Appendix A - Agency Coordination

(501) 324-5751 □ FAX: 501-324-5605 □ http://www.swl.usace.army.mil

February 27, 2001

Planning, Environmental and Regulatory Division
Planning Branch

«fn» «ln»
«title»
«agency»
«office»
«add1»
«add2»
«city», «state» «zip»

Dear «salutation» «ln»:

The Little Rock District, Corps of Engineers is in the process of preparing an environmental impact statement (EIS) for the White River Minimum Flow Study. Section 374 of the Water Resources Development Act of 1999, Public Law 106-53, and Section 304 of the Water Resources Development Act of 2000 directed the Corps to provide minimum flows for the downstream trout fishery below the dams by providing storage reallocation from its lakes in the following amounts: Beaver Lake – 1.5 feet, Table Rock Lake –2 feet, Norfork Lake – 3.5 feet, Bull Shoals Lake – 5 feet, and Greers Ferry lake – 3 feet. The study's task will be to determine if this can be done in a technically sound, environmentally acceptable and economically justified way.

A Notice of Intent (NOI) was published in the Federal Register on May 30, 2000 announcing the Corps intent to prepare an EIS. Public Workshops/Scoping Meetings were held at the Rogers, Arkansas Chamber of Commerce on June 12, 2000, the Table Rock Project Office near Branson, Missouri on June 13, 2000, the First United Methodist Church in Mountain Home, Arkansas on July 24, 2000, and the Heber Springs High School at Heber Springs, Arkansas on July 25, 2000.

A press release was issued on February 8, 2001 (enclosed) announcing that the Corps has resumed this study that was put on hold in September 2000 in order to resolve cost-sharing policy. This study will be completely federally funded.

By copy of this letter, we are soliciting any information your agency may have that may assist us in preparing this EIS. Our first task will be to document the “existing conditions” for the White River Lakes and their tailwaters.

Any information or questions you may have regarding the EIS should be directed to Mr. Jim Ellis, Environmental Team Leader, Planning, Environmental, and Regulatory Division, U.S. Army Corps of Engineers, P.O. Box 867, Little Rock, Arkansas 72203-0867; (501) 324-5033 or email: james.d.ellis@usace.army.mil.

Sincerely,

Roger C. Hicklin, P.E.
Chief, Planning Branch

Enclosure

Sam D. Hamilton
Regional Director
U.S. Fish and Wildlife Service
1875 Century Boulevard
Atlanta, GA 30345

Allan Mueller
Arkansas Field Supervisor
U.S. Fish and Wildlife Service
Arkansas Field Office
1500 Museum Road, Suite 105
Conway, AR 72032

R. Mark Wilson
Field Supervisor
U.S. Fish and Wildlife Service
Columbia Field Office
608 East Cherry Street, Room 200
Columbia, MO 65201-7712

William F. Hartwig
Regional Director
U.S. Fish and Wildlife Service
1 Federal Drive, Federal Bldg.
Fort Snelling, MN 55111

Richard A. Weiss
Interim Director
Arkansas Dept of Environmental Quality
8001 National Drive
P.O. Box 8913
Little Rock, AR 72219-8913

Hugh Durham
Director
Arkansas Game and Fish Commission
2 Natural Resources Drive
Little Rock, AR 72205

Karen Smith
Director
Arkansas Natural Heritage Commission
1500 Tower Building
323 Center Street
Little Rock, AR 72201

Bob Lidwin
District Chief
U.S. Geological Survey
401 Hardin Road
Little Rock, AR 72211

Glenn Sekavec
U.S. Department of the Interior
Office of Environmental Policy and Compliance
625 Silver Ave., SW, Suite 190
P.O. Box 649
Albuquerque, NM 87102

Michael Deihl
Administrator
Southwestern Power Administration
P.O. Box 1619
Tulsa, OK 74101

Ted Coombes
Executive Director
Southwestern Power Resources Association
P.O. Box 471827
Tulsa, OK 74147

Lois Pohl
Department of Finance & Administration
Missouri State Clearing House
Truman Building, Room 760
P.O. Box 809
Jefferson City, MO 65102-0809

John T. Shannon
State Forester
Arkansas Forestry
Commission
3821 West Roosevelt
Little Rock, AR 72204

Kalven L. Trice
State Conservationist
U.S. Department of
Agriculture
Natural Resources
Conservation Service
700 West Capitol Ave.
Room 3416, Federal Building
Little Rock, AR 72201

LaRue Parker
Tribal Chairperson
Caddo Tribe of Oklahoma
P.O. Box 487
Binger, OK 73009

Chad Smith
Chief
Cherokee Nation of Oklahoma
P.O. Box 948
Tahlequah, OK 74465

Gregory E. Pyle
Chief
Choctaw Nation of Oklahoma
P.O. Box 1210
Durant, OK 74702-1210

Charles O. Tillman
Principal Chief
Osage Nation
P.O. Box 53
Pawhuska, OK 74056

Carrie Wilson
NAGPRA Coordinator
Quapaw Tribe of Oklahoma
223 E. Lafayette
Fayetteville, AR 72703

Earl J. Barby, Sr.
Tribal Chairman
Tunica-Biloxi Indians of
Louisiana
P.O. Box 331
Marksville, LA 71351-0331

Claire Blackwell
Missouri Department of
Natural Resources
Historic Preservation
Program
P.O. Box 176
Jefferson City, MO 65102

David Shorr
Director
Missouri Department of
Natural Resources
Division of Environmental
Resources
P.O. Box 176
Jefferson City, MO 65102

Jerry Conley
Director
Missouri Department of
Conservation
P.O. Box 80
Jefferson City, MO 65102

Gary Christoff
Missouri Department of
Conservation
P.O. Box 180
Jefferson City, MO 65102-
0180

Robert F. Stewart
U.S. Department of the
Interior
Office of Environmental
Policy and Compliance
Denver Federal Center,
Bldg. 56, Room 1003
P.O. Box 25007
Denver, CO 80225-0007

Bruce Thompson
Director
U.S. Department of
Agriculture
Natural Resource
Conservation Service
601 Business Loop, Suite
250
Columbia, MO 65203

Raymond Young
Regional Director
FEMA, Region VI
Federal Regional Center
800 North Loop 288
Denton, TX 76210

John Miller
Regional Director
FEMA
2323 Grand Blvd., Suite 900
Kansas City, MO 64108-2670

Earl Smith
Chief
Arkansas Soil and Water
Conservation Commission
Water Resource Management
Division
101 E. Capitol, Suite 350
Little Rock, AR 72201

Richard W. Davies
Executive Director
Department of Parks and
Tourism
#1 Capitol Mall
Rm 4A-900
Little Rock, AR 72201

Faye Boozman
Director
Department of Health
4815 West Markham
Little Rock, AR 72205

MISSOURI DEPARTMENT OF CONSERVATION

Headquarters

2901 West Truman Boulevard, P.O. Box 180, Jefferson City, Missouri 65102-0180

Telephone: 573/751-4115 ▲ Missouri Relay Center: 1-800-735-2966 (TDD)

JOHN D. HOSKINS, Director

August 16, 2004

Mr. Michael Biggs
White River Minimum Flow Project
U.S. Army Corps of Engineers
Planning, Environmental and Regulatory Division
P.O. Box 867
Little Rock, Arkansas 72203-0867

Dear Mr. Biggs:

RE: White River Minimum Flows Study
Arkansas and Missouri, Reallocation Report

The Missouri Department of Conservation (Department) received a copy of the "White River Minimum Flows Reallocation Study Report" via e-mail on August 9, 2004. I appreciate this opportunity to provide preliminary comments concerning this document.

Before providing any detailed comments, I want to emphasize that it is our belief that fish and wildlife impacts have not been fully mitigated along the White River as a result of construction of the five multipurpose White River Basin lakes. Efforts to improve habitat conditions in the tail waters, including appropriate minimum flows, should be pursued as measures for the restoration of environmental quality and enhancement of the existing ecosystem. The existing fishery and the recreational public will benefit from a designated instantaneous minimum flow in the tail waters versus current operations.

Please refer to Page 7 (subsection d. *Problems*) and Page 8 (subsection e. *Base Conditions*). Studies to determine instream flow needs in Lake Taneycomo below Table Rock Dam were conducted by the Missouri Department of Conservation during 1994. Based on our findings, we recommended an instantaneous instream flow regime that varied throughout the year, from a low of 400 cfs up to 842 cfs. Under a cover letter dated October 23, 2001, you received a copy of a report prepared by the Tennessee Valley Authority (TVA) for the Department entitled "Model Exploration of Table Rock Hyrodynamics and Water Quality." The following conclusions are excerpted from that letter:

> "Based on the modeling results, continuous minimum total flows in the 250-750 cfs range are appropriate for further consideration, with a focus on total flows in the 366-566 range. Specific recommendations will vary depending on many factors, including, but not limited to, storage reallocation decisions, time of year, temperature and dissolved oxygen levels of release water, and system-wide lake levels."

The 400 cfs instantaneous minimum flow discussed in your recent report will provide additional wetted habitat year-round in the Table Rock tail water, but this discharge is not necessarily "optimum." Please note that the "target flows" mentioned on Page 7 and 8 (subsection d. *Problems*) were derived jointly by the Arkansas Game and Fish Commission (AG&FC) and the Department.

Table Rock Lake is currently operated using a "seasonal pool" of 917 feet mean sea level during the summer. We understand that this is a relatively recent change in operation and a departure from the conservation pool of 915 feet mean sea level. How does the implementation of the seasonal pool impact the availability of storage for minimum flow purposes and the choice between the National Economic Development Plan (NED) and Alternate Plan at Table Rock?

As you know, low dissolved oxygen concentrations in releases from the White River lakes have been an ongoing concern. Substantial interagency efforts have been expended to address this problem, and both the U.S. Army Corps of Engineers and Southwestern Power Administration have been instrumental in finding solutions to these problems. Given this background, any facility modifications implemented as a part of the efforts to establish minimum flows must include the latest technology to enhance dissolved oxygen in the water released into the tail waters, preferably at or above 6.0 parts per million.

We recognize that there could be impacts to some lake facilities (e.g., parking lots, boat ramps); more detailed consideration may be needed to fully assess and develop a plan to mitigate these impacts. We will work with your agency to better identify and mitigate these impacts once a preferred alternative is chosen.

At this time, the Department prefers the following plans for implementing minimum flows:

1. The National Economic Development (NED) plan (TR5) for Table Rock Lake: This plan seems to be the best available alternative for implementing the minimum flows plan while resulting in the least impact to hydropower, flood control, and in-lake recreation at the lowest cost.

2. The NED plan (BS3) for Bull Shoals: no additional comments.

3. The Alternate Plan (NF2) for Norfork: This plan will not only enhance minimum flows downstream but will also ensure adequate water levels on the upper portions of Norfork Lake in Missouri. In addition, the installation of new station service units, combined with appropriate measures to improve dissolved oxygen concentrations in station service unit releases, will enhance downstream dissolved oxygen concentrations during minimum releases. The Department currently wrestles with boater access issues, navigation safety, and damage to public watercraft in the upper reaches of Norfork. Our selection of the NF2 plan centers on our concern that any additional lowering of water levels on top of regular seasonal reductions in pool levels would exacerbate these problems

significantly in the Missouri portions of Norfork. However, if AG&FC supports an option that uses a siphon rather than a new station service unit, the Department would support that option as long as our concerns for adequate water levels in the upper reaches of Norfork are adequately addressed. Therefore, we are not ruling out our acceptance of an alternative with less than a 100% flood pool reallocation (i.e., NF8 or NF9).

Please note that in each case, we reserve the right to further consider the various reallocation alternative plans developed during the National Environmental Protection Act (NEPA) compliance phase of this proposed project. Again, we feel strongly that this project should be viewed as appropriate mitigation for the loss of habitat capable of supporting a native fishery. We realize our viewpoint may be in opposition to the U.S. Army viewpoint expressed by Major General Carl A. Strock in his report to congress (dated July 30, 2004). However, we remain firm in our belief that any implementation costs should be covered fully at federal expense, including the cost of storage.

The Department will continue to work closely with the U.S. Army Corps of Engineers and our other partners in this project to see minimum flows implemented at the White River reservoirs. Please continue to direct relevant correspondence related to this project to Mr. Chris Vitello, Southwest Regional Office, Missouri Department of Conservation, 2630 N. Mayfair, Springfield, Missouri 65803. You may also contact him by phone at 417.895.6881, Extension 1060, or by e-mail at chris.vitello@mdc.mo.gov.

Sincerely,

John Hoskins

JOHN D. HOSKINS
DIRECTOR

c: Scott Henderson, Arkansas Game and Fish Commission
Mike Armstrong, Arkansas Game and Fish Commission
Chris Vitello, Missouri Department of Conservation
Bob Legler, Missouri Department of Conservation
Gene Gardner, Missouri Department of Conservation

Bob Holden
Governor

Michael Hartmann
Commissioner

State of Missouri
OFFICE OF ADMINISTRATION
Post Office Box 809
Jefferson City
65102

Stan Perovich
Director
Division of General Services

March 26, 2001

Roger Hicklin, P.E.
Chief, Planning Branch
Department of the Army
Little Rock District, Corps of Engineers
Post Office Box 867
Little Rock, AR 72203-0867

Dear Mr. Hicklin:

Subject: 0103052 - Department of the Army, Little Rock District, Corps of Engineers
White River Minimum Flow Study--Environmental Impact Statement (EIS)

The Missouri Federal Assistance Clearinghouse, in cooperation with state and local agencies interested or possibly affected, has completed the review on the above project application.

None of the agencies involved in the review had comments or recommendations to offer at this time. This concludes the Clearinghouse's review.

A copy of this letter is to be attached to the application as evidence of compliance with the State Clearinghouse requirements.

Sincerely,

Lois Pohl
c.m.

Lois Pohl, Coordinator
Missouri Clearinghouse

LP:cm

Ellis, James D SWL

From: Reed Green [wrgreen@usgs.gov]
Sent: Wednesday, March 07, 2001 11:38 AM
To: Ellis, James D
Cc: Hicklin, Roger C; Project, Minimum FLOW; John EJr. Terry; C. Shane Barks; David A Freiwald
Subject: Information for White River Minimum Flow Study EIS

Card for Reed Green

Jim Ellis
Environmental Team Leader
Planning, Environmental, and Regulatory Division
U.S. Army Corps of Engineers
Little Rock, Arkansas 72203

Jim:

In reply of the February 27, 2001 letter requesting information regarding the EIS for the White River Minimum Flow Study, the U.S. Geological Survey would like to inform you of our current and past activities in the White River Basin and will share any information that we have to assist you in preparing the EIS.

As you know, the USGS operates a number of stream-discharge stations in the White River Basin. These data are available at our District's home page (http://ar.water.usgs.gov/) or you can access these data at http://water.usgs.gov/ar/nwis/sw/. Between 1974 and 1995, the USGS conducted water-quality monitoring for the USACE on Beaver, Table Rock, Bull Shoals, Norfork, and Greers Ferry Lakes and these data can be found at http://water.usgs.gov/ar/nwis/qw/. These data were used to prepare a Ph.D. dissertation in 1998 titled "Relations Between Reservoir Flushing Rate and Water Quality". A report "Eutrophication Trends Inferred From Hypolimnetic Dissolved-Oxygen Dynamics Within Selected White River Reservoirs, Northern Arkansas-Southern Missouri, 1974-94" was published by the USGS in 1996 and is available, if needed. The USGS currently operates 10 continuous temperature and dissolved oxygen monitors in and below the dams on Beaver, Table Rock, Bull Shoals, Norfork, and Greers Ferry, between June 1 and December 31, annually. Also, the USGS measures vertical profiles of temperature and dissolved oxygen above each respective dam during the same time period.

Currently, the USGS is completing calibration and verification of numerical models of hydrodynamics and water quality using the CE-QUAL-W2 software for Beaver, Table Rock, Bull Shoals, and Norfork Lakes for the Arkansas Game and Fish Commission, Missouri Department of Conservation, Arkansas Soil And Water Conservation Commission, and Beaver Water District. Many of the data (boundary conditions) used in these models were provided by USACE (John Kielczewski). These models are being developed for use in diagnostic and predictive applications related to temperature and dissolved oxygen concentrations above each respective dam in response to expected increases in minimum flows. As a result of the development of these models, digital files of pre-impoundment elevation and hypsography were prepared in order to develop reservoir geometry and computational grids for each reservoir. These data also are available, if needed.

The USGS currently is working with potential partners (Beaver Water District, Arkansas Soil and Water Conservation Commission, and Arkansas Department of Health) to develop a water-quality monitoring program on

Beaver Lake for use in refining the water-quality component witnin the existing numerical model. We expect to start sampling soon. The expected model will allow further water-quality assessment of eutrophication processes within Beaver Lake and could be used to establish TMDL's.

Also, the USGS has available a number of new technologies (acoustic dopler, etc.) that may be of some value in gathering additional information, i.e. current minimum flows (leakage, etc.).

If you are in need of any of this information for the Minimum Flow Study EIS or have any questions or comments, please feel free to call me at (501) 228-3607.

Reed Green
Hydrologist
U.S. Geological Survey
Little Rock, Arkansas 72211

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Fay W. Boozman, M.D. Director
Mike Huckabee, Governor

March 30, 2001

Mr. Jim Ellis, Environmental Team Leader
Planning, Environmental, and Regulatory Division
U.S. Army Corps of Engineers
P.O. Box 867
Little Rock, AR 72203-0867

Re: White River Minimum Flow Study

Dear Mr. Ellis:

The February 27 letter from Mr. Roger C. Hicklin to Dr. Boozman on the proposed EIS for the referenced project has been referred to our office for reply. The information was reviewed and we have the following comments:

1. The Department considers the preservation of adequate drinking water supply sources to be paramount. In this regard, the Department would be in opposition to any reallocation actions that would have a detrimental impact on drinking water sources.

2. The Corps is already preparing an Environmental Assessment of a request for reallocation of Beaver Lake water for additional water supply. If not already the case, we recommend that effort be made to coordinate these studies. Attached for your information is a copy of a comment letter previously provided by our office on the Beaver Lake reallocation study.

If you have any questions, you may contact Robert Hart or myself at (501) 661-2623. We appreciate the opportunity to review this notice.

Sincerely,

Bob Makin, P.E., Assistant Director
Division of Engineering

MISSOURI DEPARTMENT OF CONSERVATION

Headquarters

2901 West Truman Boulevard, P.O. Box 180, Jefferson City, Missouri 65102-0180

Telephone: 573/751-4115 ▲ Missouri Relay Center: 1-800-735-2966 (TDD)

JOHN D. HOSKINS, Director

August 16, 2004

Mr. Michael Biggs
White River Minimum Flow Project
U.S. Army Corps of Engineers
Planning, Environmental and Regulatory Division
P.O. Box 867
Little Rock, Arkansas 72203-0867

Dear Mr. Biggs:

RE: White River Minimum Flows Study
Arkansas and Missouri, Reallocation Report

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significantly in the Missouri portions of Norfork. However, if AG&FC supports an option that uses a siphon rather than a new station service unit, the Department would support that option as long as our concerns for adequate water levels in the upper reaches of Norfork are adequately addressed. Therefore, we are not ruling out our acceptance of an alternative with less than a 100% flood pool reallocation (i.e., NF8 or NF9).

Please note that in each case, we reserve the right to further consider the various reallocation alternative plans developed during the National Environmental Protection Act (NEPA) compliance phase of this proposed project. Again, we feel strongly that this project should be viewed as appropriate mitigation for the loss of habitat capable of supporting a native fishery. We realize our viewpoint may be in opposition to the U.S. Army viewpoint expressed by Major General Carl A. Strock in his report to congress (dated July 30, 2004). However, we remain firm in our belief that any implementation costs should be covered fully at federal expense, including the cost of storage.

The Department will continue to work closely with the U.S. Army Corps of Engineers and our other partners in this project to see minimum flows implemented at the White River reservoirs. Please continue to direct relevant correspondence related to this project to Mr. Chris Vitello, Southwest Regional Office, Missouri Department of Conservation, 2630 N. Mayfair, Springfield, Missouri 65803. You may also contact him by phone at 417.895.6881, Extension 1060, or by e-mail at chris.vitello@mdc.mo.gov.

Sincerely,

John Hoskins

JOHN D. HOSKINS
DIRECTOR

c: Scott Henderson, Arkansas Game and Fish Commission
Mike Armstrong, Arkansas Game and Fish Commission
Chris Vitello, Missouri Department of Conservation
Bob Legler, Missouri Department of Conservation
Gene Gardner, Missouri Department of Conservation

Appendix B – 2008 SDEIS & 2006 DEIS Comments and Responses

2008 SDEIS Agency Comments and Corresponding Responses

Written Comments regarding the 2008 SDEIS were received by the following agencies. Comments and responses are grouped by Agency Name. Many comments from the agencies consisted of editorial changes which were incorporated into the FEIS. The actual comments are listed following these response pages for the reviewer's information.

Arkansas Department of Health
Arkansas Game and Fish Commission
Missouri Department of Natural Resources
U.S. Department of Energy, Southwestern Power Administration
U.S. Department of Interior, National Park Service
U.S. Department of Interior, Office of Environmental Policy and Compliance
U.S Environmental Protection Agency

Arkansas Department of Health

Comment: **"The Department considers the preservation of adequate drinking water supply sources to be paramount. In this regard, the Department would be in opposition to any reallocation actions that would have a detrimental impact to drinking water sources."**

Response: **Comment noted.**

Arkansas Game and Fish Commission

Comment: **We have a number of questions regarding the basis, scope and cost recommended mitigation features that will best be resolved through specific site visits and dialogue with marina owners and Corps personnel.**

Response: **Concur.**

Missouri Department of Natural Resources

Comment: **"The department suggests that the DEIS include a more detailed explanation of the origin and functions of the simulation model (SWD-SUPER) and adequate detail to evaluate data and methodologies on which these analyses are based."**

Response: **The SUPER program was developed at the Southwestern Division of the Corps of Engineers. The SUPER program simulates, on a daily basis, the regulation of a system of multipurpose reservoirs based on a specified plan of regulation including**

seasonal pools as defined by the operation guide curve. The hydrologic output is presented in average daily values such as average daily lake level elevations. Project releases and river flows are given as daily average flows. Pool elevations are given as midnight elevations. For the White River Minimum Flows Study, SWL modified the SUPER model algorithm to include a function that allowed SUPER to stop minimum flows releases when EWRDA authorized storage was depleted and restart releases once storage was recharged. Consistent with other SWL uses of SUPER, the impacts of White River Minimum Flows operations were simulated over a 64-year period of record of historic rainfall and inflow.

Comment: **"emission changes are compared to total annual statewide emissions for Missouri and Arkansas." "A better approach might be to base the comparisons of NOx and SO2 emissions on emissions where generation is likely to take place based on previous sales of electrical power to utilities with fossil fueled power plants."**

Response: **The analysis in the SDEIS on air quality provides an adequate comparison to determine whether potential increased emissions resulting from the implementation of the minimum flow project would have significant impacts on state and regional air quality.**

U.S. Department of Interior, Office of Environmental Policy and Compliance

U.S. Fish and Wildlife Service

The Arkansas FWS Field Office did not provide comments in addition to those previously provided in their comment letter dated July 17, 2006.

National Park Service

Comment: **"The National Park Service recommends that the EIS includes a mitigation strategy to rectify the decreased warm water fish migrations that would occur by significantly reducing the White River water temperatures at the Buffalo National River confluence by three to four degrees centigrade, as a result of altering the existing minimum flow regime."**

Response: **The cold water barrier that exists due to existing hydropower operations will still constitute the vast majority of influence on water temperature. The Corps position has always been that the dams and their authorized uses have already been fully mitigated in the past. The low flow increase in water volume resulting from minimum flows will not significantly affect the migration of warm water fish species from the existing condition.**

Comment: **"The National Park Service recommends that the EIS includes a mitigation strategy to offset the deleterious declines of freshwater mussels that relay on warmwater fish as intermediate host, required for reproduction and recruitment."**

Response: **Please refer to the previous comment and response.**

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Governor Mike Beebe
Paul K. Halverson, DrPH, FACHE, Director and State Health Officer

Engineering Section, Slot 37 Ph 501-661-2623 Fax 501-661-2032
www.HealthyArkansas.com/eng/ After Hours Emergency 501-661-2136

September 17, 2008

Mr. Mike Biggs
Project Manager
U.S. Army Corp of Engineers
Little Rock District
Planning and Environmental Office
P.O. Box 867
Little Rock, AR 72203 0867

RE: White River Minimum Flow Reallocation Study – Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Mr. Biggs:

This letter provides you with written notification of the Engineering Section's receipt of the CD containing a copy of the SDEIS for the proposed White River Minimum Flow Reallocation Study.

We have reviewed the proposal. At this time we would like to reiterate the following comment provided on March 30, 2001 to Mr. Jim Ellis, U.S. Corp of Engineers from Bob Makin, Assistant Director, Engineering Section:

1) The Department considers the preservation of adequate drinking water supply sources to be paramount. In this regard, the Department would be in opposition to any reallocation actions that would have a detrimental impact to drinking water sources.

If you have any questions you may contact Lyle Godfrey or myself at (501) 661-2623. We appreciate the opportunity to review this notice.

Sincerely,

Daniel K. Smith, P.G.
Geology Supervisor
Engineering Section

RH:BM:JS:LAJ:LG:ds

November 3, 2008

Mr. Michael Biggs
Project Manager
US Army Corps of Engineering
Little Rock District
Programs and Project Management Division
PO Box 867
Little Rock, AR 72203-0867

Re: White River Minimum Flow

This letter is in response to your request for comments on the draft Minimum Flow Project Report and Supplemental Draft Environmental Input Statement (SDEIS). The Arkansas Game and Fish Commission supports minimum flows on the White and Norfork Rivers as a critical habitat enhancement component of our trout fishery. Minimum flows will improve trout growth, reproduction and reduce temperature stress. I am pleased to offer the following comments on the draft project report and SDEIS.

1. Project Report Section II, No. 3, Project Facilities and Lake Facilities, pgs. 20-26: We agree in general with the Project Report's conclusions on lakeside facility impacts. We agree that the criteria for determining "reasonable use" consider magnitude of impact, degree of actual displaced usage and availability of substantively equal alternative facilities. We further agree with a filter elevation of 660 ft. msl for Bull Shoals Lake and 554.5 ft msl for Lake Norfork. We appreciated the opportunity to participate in meetings which established these filtering criteria. We note one error in the description of the vetting process described in the Project Report on page 26 (Par. 1) which states "site by site application were coordinated and approved by State, County and Corps stakeholders." We did not participate in any site-specific meetings in which the scope of impact or mitigation proffered was discussed and selected. We received a copy of your facility impact and mitigation analysis in May 2008. We understand this analysis was produced by Little Rock District staff with substantial input from your Bull Shoals Field Office. Since receiving this report, high pool elevations in both lakes have prevented us from visiting any of the potentially impacted sites. While we do not dispute the findings of the Corps' facility impact analysis, we suggest the mitigation analysis be viewed as preliminary, subject to review by the local sponsor and with final selection of mitigation features to be completed as part of the Project Partnership Agreement. We have a number of questions regarding the basis, scope and cost recommended mitigation features that will best be resolved through specific site visits and dialogue with marina owners and Corps personnel.

2. Project Report Section V, pg. 37: The benefit to cost ratio (B/C) for Bull Shoals is listed as 3.4:1 and Norfork as 0.93:1. These values should be changed to 11.78:1 and 1.39:1, respectively, to reflect the National Economic Development Plan evaluation contained in Appendix A (Reallocation Report).

3. Project Report Appendix A (Reallocation Report) Section 5.4.2 Diminishing Returns: The B/C ratio incorporates a substantial 50% diminishing return for implementing one project without the other. However, no basis is provided for using the 50% value. Clearly, implementing of Bull Shoals without Norfork should accrue greater economic benefits when compared to implementing Norfork only. Moreover, full environmental benefits will only be realized by implementing minimum flows at both projects. It is our experience that trout anglers do not distinguish economically between the two tailwaters and will often fish both tailwaters within the same trip. Ascribing a diminishing return to the benefits of minimum flow appears to be an unnecessary and somewhat arbitrary decision. Since a conservative lower bound benefit calculation is used in the B/C analysis, assuming a diminishing return seems unwarranted and should be eliminated.

4. Our comments on the hydropower impacts were provided to Southwest Power Agency in response to their draft determination report in our letter dated September 12, 2008. (A copy of that letter is attached.)

5. Project Report Section IV, Implementation and Cost Apportionment: The Project Report estimates a May 2009 date for executing the Project Cooperators Agreement (or Project Partnership Agreement), but does not provide a date for implementing minimum flows at Bull Shoals or Norfork. As the project's local sponsor, we fully intend to execute our responsibilities under the project agreement with all reasonable expediency. However, we recognize that the logistics and funding requirements of completing facility modifications at 24 sites will require several years to complete. We wish to see storage captured and minimum flows implemented as soon as possible, and believe the facility re-location work should be prioritized and phased over a period of time without delaying minimum flow.

6. SDEIS Section 4.3, Water Resources-Comparison of Extreme Events: Operation of minimum flows at both Bull Shoals and Norfork will require modification of the district's Reservoir Control Manual. Since minimum flows will not be 100% dependable at either reservoir, we suggest revising drought contingency plans for both reservoirs. Conserving minimum flows during drought conditions would lessen the estimated impact of drought on pool elevations of both lakes.

In closing, I wish to express my sincere appreciation to you and your district colleagues for your perseverance and dedication shown throughout this endeavor. We sincerely believe that minimum flows below Bull Shoals and Norfork will be beneficial both to the environment and economies of the White River trout fishery. We look forward to working with you on the Project Partnership Agreement to implement minimum flows.

Sincerely,

David Goad
Acting Director

2 Natural Resources Drive • Little Rock, AR 72205 • www.agfc.com
Phone (800) 364-4263 • (501) 223-6300 • Fax (501) 223-6448

Draft Project Report Comments – AGFC Trout Program

Prepared by Jeff Williams (Trout Program Supervisor)

Page 8 – 2nd Paragraph – Lines 12&13 – The report states that the trout fishery below Bull Shoals Dam extends downstream 78 miles to Sylamore Creek. However, the Arkansas Game and Fish commission defines the fishery as extending to the Hwy 58 Bridge at Guion, a distance of approximately 92 miles.

Page 10 – 1st paragraph – Line 7 – The report states, "Section 132 did not authorize implementation of Minimum Flows at Beaver, Norfork, and Greers Ferry Lakes and it repealed WRDA 99 & 00. I believe that this should read, "…at Beaver, Table Rock, and Greers Ferry Lakes…".

Page 10 – Last paragraph, which continues on Page 11 – Is there a threshold percentage of the storage that will have to be re-captured before minimum flow releases can resume?

Page 12 – Last Paragraph – 2nd to last line - The report refers to the "Tennessee Valley Association". I believe it should be the Tennessee Valley Authority. This also applies to Page 28 – Last Paragraph.

Page 17 – Table 2 – Is the trout storage (acre-feet) correct for Norfork? I was under the impression that DYMS-HYPO would be subtracted from allocated storage as it was for Bull Shoals. Shouldn't the trout storage for Norfork then be 12,181 acre-feet?

Page 20 -Last paragraph – 6th Sentence - I think it is important to indicate that the potential for the siphon/knife valve to improve DO would only occur during minimum flow operations. This may seem obvious, but I have spoken with some individuals that were not aware that we could still have low dissolved oxygen levels occurring over a larger area during hydropower releases.

Page 21 – Footnotes for Table 4
1) There is an issue with the numbering of the footnotes between the table and the footnotes themselves.

2) The seasonal pool elevation in footnote #1 should be 657 rather than 656 and the seasonal pool elevation in footnote #3 should be 662 rather than 661.

Page 28 – Last Paragraph – The U.S. Fish and Wildlife Service is not an official member of the White River DO Committee.

Page 33 -2nd paragraph – - I think it is important to indicate that the potential for the siphon/knife valve to improve DO would only occur during minimum flow operations. This may seem obvious, but I have spoken with some individuals that were not aware that we could still have low dissolved oxygen levels occurring over a larger area during hydropower releases.

Page 38 -Table 13 (Norfork Summary) – Footnote #3 for this table indicates that the hydropower losses include those losses associated with Empire Electric. How is Empire Electric impacted by implementation on Norfork?

Fisheries File
09/12/08 - Original mailed.
dgb

COPY

Scott Henderson
Director

Mike Gibson
Deputy Director

Keeping the Natural State natural.

Arkansas Game and Fish Commission

David Goad
Deputy Director

Loren Hitchcock
Deputy Director

September 12, 2008

George Robbins, Director
Division of Resources and Rates
Southwestern Power Administration
U.S. Department of Energy
One West Third Street
Tulsa, OK 74103

Re: White River Minimum Flows – Proposed Determination of Federal and Non-Federal Hydropower Impacts

Dear Mr. Robbins:

The Arkansas Game and Fish Commission (Commission) appreciates this opportunity to comment on the draft "Determination of Offset to the Federal Hydropower Purpose and Impacts on Non-Federal Project" dated June 2008. We offer these comments as the Minimum Flow Project local sponsor and the state agency authorized to manage the fish and wildlife resources of the state of Arkansas. The Commission considers minimum flow a critical component to sustain the White River trout fishery. We note that Congress found the White River Minimum Flows Project to contain significant fish and wildlife features benefiting the nation. Further, minimum flow will have highly favorable economic returns to the north Arkansas region.

We respectfully submit the following comments:

1. The Corps of Engineers Minimum Flow Study Report reduced flood pool storage available for minimum flow in both Bull Shoals and Norfork for Hydropower Yield Protection Operation (HYPO) and Dependable Yield Mitigation Storage (DYMS) storage as a means to keep hydropower yields whole. This reduction reduced the reliability of minimum flow storage to meet minimum flow needs during non-generation periods below both dams. Storage not available to meet minimum flow should not be included in the energy compensation calculations at Bull Shoals and Norfork.
2. Base runs of SUPER upon which energy loss calculations were based included current seasonal pools on both Bull Shoals and Norfork. Seasonal pools are not authorized storage and have not been subject to the National Environmental Policy Act (NEPA). We are not aware of any formal agreement between the Little Rock District Corps of Engineers (LRDCOE), Southwest Power

Administration (SWPA) operate seasonal pools. Including seasonal storage that is not authorized storage as a base condition and then projecting this unauthorized storage 50 years into the future is not reasonable. Base runs for the determining of energy loss at Bull Shoals and Norfork should not include seasonal pools. If included, we would consider the use of seasonal pools on both reservoirs a significant federal action and subject to NEPA.

3. SWPA considers all energy produced from minimum flow releases at Bull Shoals as off-peak. The basis for this consideration appears solely on SWPA's observation that all minimum flows would occur at a time SWPA is not generating to meet it's contractual obligations. We note from previous discussions with SWPA that generation occurring between 6:00AM and 10:00 PM (16 hours) is considered on-peak, and electricity produced between 10:00 PM and 6:00AM (8 hours) is considered off-peak. We note this 67% to 33% ratio was used in allocating on-peak vs. off-peak value to electricity produced at Ozark Beach. It is highly unlikely that all minimum flows will occur between the hours of 10:00PM and 6:00AM. Unless SWPA can demonstrate that minimum flows will be largely restricted to those hours, a similar split of 67% on-peak and 33% off-peak value should be used to value energy produced by minimum flows at Bull Shoals.
4. SWPA has proposed a capacity loss at Ozark Beach of 3 MW. This finding is problematic on several fronts. First, since Ozark Beach is a "run-of-the-river" facility, SWPA used loss of head to estimate loss of capacity. Ozark Beach has an installed capability of 20 MW at full head. A loss of 3 MW annually would constitute a 15% loss across the lifetime of the plant if operated under full capability at all times. SWPA recognizes that Ozark Beach does not operate at full capability at all times due to variations in the Bull Shoals pool. The estimated annual average pool elevation difference due to minimum flow storage will be 3.3 ft (Minimum Flow Study Report 2004). The net head of the Ozark Beach facility ranges from 20-53 ft., depending on the Bull Shoals pool elevation. This 3.3 ft. average translates to a loss of head ranging from 6% to 17%. Second, SWPA found the average loss of capacity based to be 1.84 MW, with a median of 2.34 MW. Duration analysis found a capacity loss less than 3 MW 70% of the time. The proposed 3 MW loss of capacity projected 50 years into the future appears arbitrary, overly generous and not well substantiated. Finally, SWPA has found the present value of the capacity loss to be $12,288,000. The value assumes Empire Electric will invest resources to replace this loss capacity, most likely through a Combined Cycle Plant. Empire Electric currently meets its load demand through a combination of producing electricity from its own plants (about 60%) and the purchase of power (40%) (Empire District Electric Annual Report 2007). We note that Ozark Beach constitutes about one percent of Empire Electric's total generating capacity and a loss of 1.84 MW (average capacity loss) constitutes a very small fraction of Empire's system-wide generating capacity and total energy production. It seems plausible that the small loss of energy compared to Empire's system resources will be absorbed by existing capacity or planned capacity. We agree Empire should be compensated for the estimated loss of energy at Ozark Beach, but we question the amount of capacity loss and

assumptions on how Empire should be compensated to replace this capacity. The compensation for energy loss alone seems to be a more reasonable approach.

5. SWPA used a 50-year timeframe for determining the hydropower losses due to minimum flow. We question the use of a 50-year compensation timeframe. We understand 50 years was used so as to remain consistent with the timeframe used by the Corps of Engineers when investigating the economic benefits and costs of minimum flow, and consistent with the Corp's principles and guidelines for planning federal water projects. We believe a 50-year forecast contains far too much uncertainty to provide a reliable compensation estimate. We note that Platts' Power Outlook Research Services provides only 20-year forecasts for energy values. We also note that EIA, the source of SWPA's inflation forecast, only projects inflation over the next 25 years. We suggest a 20-year timeframe as a much more reasonable compensation timeframe of federal hydropower losses from minimum flow.
6. The Federal Energy Regulatory Commission (FERC), part of the Department of Energy, regulates and licenses Ozark Beach to operate using a public resource (i.e. White River). The license constitutes a contract to operate a private hydropower plant under the conditions set forth by FERC. We note that Ozark Beach's project license (Project No. 2221) expires in 2022. We question the fiscal wisdom of compensating Empire District Electric beyond the terms of the project's current operating license. FERC may decide to re-license the project (with or without modifications), recommend that the project be taken over by the federal government, or decide not to re-license the facility (FERC 2008 – Citizen's Guide to Re-Licensing). Two complete re-licensing cycles will occur over a 50-year period. Compensating Empire Electric for loss of energy for the life of Project 2221's current license seems a more reasonable and fiscally responsible approach.
7. In Section 8.1 Firm Energy, SWPA states minimum flows must not reduce their ability to meet firm energy. The White River Minimum Flow Hydrologic and Hydraulic Report November 2006 found minimum flow impacts at the Newport gage (used to regulate releases from Bull Shoals and Norfork) found that minimum flows would cause only minor increases in stage heights, and then only for extreme events with no increase in stage duration. SWPA states there is no reason to believe firm energy would be impacted by minimum flows, but goes on to provide energy, annual, and present value estimates for the entire firm energy estimates. Since the study found that minimum flows will not impact regulating decisions (and by inference firm energy releases) and SWPA does not provide any estimate of minimum flows direct impact upon firm energy releases, this section has no basis in the report and should be removed.
8. In Section 8.2 Water Temperature Control states minimum flows should be considered meeting a portion of the 3-day, 6,000 cfs-day generation releases designed to maintain suitable water temperatures in the downstream trout fishery and SWPA's generation requirements should be reduced accordingly, or additional compensation provided. We agree releases are needed to maintain suitable water temperatures and commend SWPA for providing these releases. However, we do not agree these volumes should be reduced since 1) seasonal

pools have been provided to mitigate SWPA for these generations, 2) neither the timing nor volume of these releases are optimal for addressing temperature needs of the downstream trout fishery.

9. SWPA used Platts Power Research Services for energy costs and the Corps of Engineers Hydropower Analysis Center for capacity costs. No discussion is provided of other resources available to determine the future value of energy or capacity. Since Platts is a subscription-based service, reviewers are not provided any means to determine the basis of the Platts estimates. Given the high degree of uncertainty contained in projecting future energy costs, we believe the report should contain a comparative analysis that includes other alternative estimates for energy and capacity and a discussion that justifies Platts and HAC as the preferred estimates for energy and capacity, respectfully. This discussion should include the underlying assumptions and uncertainties contained in the Platts and HAC values.

In summary, Congress directed SWPA to determine the hydropower off-sets at Bull Shoals and Norfork and impacts to the non-federal project (Ozark Beach) due to minimum flow. We believe this proposed determination generally identifies those impacts to energy losses and capacity at the federal projects, but incorrectly incorporates HYPO and DYMS storage and seasonal pools into the models used to calculate energy losses. At the non-federal project, we believe the 3 MW capacity loss is not justified. In determining present value at both the federal and non-federal projects, we believe SWPA 1) incorrectly categorized energy produced by minimum flows at Bull Shoals as 100% off-peak, 2) introduced a high degree of uncertainty and potential inaccuracy using a 50-year compensation formula, 3) did not provide an adequate justification for capacity replacement compensation at Ozark Beach and 4) incorrectly compensates Empire District beyond FERC Project 2221's current license. We believe these errors significantly affect the accuracy of the off-sets and compensations found in this report and lead to a higher cost to the taxpayers than is fiscally warranted.

We appreciate the time and effort SWPA has put into this effort. We particularly appreciate the time and patience you and your staff have spent answering our questions over the last few weeks. We look forward to moving forward with the minimum flow project and will be happy to discuss any of our comments with you.

Respectfully Submitted,

Loren Hitchcock
Deputy Director

2 Natural Resources Drive • Little Rock, AR 72205 • www.agfc.com
Phone (800) 364-4263 • (501) 223-6300 • Fax (501) 223-6448

STATE OF MISSOURI
Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

September 19, 2008

White River Minimum Flow Project
C/O Mike Biggs
Planning, Environmental and Regulatory Division
P.O. Box 867
Little Rock, AR 72203-0867

Re: White River Minimum Flows Reallocation Study Supplemental Draft Environmental Impact Statement

Dear Mr. Biggs:

The Missouri Department of Natural Resources (department) appreciates the opportunity to comment on the White River Minimum Flows Supplemental Draft Environmental Impact Statement (SDEIS). While the department endorses the goal of this project to provide a minimum flow to sustain the tailwater fisheries in the White River, there are several issues remaining that should be addressed. These issues include the potential impacts on energy production, air and water quality. We offer the following comments.

As the department noted in its original comment letter of August 18, 2006, reduced hydroelectric generation is likely to result if the reallocation option is selected. The department submitted comments to the DEIS letter proposing that the analysis of potential environmental and financial impacts of reduced hydroelectric generation should be strengthened. These suggestions do not appear to have been addressed in the Supplemental DEIS. We offer these additional comments and suggestions.

(1) Net Reduction in Average Annual Hydroelectric Generation

In our August 18, 2006 comment letter, the department noted that:

> *The DEIS states that project researchers used the SWD-SUPER simulation to determine the net reduction in average annual generation at each project....Because the DEIS does not describe this model or the inputs used for the simulation, it is impossible to comment on the projections used in the DEIS. The department suggests that the DEIS include a more detailed explanation of the origin and functions of the simulation model and adequate detail to evaluate data and methodologies on which these analyses are based.*

The Supplemental DEIS provides no additional information that would provide a basis for independently evaluating the model results.

(2) Annual Emissions from Shifting Generation to Fossil-Fired Plants

In its original comment letter, the department noted that:

> *The DEIS examines the increase in annual emissions of NOx, SO2 and C02 that may result from shifting generation to other fossil-fuel fired plants to compensate for the loss in generation at the Bull Shoals hydroelectric facility. The DEIS characterizes these increases as "minor." While this characterization may be accurate, the DEIS fails to document the methodologies used to make this evaluation or to substantiate their conclusion. In addition it may be difficult to sustain the position that the impact of increased emissions will be insignificant until it can be determined where replacement power might be generated. An increase in emissions at a plant in an SO2 or NOx non-compliance area could be significant. Similar increases in emissions for plants in air quality maintenance areas could have even greater impact on citizens in those areas should the resulting additional pollutants shift the area into noncompliance.*

Section 4.6 of the Supplemental DEIS contains revised estimates of the reduction in hydroelectric generation and resulting increase in annual emissions of NOx, SO2 and CO2 that is likely to occur under the recommended reallocation option. Comparing these estimates with those included in the DEIS indicates that revised assumptions and input data were used for the SWD-SUPER analysis. In the absence of any description of the model or explanation for the basis of the revision, it is impossible to evaluate the validity of these revisions. However, none of the revisions appear to address the issues noted in the department's August 18, 2006 letter. The Supplemental DEIS, like the DEIS, appears to justify its characterization of the emissions as "minor" by comparing projected emissions increases to total annual statewide emissions for Missouri and Arkansas. Not surprisingly, the resultant ratios tend to minimize any impacts. A better approach might be to base the comparisons of NOx and SO2 emissions on emissions where generation is likely to take place based on previous sales of electrical power to utilities with fossil fueled power plants. Neither the draft nor the Supplemental DEIS provides information concerning the location of any fossil-fired power plants where increased generation would occur.

The failure of the Supplemental DEIS to consider localized air quality impacts that may occur due to increased generation at fossil-fuel plants extends to Section 3.7 ("Air Quality") of the Supplemental DEIS, which largely reproduces Section 3.8 of the DEIS. Section 3.7 discusses only potential impacts on air quality in the vicinity of the proposed project and fails to consider possible impacts on air quality in the vicinity of fossil-fired power plants whose emissions may increase as a result of the project.

Geology

The department anticipates no negative geological impacts will result from a water level elevation change in the White River reservoirs. The SDEIS describes the geology accurately on the whole. However, there appears to be an inconsistency between the second and third paragraphs on Page 3-6. The department suggests that the document be amended to clearly state that the geology described in the second paragraph is location specific and the geology described in the third paragraph is strictly regional. If there are any questions related to geology, please contact Mr. Peter Bachle of our Division of Geology and Land Survey at 573-368-2472.

The department appreciates the opportunity to review and comment on this project and we will be happy to assist the Corps in the event that any additional information or assistance is required. Please feel free to contact Mr. Robert Stout of my staff if you have any questions or concerns. He may be reached by mail at P.O. Box 176, Jefferson City MO 65102-0176 or by phone at (573) 751-7402. Thank you.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

H. Floyd Gilzow
Deputy Director for Policy

HFG:rsj

Department of Energy
Southwestern Power Administration
One West Third Street
Tulsa, Oklahoma 74103-3502

NOV 0 3 2008

VIA FEDEX

Mr. Mike Biggs
Project Manager
Planning & Environmental Office
U.S. Army Corps of Engineers, Little Rock District
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mr. Biggs:

This is in response to the Little Rock District's Federal Register Notice dated August 6, 2008 and the Environmental Protection Agency's Federal Register Notice dated September 19, 2008, requesting comments on the Supplemental Draft Environmental Impact Statement (SDEIS) for the White River Minimum Flow Reallocation Study. Please find Southwestern Power Administration's (Southwestern) specific comments regarding the SDEIS detailed in the enclosure. In addition, Southwestern has the following comments.

Southwestern recognizes that minimum flow plans BS-3 and NF-7 have been authorized at Bull Shoals and Norfork, respectively, in the Energy and Water Development Appropriations Act, 2006 (EWDAA). Plan BS-3 reallocates five feet of flood storage at Bull Shoals and will utilize a main turbine for minimum flow releases. Plan NF-7 reallocates 1.75 feet of flood storage and 1.75 feet of conservation storage at Norfork and will utilize a siphon system and the existing station service unit for minimum flow releases. When the siphon is designed and installed, it is imperative that the siphon have a multi-level intake and the ability to aerate the water used for minimum flow. This measure is necessary to increase the dissolved oxygen (DO) in the minimum flow releases during the low DO season to obtain the maximum benefit of the minimum flow project. Southwestern was pleased that plans BS-3 and NF-7 are proposed to be implemented as studied and formulated. By containing dependable yield mitigation storage for hydropower (or hydropower yield protection operation as it is termed in the reallocation report) for storage reallocated from the flood control pools, impacts to Federal hydropower will be minimized. Also, inclusion of the current seasonal pools will continue the summertime daily releases to provide cold water for the downstream fisheries.

The energy losses to the Federal hydropower purpose for the impacts of minimum flows shown in the SDEIS are not the energy losses that Southwestern calculated for the impacts to hydropower. Southwestern believes that, to avoid any confusion, the energy losses associated with the minimum flows projects included in the SDEIS should be the energy losses that Southwestern calculated (as required by the EWDAA). Also, as reported in the SDEIS, the impacts to air quality due to minimum flows are somewhat ambiguous. Southwestern's

experience has demonstrated that impacts to air quality due to the loss of hydropower are usually displayed in tons per year for increased emissions of CO_2, NO_x, and SO_2. However, the SDEIS displayed the increased emissions just as a percentage of total emissions, which, Southwestern believes, gives the false impression of the increased emissions as being very minor.

Southwestern believes that before minimum flows are implemented, several actions must take place. Empire District Electric Company must be compensated for losses to their Federal Energy Regulatory Commission licensed hydropower project at Ozark Beach Dam due to the storage reallocation at Bull Shoals Lake as required by the EWDAA. The Federal hydropower purpose must be credited for losses due to minimum flows at Bull Shoals and Norfork, also as required by the EWDAA. Finally, water must be sufficiently accumulated in the reallocated storage to provide the minimum flows.

We appreciate the opportunity to provide comments on the SDEIS. Please contact Mr. Michael Denny at 918-595-6683 or Michael.Denny@swpa.gov if you have any questions.

Sincerely,

George Robbins
Director, Division of Resources and Rates

Enclosure

cc:
Ted Coombes (SPRA)
Executive Director
Southwestern Power Administration

Darrick Moe
Assistant Administrator
Power Marketing Liaison Office

Enclosure 1

November 03, 2008

Southwestern Power Administration Comments for the Supplemental Draft Environmental Impact Statement – White River Minimum Flow Study August 2008

Abstract:

(Note: Paragraphs are numbered from the beginning of the referenced section or sub-section)

1. Abstract, Paragraph 1, Sentence 2. Sentence 2 states "WRDA 99 & 00 directed…" For consistency, please change sentence 2 to "WRDA 1999 and WRDA 2000 directed…"

2. Abstract, Paragraph 2, Sentence 1. Sentence 1 incorrectly titles Public Law (PL) 109-103. Please change sentence 1 to "…the FY 2006 Energy and Water Development *Appropriations* Act…"

3. Abstract, Paragraph 2, Sentences 2 and 3. For clarity, please delete sentences 2 and 3 and insert in their place "Section 132 of PL 109-103 de-authorized implementation of Minimum Flows at Beaver, Table Rock and Greers Ferry by repealing the previous Minimum Flow project authorities in WRDA 1999 and WRDA 2000."

4. Abstract, Paragraph 3, Sentence 1. Please correct sentence 1 to read "…Reservoirs; however, emphasis…"

5. Abstract, Paragraph 3, Sentence 1. Sentence 1 incorrectly titles PL 109-103. Please change sentence 1 to "…the FY 2006 Energy and Water Development *Appropriations* Act…"

Executive Summary:

(Note: Paragraphs are numbered from the beginning of the referenced section or sub-section)

1. Introduction, Paragraph 1, Sentence 2, Page ES-1-1. Sentence 2 incorrectly titles PL 109-103. Please change sentence 2 to "…the FY 2006 Energy and Water Development *Appropriations* Act (EWDAA, …"

2. Introduction, Paragraph 2, Sentence 3, Page ES-1-1. For clarity, please add "…of Minimum Flows." to the end of the sentence.

3. Introduction, Paragraph 4, Sentences 5 and 6, Page ES-1-2. For clarity, please delete sentences 5 and 6 and insert in their place "Section 132 of PL 109-103 de-authorized implementation of Minimum Flows at Beaver, Table Rock and Greers Ferry by repealing the previous Minimum Flow project authorities in WRDA 1999 and WRDA 2000."

4. Introduction, Paragraph 5, Sentence 1, Page ES-1-3. Please reference PL 109-103 correctly. Please change sentence 1 to "…the 2006 EWDAA this…"

5. Introduction, Paragraph 6, Sentence 1, Page ES-1-3. Please reference PL 109-103 correctly. Please change sentence 1 to "The 2006 EWDAA directed…"

6. Introduction, Paragraph 9, Sentence 2, Page ES-1-3. Please insert "one of" after "specifies the use of."

7. Introduction, Paragraph 9, Sentence 3, Page ES-1-3. For clarity, please change sentence 3 to "The Supervisory Control and Data Acquisition system, the computer system that operates Bull Shoals, can be modified in order to use the main turbines for minimum flow releases."

8. Introduction, Figure ES-2, Page ES-1-4. Please change storage zone designation "Fishery" to "Minimum Flows."

9. Introduction, Paragraph 10, Sentence 1, Page ES-1-4. Please reference PL 109-103 correctly. Please change sentence 1 to "…the 2006 EWDAA directed…"

10. Introduction, Figure ES-3, Page ES-1-5. Please change storage zone designation "Fishery" to "Minimum Flows."

11. Introduction, Paragraph 12, Sentence 3, Page ES-1-5. Sentence 3 states that the trout fishery is "sub-optimal." Southwestern has previously commented on the use of the "sub-optimal" adjective when describing the trout fisheries of the Bull Shoals and Norfork tailwaters. Southwestern believes that the use of "sub-optimal" conveys a negative connotation regarding the overall health and

viability of the trout fisheries that have also been described as "world class" and "exceptional" by numerous sources (the Supplemental Draft Environmental Impact Statement (SDEIS) uses the 'world class' descriptor in 3.6.2.3 Tailwater Areas, Paragraph 9, Sentence 3, Page 3-31). The Corps did not concur with Southwestern's previous comment, provided to the Corps during the review period for the May 2006 Draft Environmental Impact Statement for the White River Minimum Flows, regarding the use of the "sub-optimal" descriptor of the trout fishery. The Corps non-concurrence stated, "A world class trout fishery does not necessarily imply that it is at its optimal potential." If the Corps insists on using "sub-optimal" when describing the trout fisheries below Bull Shoals and Norfork, Southwestern requests that the descriptor be expanded to "exceptional, but sub-optimal" and be used throughout the SDEIS to avoid any negative inference about the overall status of the trout fisheries. Please change.

12. ES.2 Land Use, Paragraph 1, Sentence 1, Page ES-1-6. Please correct the sentence to "…Action" alternative or the…"

13. ES.4 Water Resources, Lake Effects, Paragraph 2, Conservation Pool Table, Page ES-1-6. Please rename column 1 from "Lake" to "Project."

14. ES.4 Water Resources, Lake Effects, Paragraph 2, Conservation Pool Table, Page ES-1-6. Please re-format column 2 to allow the "Reallocation" heading to appear correctly.

15. ES.4 Water Resources, Conservation Pool Table, Page ES-1-6. Please change third column heading from "REALLOCATION TAKEN FROM" to "ALTERNATIVE."

16. ES.4 Water Resources, Lake Effects, Paragraph 2, Conservation Pool Table, Page ES-1-6. Columns 3, 4, 5, 6, 7 and 8. There are "*" or "**" flowing or preceding several values and descriptors in the table; however, it is not clear what the "*" or "**" are to be indicating or identifying. Please clarify what the "*" and "**" are defining, or delete them from the table.

17. ES.4 Water Resources, Lake Effects, Paragraph 2, Conservation Pool Table, Page ES-1-6. Please insert a ")" after "(feet MSL" in column 4.

18. ES.4 Water Resources, Lake Effects, Paragraph 2, Bull Shoals – Annual Pool Elevation Duration for Elevations of Interest, Page ES-1-7. Please re-format column 1 to allow the "Elevation" heading to appear correctly.

19. ES.4 Water Resources, Lake Effects, Paragraph 2, Bull Shoals – Annual Pool Elevation Duration for Elevations of Interest, Page ES-1-7. Please rename the entry in Column 2, rows 6-8 from "Fish and Wildlife Service" to "Fish and Wildlife Service Elevations of Concern."

20. ES.4 Water Resources, Water Quality, Paragraph 3, Sentence 6, Page ES-1-8. Southwestern believes, if implemented correctly, that the minimum flow provided to the fishery downstream of Bull Shoals via a small, highly aerated, release through the existing hydropower turbine will increase the dissolved oxygen (DO) in the Bull Shoals tailwaters as well. Please change the sentence to "The dissolved oxygen in the Bull Shoals and Norfork tailwaters should increase from highly aerated turbine releases (BS-3) and from a siphon and aeration valve combination release (NF-7)."

21. ES.6 Threatened and Endangered Species, Paragraph 3, Page ES-1-10. Please place below the paragraph "This Space Intentionally Left Blank" or delete the page break before Section ES.7 to avoid any confusion of missing information.

22. ES.7 Air Quality, Paragraph 1, Sentence 1, Page ES-1-11. Any reallocation of storage from a hydropower project will result in a decrease in hydropower production in any scenario, not just during a drought. Please change the sentence to "Other than the "No Action" alternative, the reallocation alternatives will result in a decrease in hydropower production."

23. ES.7 Air Quality, Paragraph 1, Sentence 2, Page ES-1-11. When a storage reallocation occurs from a hydropower project, the lost power will have to be replaced. It is unlikely that new hydropower of any significant size will be placed into service in Southwestern's region in the foreseeable future. The energy that will replace the lost hydropower energy will most certainly be derived from a thermal source (coal, gas, oil or nuclear). Please change sentence 2 to "Replacement power for the lost hydropower generation will have to be provided by alternative sources such as combustion plants (gas, coal, oil) or nuclear power plants."

24. ES.7 Air Quality, Paragraph 1, Sentence 3, Page ES-1-11. Please change sentence 3 from "Even if all additional power were …" to "If all the replacement power were..."

25. ES.7 Air Quality, Percent Annual Increase in Emissions Table, Page ES-1-11. Please use capital "O" instead of zero in NO_x headings.

26. ES.7 Air Quality, Paragraph 1, Percent Annual Increase in Emissions Table, Page ES-1-11. Southwestern believes the information displayed in the table is very misleading. The increase in emissions due to the loss of hydropower for this project should be displayed in a table that shows the increase in tons/year of CO_2, SO_2 and NO_x, not a table that just quantifies the percent of annual increase in greenhouse gas emissions for a particular state. A second table should be added to display the cumulative increase (in tons) in CO_2, SO_2 and NO_x emitted into the atmosphere over the project life. The information presented is also misleading by quantifying the greenhouse gas increase in both Missouri and Arkansas. Without a thorough analysis, the data could be interpreted as an

impact in each state, rather than the separate impact in Arkansas or Missouri (depending on where the replacement power will be generated). Perhaps a better approach would be to use the average of the output emission rates of Arkansas, Kansas, Missouri, Louisiana, Oklahoma, and Texas (Southwestern's marketing region) to determine the increase in annual emissions due to lost hydropower from the project since the replacement energy for the lost hydropower will more than likely be produced in one of those six states rather than just Arkansas or Missouri. Please revise the emissions table by adding information that quantifies the additional CO_2, SO_2 and NO_x that will be emitted into the atmosphere due to the lost hydropower with the information displayed in tons/year by using an average regional output emission rate. Also, please add a table that quantifies the cumulative amount of additional CO_2, SO_2 and NO_x that will be emitted into the atmosphere due to the lost hydropower throughout the project life (in tons) by using an average regional output emission rate.

27. ES.7 Air Quality, Paragraph 2, Percent Annual Increase in Emissions Table for all Projects, Page ES-1-12. Please split the "White River Minimum Flow" descriptor in Column 1, Row 2 into two rows and re-designate the new rows "White River Minimum Flow BS-3" and "White River Minimum Flow NF-7" to clarify what project uses the 50/50 conservation and flood storage split (NF-7) and what project uses the flood storage (BS-3).

28. ES.7 Air Quality, Paragraph 2, Percent Annual Increase in Emissions Table for all Projects, Page ES-1-12. Southwestern believes the information displayed in the table is very misleading. The increase in emissions due to the loss of hydropower for these projects should be displayed in a table that shows the increase in tons/year of CO_2, SO_2 and NO_x, <u>not</u> a table that just quantifies the percent of annual increase in greenhouse gas emissions for a particular state. A second table should be added to display the cumulative increase (in tons) in CO_2, SO_2 and NO_x emitted into the atmosphere over the life of these projects. The information presented is also somewhat misleading by quantifying the greenhouse gas increase in both Missouri and Arkansas. Without a thorough analysis, the data could be interpreted as an impact in each state, rather than the separate impact in Arkansas or Missouri (depending on where the replacement power will be generated). Perhaps a better approach would be to use the average of the output emission rates of Arkansas, Kansas, Missouri, Louisiana, Oklahoma, and Texas (Southwestern's marketing region) to determine the increase in annual emissions due to lost hydropower from these projects since the replacement energy for the lost hydropower will more than likely be produced in one of those six states rather than just Arkansas or Missouri. Please revise the emissions table by adding information that quantifies the additional CO_2, SO_2 and NO_x that will be emitted into the atmosphere due to the lost hydropower with the information displayed in tons/year by using an average regional output emission rate. Also, please add a table that quantifies the cumulative amount of additional CO_2, SO_2 and NO_x that will be emitted into the

atmosphere due to the lost hydropower throughout the project life (in tons) by using an average regional output emission rate.

29. ES.8 Socioeconomic Resources, Paragraph 2, Sentence 4, Page ES-1-12. The sentence states that "...the study area could experience a significant increase in economic activity." Southwestern disagrees with this statement. A $4 million (or $7 million as is reported in the SDEIS, 3.8 Socioeconomic, Paragraph 13, Sentence 5, Page 3-40) annual recreation benefit increase is not significant when compared to the current annual recreation benefits derived from the Bull Shoals and Norfork Lake Projects (approximately $125.5 million - Tables 3.5.2.1-1 and 3.5.2.2-1). Also, when the annual loss of benefits to hydropower (approximately $3.5 million – Southwestern Power Administration Proposed Hydropower Impact Determination) for Minimum Flows is accounted for, the estimated benefits of the project decrease dramatically. Please revise the sentence to state that the increase in economic activity will be minor.

30. ES.8 Socioeconomic Resources, Paragraph 2, Sentence 5, Page ES-1-12. The sentence states that the project is expected to bring in over $4 million annually in benefits. However, the SDEIS (Section 3.8, Paragraph 13, Sentence 5, Page 3-40) states that the project is expected to bring in over $7 million annually in benefits. After review of the Reallocation Report (Appendix D, Table D6), Southwestern believes that the correct average annual benefit of the Minimum Flow project is almost $5.0 million. Please correct and use the correct benefit number consistently throughout the Executive Summary, the SDEIS, and Reallocation Report.

31. ES.10 Cumulative Impacts, Paragraph 3, Sentence 1, Page ES-1-13. The sentence refers to Table 4.10-1; however, the Table on the following pages is not titled. Please add the title of the Table 4.10-1 to the tables on pages ES-14, ES-15 and ES-16.

32. ES.10 Cumulative Impacts, Table 4.10-1, Page ES-14. The page numbering on ES-14 through ES-16 is inconsistent with the page numbering throughout the executive summary. Please renumber pages ES-14 through ES-16 as ES-1-14, ES-1-15 and ES-1-16.

33. ES.10 Cumulative Impacts, Table 4.10-1, Page ES-14. In Columns 3, 4 and 5 of the Water Resources row, the statement should read "Water Supply Reallocations could possibly reduce flood control storage benefits and will reduce hydropower benefits." Any water storage reallocation from a reservoir project with hydropower will negatively affect the hydropower benefits from the project. Please correct.

34. ES.10 Cumulative Impacts, Table 4.10-1, Pages ES-14, ES-15 and ES-16. There are numerous statements in the rows and columns that do not have a "." at the end of the statement or contain multiple ".." at the end of the statement. Please correct.

Supplemental Draft Environmental Impact Statement – White River Minimum Flow Study, August 2008:

(Note: Paragraphs are numbered from the beginning of the referenced section or sub-section)

1. Supplemental Draft Environmental Impact Statement, Section 1.1, Paragraph 2, Sentences 3 and 4, Page 1-1. Southwestern believes that these sentences are inaccurate at best, and actually misinform the reader of the Supplemental Draft Environmental Impact Statement for the White River Minimum Flow Study (SDEIS) to infer that the trout fisheries below Bull Shoals and Norfork are impaired by the upstream projects. The trout fisheries downstream of Bull Shoals and Norfork owe their existence to the upstream multi-purpose projects which have, according to the SDEIS, created "coldwater fisheries of major economic proportion" (Section 3.5.4, Paragraph 4, Sentence 1, Page 3-26). Furthermore, Public Law (PL) 109-103 states in Section 132(A)(2) that the "…White River Minimum Flows project facilities shall be considered fish and wildlife enhancements…" A viable and exceptional cold water trout fishery currently exists downstream of Bull Shoals and Norfork, and the Minimum Flow project will further enhance the fishery. It also seems premature to comment on water quality in the introduction of the SDEIS, and again, inaccurate as for a reason for implementing Minimum Flow. The overarching argument for the Minimum Flow project has historically been the benefits of the betterment of navigation and temperature associated with Minimum Flows. The benefit of water quality improvement regarding the low DO problem is a possibility if Minimum Flows are implemented correctly below Norfork and Bull Shoals, but water quality improvement for low DO was not the reason for the Minimum Flow project. Please change the sentences to "Since that time, exceptional trout fisheries have been developed below the projects. To further enhance the fisheries it was determined that increased minimum flows below the dams would provide better downstream temperatures and aid in river boat navigation."

2. Supplemental Draft Environmental Impact Statement, Section 1.1, Paragraph 3, Sentence 2, Page 1-1. Please correct the sentence to "…provide an *enhanced* minimum flow for the benefit of the tailwater fishery as directed in Section 132 of the Energy and Water Development Appropriations Act, (P.L. 109-103)."

3. Supplemental Draft Environmental Impact Statement, Section 1.2, Paragraph 1, Sentence 2, Page 1-1. Delete the second comma after "control."

4. Supplemental Draft Environmental Impact Statement, Section 1.2, Paragraph 3, Sentences 5 and 6, Page 1-2. For clarity, please delete sentences 5 and 6 and insert in their place "Section 132 of PL 109-103 de-authorized implementation

of Minimum Flows at Beaver, Table Rock and Greers Ferry by repealing the previous Minimum Flow project authorities in WRDA 1999 and WRDA 2000."

5. Supplemental Draft Environmental Impact Statement, Section 1.2, Paragraph 4, Sentence 1 and the Sec. 132 (A) heading, Page 1-2. The Energy and Water Development Appropriations Act would normally be given the acronym of "EWDAA." Please correct throughout the SDEIS.

6. Supplemental Draft Environmental Impact Statement, Section 1.2, Paragraph 4, Sec. 132 (b), Page 1-3. This section should be italicized for consistency of format. Please correct.

7. Supplemental Draft Environmental Impact Statement, Section 1.3, Paragraph 4, Sentence 2, Page 1-4. Southwestern believes that this sentence conveys negative connotations about the Bull Shoals and Norfork projects. Please change the sentence to "...hypolimnetic water changed the native warm water fishery of both streams to cold water fisheries.

8. Supplemental Draft Environmental Impact Statement, Section 2.1.1, Paragraph 1, Page 2-1. A statement should be included in this paragraph that specifies that the BS-3 alternative includes the seasonal pool at Bull Shoals that was established to partially mitigate for the releases that Southwestern schedules during the summer to maintain cool water temperatures downstream for the trout fishery. The SUPER modeling for the BS-3 alternative included the seasonal pool at Bull Shoals and the EIS should explicitly state that the seasonal pool will remain in place at Bull Shoals.

9. Supplemental Draft Environmental Impact Statement, Section 2.1.1, Paragraph 1, Sentence 1, Page 2-1. Southwestern believes that the acronym for the 2006 Energy and Water Development Appropriations Act should be EWDAA, not EWRDA. Please correct throughout the report.

10. Supplemental Draft Environmental Impact Statement, Section 2.1.1, Paragraph 4, Sentence 3, Page 2-1. For clarity, please change sentence 3 to "The Supervisory Control and Data Acquisition system, the computer system that operates Bull Shoals, can be modified in order to use the main turbines for minimum flow releases."

11. Supplemental Draft Environmental Impact Statement, Section 2.2.1, Figure 2.1.1-1, Page 2-2. Please change storage zone designation "Fishery" to "Minimum Flows."

12. Supplemental Draft Environmental Impact Statement, Section 2.1.2, Paragraph 1, Page 2-2. A statement should be included in this paragraph that specifies that the NF-7 alternative includes the seasonal pool at Norfork that was established to partially mitigate for the releases that Southwestern schedules during the

summer to maintain cool water temperatures downstream for the trout fishery. The SUPER modeling for the NF-7 alternative included the seasonal pool at Norfork and the EIS should explicitly state that the seasonal pool will remain in place at Norfork.

13. Supplemental Draft Environmental Impact Statement, Section 2.2.2, Figure 2.1.2-1, Page 2-4. Please change storage zone designation "Fishery" to "Minimum Flows."

14. Supplemental Draft Environmental Impact Statement, Section 2.1.2.1, Paragraph 1, Sentence 3, Page 2-4. Sentence 3 states that the trout fishery is "sub-optimal." Southwestern has previously commented on the use of the "sub-optimal" adjective when describing the trout fisheries of the Bull Shoals and Norfork tailwaters. Southwestern believes that the use of "sub-optimal" conveys a negative connotation regarding the overall health and viability of the trout fisheries that have also been described as "world class" and "exceptional" by numerous sources (the Supplemental Draft Environmental Impact Statement (SDEIS) uses the 'world class' descriptor in 3.6.2.3 Tailwater Areas, Paragraph 9, Sentence 3, Page 3-31). The Corps did not concur with Southwestern's previous comment, provided to the Corps during the review period for the May 2006 Draft Environmental Impact Statement for the White River Minimum Flows, regarding the use of the "sub-optimal" descriptor of the trout fishery. The Corps non-concurrence stated, "A world class trout fishery does not necessarily imply that it is at its optimal potential." If the Corps insists to maintain the use of "sub-optimal" when describing the trout fisheries below Bull Shoals and Norfork, Southwestern requests that the descriptor be expanded to "exceptional, but sub-optimal" and be used throughout the SDEIS to avoid any negative inference about the overall healthy status of the trout fisheries. Please change.

15. Supplemental Draft Environmental Impact Statement, Section 2.1.2.1, Paragraph 1, Sentence 4, Page 2-4. Please add a period to the end of the sentence.

16. Supplemental Draft Environmental Impact Statement, Section 3.1, Sentence 3, Page 3-1. Please change "temperate" to "temperature."

17. Supplemental Draft Environmental Impact Statement, Section 3.5.1.3, Paragraphs 1, 2, 3, 4, 5, and 6, Page 3-11. The section regarding the Buffalo National River (BNR) is a needed inclusion into the SDEIS; however, much of the information contained in Section 3.5.1.3 appears to be based on opinion and is written more like a tourist information brochure than what would normally be found in an environmental impact statement, and devalues the remaining information in the section. Phases such as "...as a trickle...the meaning of the BNR...reflected in the faces of people accepting the river's recreational challenges...it rises the spirits of the people immersed in this landscape's

beauty…" An environmental impact statement should be an unbiased, scientific analysis of the effects that an action (or actions) will cause to the affected area demonstrating good faith objectivity. An environmental impact statement should not include information regarding the location of visitor centers, the need of an Arkansas fishing license to fish on the BNR, and spectacular sights. Southwestern believes that Section 3.5.1.3 should be entirely revised and rewritten in a manner that conveys an objective, scientific approach to describing the BNR (Sections 3.5.1.1 and 3.5.1.2 would be good to use as examples when rewriting Section 3.5.1.3). Please revise Section 3.5.1.3.

18. Supplemental Draft Environmental Impact Statement, Section 3.5.1.3, Paragraph 10, Sentences 2, 3 and 4, Page 3-12. These sentences seem to indicate that the Corps does not believe that the Bull Shoals project was completely mitigated when it was constructed. It also implies that actions by the Arkansas Game and Fish Commission (AGFC), US Fish and Wildlife Service, the Corps and Southwestern continue to be detrimental to the BNR fishery because of unmitigated consequences due to the construction of Bull Shoals. Southwestern has always maintained that the construction of Bull Shoals and the impacts that the project has had to downstream fisheries were completely mitigated when the project was authorized by Congress. Please clarify the intent of these sentences.

19. Supplemental Draft Environmental Impact Statement, Section 3.5.2.1, Fish and Wildlife, Paragraph 1, Sentence 1, Page 3-16. At the end of the sentence, please include the acronym for Arkansas Game and Fish Commission (AGFC).

20. Supplemental Draft Environmental Impact Statement, Section 3.5.2.1, Fish and Wildlife, Paragraph 1, Sentence 5, Page 3-16. Please use the AGFC acronym.

21. Supplemental Draft Environmental Impact Statement, Section 3.5.2.1, Park Facilities, Table 3.5.2.6-1, Page 3-18. The "X" and "*" marks in Row 1 of the table need to be aligned with the marks in the other rows. Please correct.

22. Supplemental Draft Environmental Impact Statement, Section 3.5.2.2, Topography, Paragraph 1, Page 3-21. Please insert a space between the numbers and "percent."

23. Supplemental Draft Environmental Impact Statement, Section 3.5.2.2, Fish and Wildlife, Paragraph 1, Sentence 2, Page 3-22. Hydropower is not the only pool operation at Norfork that causes "…dramatic water fluctuations…" Please change the sentence to "Submergent aquatic vegetation that occurs in stable reservoirs is absent from Norfork Lake due to dramatic water fluctuations associated with a multi-purpose flood control project and poor substrate."

24. Supplemental Draft Environmental Impact Statement, Section 3.5.2.2, Fish and Wildlife, Paragraph 1, Sentence 5, Page 3-22. Please include "feet" after 15 and 25 in the sentence.

25. Supplemental Draft Environmental Impact Statement, Section 3.5.2.2, Fish and Wildlife, Paragraph 2, Sentence 5, Page 3-22. Please use the AGFC acronym (as defined in sentence 1 of the paragraph) for AGFC. Also, please include a period at the end of the sentence.

26. Supplemental Draft Environmental Impact Statement, Section 3.5.4, Heading, Page 3-25. Tailwater is one word. Please correct.

27. Supplemental Draft Environmental Impact Statement, Section 3.5.4, Paragraph 1, Sentence 12, Page 3-26. At the end of the sentence please include "...project; however, it is anticipated that minimum flows should improve the low DO problem when implemented."

28. Supplemental Draft Environmental Impact Statement, Section 3.5.4, Paragraph 3, Sentence 1, Page 3-26. The water quality problems with the tailwaters of Bull Shoals and Norfork are not only attributable to hydropower generation. The dissolved oxygen (DO) data compiled since the early 1990's clearly shows that the temperature and DO problems in the Bull Shoals and Norfork tailwaters are much worse during periods of non-generation, rather than generation. During the low DO season, leakage from the dams during non-generation periods causes the most severe DO conditions. Please delete "hydropower generation" from the sentence and change the sentence to "...water quality problems have been associated with the Bull Shoals and Norfork tailwaters."

29. Supplemental Draft Environmental Impact Statement, Section 3.5.4, Paragraph 3, Sentence 4, Page 3-26. Delete "Emergency" from the sentence and replace it with "Operating." DO levels in the forebays of Bull Shoals and Norfork regularly reach levels that require changes to the hydropower operations to entrain oxygen into the hydropower releases to support a minimum level of DO. These operations occur on a routine, annual basis, and are not considered "emergency."

30. Supplemental Draft Environmental Impact Statement, Section 3.5.4, Table 3.5.4, Page 3-27. Based on various information sources, it appears that the majority of the reported fish killed on October 08, 1990, at Bull Shoals were those stocked immediately below the dam by AGFC personnel although they were aware of potentially lethal DO concentrations. The Corps reported that they received no fish kill reports from the public and their personnel were unable to verify that a fish kill had occurred. Please provide additional information or remove the October 08, 1990, fish kill from Table 3.5.4.

31. Supplemental Draft Environmental Impact Statement, Section 3.5.4, Table 3.5.4, Page 3-27. Please remove the fish kills dated November 24, 2004, May 04, 2007, and June 05, 2007 from Table 3.5.4. One or two dead trout could probably be noted at any time for various reasons other than water quality issues.

32. Supplemental Draft Environmental Impact Statement, Section 3.5.4, Table 3.5.4, Page 3-27. Please remove the fish kills dated June 16, 2002, and May 27, 2005, from Table 3.5.4. No specific quantities of fish or species have been identified for those dates.

33. Supplemental Draft Environmental Impact Statement, Section 3.6.2.1, Paragraph 1, Sentence 2, Page 3-27. Please insert a space between "30" and "percent."

34. Supplemental Draft Environmental Impact Statement, Section 3.6.2.2, Paragraph 4, Sentences 1 and 2, Page 3-28. Southwestern believes the sentences convey a negative connotation regarding the Bull Shoals and Norfork projects. Please delete sentence 2 and change sentence 1 to "Below Bull Shoals and Norfork, cold water and fluctuating water levels changed the warm water fisheries to cold water fisheries and presented an opportunity to introduce trout."

35. Supplemental Draft Environmental Impact Statement, Section 3.6.2.3, Paragraph 1, Sentences 8 and 9, Page 3-29. These two sentences appear to be in the wrong section of the SDEIS. Please move these sentences to section 3.5.4, Water Quality, where the topics addressed in these sentences should be located.

36. Supplemental Draft Environmental Impact Statement, Section 3.6.2.3, Paragraph 4, Sentence 1, Page 3-29. The sentence states that changes in the hydropower operations that occurred in the early 1970's are partially at fault for limiting the size of rainbow trout in the tailwaters. Southwestern is not aware of any change that was made to the hydropower operations in the early 1970's that would have inhibited the growth of rainbow trout. Furthermore, it was in the early 1970's that the daily minimum hydropower releases were increased. Those increases in the hydropower releases should have enhanced the habitat for the rainbow trout and facilitated growth rates for the fish. The sentence also states that during the 1970's, the fishing pressure increased. Along with increased fishing pressure, there was increased stocking of the tailwaters, which led to more trout in the tailwaters, but less available food for each trout; therefore, the growth rates of the rainbow trout are inhibited by the increased stocking and the limited food availability, not hydropower releases. As previously requested (in comments submitted regarding the May 2006 Draft Environmental Impact Statement for the White River Minimum Flows) by Southwestern, please provide documentation of the operational changes. The Corps' response to Southwestern's requested was that a citation was added;

however, a citation of a report completed by "Jones and Aggus in 1983 is not sufficient documentation of changes to the hydropower operations. Southwestern requests a copy of the Jones and Aggus 1983 report. Please delete "combined with changes in hydropower operations" from the sentence, or, as previously requested by Southwestern, please detail what operational changes were made and provide documentation.

37. Supplemental Draft Environmental Impact Statement, Section 3.6.2.3, Paragraph 8, Sentences 6, 7 and 8, Page 3-31. These three sentences appear to be in the wrong section of the SDEIS. Please move these sentences to section 3.5.4, Water Quality, where the topics addressed in these sentences should be located.

38. Supplemental Draft Environmental Impact Statement, Section 3.6.2.3, Paragraph 9, Sentences 1 and 3, Page 3-31. These sentences contain statements that are based on opinion ("...favorite recreational pursuit..." and "...little doubt that...") and contain no scientific or objective information regarding the tailwaters of Bull Shoals and Norfork. They read more like an advertisement of the "world class" fishing available in the tailwaters of Bull Shoals and Norfork. An environmental impact statement is an unbiased, scientific document demonstrating good faith objectivity that offers factual documentation of the consequences of implementing a project that may have affect on the current environmental conditions. Please remove the language in these sentences that are not based in fact.

39. Supplemental Draft Environmental Impact Statement, Section 3.6.2.3, Paragraph 11, Sentence 2, Page 3-31. Please delete the sentence and replace it with "These good fisheries may be improved by minimum flows which will enhance the recreation and economic potentials of the fishery." Southwestern believes that this statement more accurately captures the current status of the fishery and the intent of PL 109-103.

40. Supplemental Draft Environmental Impact Statement, Section 3.6.2.3, Paragraph 13, Sentence 7, Page 3-32. Please delete the second period after the sentence.

41. Supplemental Draft Environmental Impact Statement, Section 3.6.2.3, Paragraph 13, Sentence 9, Page 3-32. Please delete the sentence and replace it with "However, since power generation releases vary with daily and seasonal needs for power generation and reservoir inflow conditions, the timing of hydropower releases can be difficult to predict." Southwestern believes that this more accurately describes the hydropower release schedules, rather than referring to them as a "gamble."

42. Supplemental Draft Environmental Impact Statement, Section 3.6.2.3, Paragraph 13, Sentence 12, Page 3-32. Please delete the comma at the end of the sentence and replace it with a period.

43. Supplemental Draft Environmental Impact Statement, Section 3.6.2.3, Table 3.6.2.3-1, Page 3-32. Please center the table on the page.

44. Supplemental Draft Environmental Impact Statement, Section 3.6.2.4, Paragraph 3, Sentence 4, Page 3-32. Southwestern believes that the statement "Protection for wildlife has saved at least a remnant to remind us of what the delta fishery could be." does not belong in the SDEIS due to its lack of objectivity. Please delete the sentence.

45. Supplemental Draft Environmental Impact Statement, Section 3.6.2.4, Paragraph 3, Sentence 5, Page 3-32. Please delete the sentence and replace it with "The slough and oxbows in the lower White River flood plain contain exceptional warm water fishing." to convey a more unbiased statement.

46. Supplemental Draft Environmental Impact Statement, Section 3.8, Paragraph 13, Sentence 4, Page 3-40. The sentence states that "...the study area could experience a significant increase in economic activity." Southwestern disagrees with this statement. A $7 million (or $4 million as is reported in the Executive Summary of the SDEIS, ES.8 Socioeconomic Resources, Paragraph 2, Sentence 4, Page ES-1-12) annual recreation benefit increase is <u>not</u> significant when compared to the current annual recreation benefits derived from the Bull Shoals and Norfork Lake Projects (approximately $125.5 million - Tables 3.5.2.1-1 and 3.5.2.2-1). Also, when the annual loss of benefits to hydropower (approximately $3.5 million – Southwestern Power Administration Proposed Hydropower Impact Determination) for Minimum Flows is accounted for, the estimated benefits of the project decrease dramatically. Please revise the sentence to state that the increase in economic activity will be <u>minor</u>.

47. Supplemental Draft Environmental Impact Statement, Section 3.8, Paragraph 13, Sentence 5, Page 3-40. The sentence states that the project is expected to bring in over $7 million annually in benefits. However, the Executive Summary of the SDEIS (ES.8 Socioeconomic Resources, Paragraph 2, Sentence 5, Page ES-1-12) states that the project is expected to bring in over $4 million annually in benefits. After review of the Reallocation Report (Appendix D, Table D6), Southwestern believes that the correct average annual benefit of the Minimum Flow project is almost $5.0 million. Please correct and use the correct benefit number consistently throughout the Executive Summary, SDEIS, and Reallocation Report.

48. Supplemental Draft Environmental Impact Statement, Section 4.0, Paragraph 1, Sentence 3, Page 4-1. Sentence 3 states that the trout fishery is "sub-optimal." Southwestern has previously commented on the use of the "sub-optimal"

adjective when describing the trout fisheries of the Bull Shoals and Norfork tailwaters. Southwestern believes that the use of "sub-optimal" conveys a negative connotation regarding the overall health and viability of the trout fisheries that have also been described as "world class" and "exceptional" by numerous sources (the Supplemental Draft Environmental Impact Statement (SDEIS) uses the 'world class' descriptor in 3.6.2.3 Tailwater Areas, Paragraph 9, Sentence 3, Page 3-31). The Corps did not concur with Southwestern's previous comment, provided to the Corps during the review period for the May 2006 Draft Environmental Impact Statement for the White River Minimum Flows, regarding the use of the "sub-optimal" descriptor of the trout fishery. The Corps non-concurrence stated, "A world class trout fishery does not necessarily imply that it is at its optimal potential." If the Corps insists to maintain the use of "sub-optimal" when describing the trout fisheries below Bull Shoals and Norfork, Southwestern requests that the descriptor be expanded to "exceptional, but sub-optimal" and be used throughout the SDEIS to avoid any negative inference about the overall status of the trout fisheries. Please change.

49. Supplemental Draft Environmental Impact Statement, Section 4.0, Page 4-1. There are several instances throughout this section where spaces were omitted separating numbers and words, such as "...95percent..." Please correct.

50. Supplemental Draft Environmental Impact Statement, Section 4.0, Paragraph 3, Sentence 2, Page 4-1. Delete the semicolon before the period.

51. Supplemental Draft Environmental Impact Statement, Section 4.0, Paragraph 3, Sentence 5, Page 4-1. Delete the semicolon before "at" and capitalize the "a" in "At." Delete the semicolon before the period.

52. Supplemental Draft Environmental Impact Statement, Section 4.0, Paragraph 5, Sentence 2, Page 4-2. Please delete "approximately" or change cost to "$11.2 million."

53. Supplemental Draft Environmental Impact Statement, Section 4.0, Paragraph 6, Sentence 3, Page 4-2. Please delete the sentence. It is premature in the SDEIS to make such a statement.

54. Supplemental Draft Environmental Impact Statement, Section 4.2.2, Paragraph 2, Sentence 1, Page 4-2. Please change the sentence from "...Action that is not..." to "...Action that are not..."

55. Supplemental Draft Environmental Impact Statement, Section 4.3.1, Table 4.3-1, Page 4-4. Please change third column heading from "REALLOCATION TAKEN FROM" to "ALTERNATIVE."

56. Supplemental Draft Environmental Impact Statement, Section 4.3, Table 4.3-1, Page 4-4. Please change "**BS3" and "**NF7" to "BS3**" and "NF7**" in Column 3, Rows 2 and 4.

57. Supplemental Draft Environmental Impact Statement, Section 4.3, Table 4.3-1, Page 4-4. Please change "(feet MSL" to "(feet MSL)" in the Elevation heading.

58. Supplemental Draft Environmental Impact Statement, Section 4.3.1.1, Paragraph 2, Sentence 4, Page 4-4. Please change the sentence from "...and 4.3.1.1-2 lists .the percent..." to "...and 4.3.1.1-2 lists the percent..."

59. Supplemental Draft Environmental Impact Statement, Section 4.3.1.1, Table 4.3.1-1, Page 4-6. Column 1 needs to be expanded to have the "Elevation" heading on the same line.

60. Supplemental Draft Environmental Impact Statement, Section 4.3.1.1, Table 4.3.1.1-1, Page 4-6. Footnote 3 indicates that the seasonal pool at Bull Shoals will be one month longer than the current seasonal pool duration. The BS-3 plan does not elongate the seasonal pool. Please change footnote 3 to "Proposed Seasonal Pool May 15 – June 15 then a 30 day transition to 661 Seasonal Pool through September 30."

61. Supplemental Draft Environmental Impact Statement, Section 4.3.1.2, Table 4.3.1.2-1, Page 4-10. Footnote 3 indicates that the seasonal pool at Norfork will be one month longer than the current seasonal pool duration. The NF-7 plan does not elongate the seasonal pool. Please change footnote 3 to "Proposed Seasonal Pool May 15 – June 15 then a 30 day transition to 555.75 Seasonal Pool through September 30."

62. Supplemental Draft Environmental Impact Statement, Section 4.3.1.3, Page 4-14. Presumably, Section 4.3.1.3 heading should be moved to page 4-11 and placed before "Comparison of Extreme Events at Bull Shoals and Norfork."

63. Supplemental Draft Environmental Impact Statement, Section 4.3.1.4, Paragraph 3, Sentence 6, Page 4-14. The sentence states that the DO in the Norfork tailwaters should increase by having an aeration valve on the siphon. Southwestern believes, if implemented correctly, that the minimum flow provided to the fishery downstream of Bull Shoals via a small, highly aerated, release through the existing hydropower turbine will increase the DO in the Bull Shoals tailwaters as well. Please change the sentence to "The dissolved oxygen in the Bull Shoals and Norfork tailwaters should increase from highly aerated turbine releases (BS-3) and from a siphon and aeration valve combination release (NF-7).

64. Supplemental Draft Environmental Impact Statement, Section 4.3.2.2, Paragraph 2, Sentence 1, Page 4-18. The sentence states that the DO in the

Norfork tailwaters should improve from the minimum flow release. Southwestern believes, if implemented correctly, that the minimum flow provided to the fishery downstream of Bull Shoals via a small, highly aerated, release through the existing hydropower turbine will increase the DO in the Bull Shoals tailwaters as well. Please include Bull Shoals, (BS-3) minimum flow turbine release in the statement regarding DO improvement.

65. Supplemental Draft Environmental Impact Statement, Section 4.4.2.4, Table 4.4.2.4, Page 4-23. There is a mistake on the last entry of the Celsius Column. It should be "7 – 19." Please correct.

66. Supplemental Draft Environmental Impact Statement, Section 4.4.2.4, Paragraphs 2 and 6, Page 4-23. The paragraphs are essentially the same. Please delete paragraph 6.

67. Supplemental Draft Environmental Impact Statement, Section 4.4.2.4, Figure 4.4.2.4-1, Page 4-24. The title of the figure includes the word "Lcoatgionsocations." Please delete "Lcoatgionsocations."

68. Supplemental Draft Environmental Impact Statement, Section 4.5.1, Paragraph 1, Sentences 1 and 4, Page 4-26. Please abbreviate "elevations of concern" as was done in Section 4.5, paragraph 2.

69. Supplemental Draft Environmental Impact Statement, Section 4.5.1, Table 4.5.1-1, Page 4-26. To be consistent with Section 4.5 and paragraph 1 in Section 4.5.1 please change "elevations of interest" to "elevations of concern" in the second line of the heading in Table 4.5.1-1.

70. Supplemental Draft Environmental Impact Statement, Section 4.5.1, Table 4.5.1-2, Page 4-27. Please remove the ")" from the Current Column heading.

71. Supplemental Draft Environmental Impact Statement, Section 4.6, Paragraph 1, Sentence 1, Page 4-29. Any reallocation of storage from a hydropower project will result in a decrease in hydropower production in <u>any</u> scenario, <u>not</u> just during a drought. Please change the sentence to "Other than the "No Action" alternative, the reallocation alternatives will result in a decrease in hydropower production."

72. Supplemental Draft Environmental Impact Statement, Section 4.6, Paragraph 1, Sentence 2, Pages 4-29 and 4-30. When a water reallocation occurs from a hydropower project, the lost power will have to be replaced. It is unlikely that new hydropower of any significant size will be placed into service in Southwestern's region in the foreseeable future. The energy that will replace the lost hydropower energy will most certainly be derived from a thermal source (coal, gas, oil or nuclear). Please change sentence 2 to "Replacement power for

the lost hydropower generation will have to be provided by alternative sources such as combustion plants (gas, coal, oil) or nuclear power plants."

73. Supplemental Draft Environmental Impact Statement, Section 4.6, Paragraph 2, Sentence 2, Page 4-30. For the reasons cited in Comment 72, please delete "...other hydropower plants..." from the sentence.

74. Supplemental Draft Environmental Impact Statement, Section 4.6, Table 4.6-1, Page 4-30. The entries in Row 1, Columns 4, 5 and 6 are not aligned and are bolded. Please align and un-bold the entries.

75. Supplemental Draft Environmental Impact Statement, Section 4.6, Table 4.6-2, Page 4-31. Since PL 109-103 required that Southwestern calculate the hydropower impacts of the project, the SDEIS should use the hydropower impact energy numbers that Southwestern calculated. The energy impact numbers in the SDEIS are higher than the numbers calculated by Southwestern.

76. Supplemental Draft Environmental Impact Statement, Section 4.6, Table 4.6-3, Page 4-31. The precision in table is unreasonable. Please revise the table to reflect the precision that a calculation using data of this nature can provide.

77. Supplemental Draft Environmental Impact Statement, Section 4.6, Table 4.6-3, Page 4-31. The numbers contained in the table only account for the increased emissions from the Bull Shoals energy losses and do not account for the energy losses at Norfork. Please correct the table to include the annual increase in emissions due to the energy losses at Bull Shoals and Norfork. Also, the information presented in the table is somewhat confusing by quantifying the greenhouse gas increase in both Missouri and Arkansas. Without a thorough analysis, the data could be interpreted as an impact in each state, rather than the separate impact in Arkansas or Missouri (depending on where the replacement power will be generated). Perhaps a better approach would be to use the average of the output emission rates of Arkansas, Kansas, Missouri, Louisiana, Oklahoma, and Texas (Southwestern's marketing region) to determine the increase in annual emissions due to lost hydropower from the project since the replacement energy for the lost hydropower will more than likely be produced in one of those six states rather than just Arkansas or Missouri. Please correct the data to by using a regional output emission rate.

78. Supplemental Draft Environmental Impact Statement, Section 4.6, Table 4.6-4, Page 4-31. Southwestern believes the information displayed in the table is somewhat misleading. The increase in emissions due to the loss of hydropower for this project should be displayed in a table that shows the increase in tons/year of CO_2, SO_2 and NO_x, not a table that just quantifies the percent of annual increase in greenhouse gas emissions for a particular state. A second table should be added to display the cumulative increase (in tons) in CO_2, SO_2 and NO_x emitted into the atmosphere over the project life. The information

presented is also somewhat misleading by quantifying the greenhouse gas increase in both Missouri and Arkansas. Without a thorough analysis, the data could be interpreted as an impact in each state, rather than the separate impact in Arkansas or Missouri (depending on where the replacement power will be generated). Perhaps a better approach would be to use the average of the output emission rates of Arkansas, Kansas, Missouri, Louisiana, Oklahoma, and Texas (Southwestern's marketing region) to determine the increase in annual emissions due to lost hydropower from the project since the replacement energy for the lost hydropower will more than likely be produced in one of those six states rather than just Arkansas or Missouri. Please revise the emissions table by adding information that quantifies the additional CO_2, SO_2 and NO_x that will be emitted into the atmosphere due to the lost hydropower with the information displayed in tons/year by using an average regional output emission rate. Also, please add a table that quantifies the cumulative amount of additional CO_2, SO_2 and NO_x that will be emitted into the atmosphere due to the lost hydropower throughout the project life (in tons) by using an average regional output emission rate.

79. Supplemental Draft Environmental Impact Statement, Section 4.6, Table 4.6-5, Page 4-32. Please separate Column 1, Row 1, White River Minimum Flow descriptor into two rows to correspond with each White River Minimum flow action, BS-3 and NF-7.

80. Supplemental Draft Environmental Impact Statement, Section 4.6, Table 4.6-5, Page 4-32. Southwestern believes the information displayed in the table is somewhat misleading. The increase in emissions due to the loss of hydropower for these projects should be displayed in a table that shows the increase in tons/year of CO_2, SO_2 and NO_x, not a table that just quantifies the percent of annual increase in greenhouse gas emissions for a particular state. A second table should be added to display the cumulative increase (in tons) in CO_2, SO_2 and NO_x emitted into the atmosphere over the life of these projects. The information presented is also somewhat misleading by quantifying the greenhouse gas increase in both Missouri and Arkansas. Without a thorough analysis, the data could be interpreted as an impact in each state, rather than the separate impact in Arkansas or Missouri (depending on where the replacement power will be generated). Perhaps a better approach would be to use the average of the output emission rates of Arkansas, Kansas, Missouri, Louisiana, Oklahoma, and Texas (Southwestern's marketing region) to determine the increase in annual emissions due to lost hydropower from these projects since the replacement energy for the lost hydropower will more than likely be produced in one of those six states rather than just Arkansas or Missouri. Please revise the emission table by adding information that quantifies the additional CO_2, SO_2 and NO_x that will be emitted into the atmosphere due to the lost hydropower with the information displayed in tons/year by using an average regional output emission rate. Also, please add a table that quantifies the cumulative amount of additional CO_2, SO_2 and NO_x that will be emitted into the

atmosphere due to the lost hydropower throughout the project life (in tons) by using an average regional output emission rate.

81. Supplemental Draft Environmental Impact Statement, Section 4.7, Paragraph 2, Sentence 4, Page 4-32. The sentence states that "…the study area could experience a significant increase in economic activity." Southwestern disagrees with this statement. A $4 million (or $7 million as is reported in the SDEIS, 3.8 Socioeconomic, Paragraph 13, Sentence 5, Page 3-40) annual recreation benefit increase is not significant when compared to the current annual recreation benefits derived from the Bull Shoals and Norfork Lake Projects (approximately $125.5 million - Tables 3.5.2.1-1 and 3.5.2.2-1). Also, when the annual loss of benefits to hydropower (approximately $3.5 million – Southwestern Power Administration Proposed Hydropower Impact Determination) for Minimum Flows is accounted for, the estimated benefits of the project decrease dramatically. Please revise the sentence to state that the increase in economic activity will be minor.

82. Supplemental Draft Environmental Impact Statement, Section 4.7, Paragraph 2, Sentence 7, Page 4-32. Replace "…would undoubtedly…" with "…may…" and replace "…those employed by them." With "…employees."

83. Supplemental Draft Environmental Impact Statement, Section 4.7, Table 4.7-2, Page 4-33. Please include "$" signs for Norfork data.

84. Supplemental Draft Environmental Impact Statement, Section 4.9, Paragraph 1, Sentences 3 and 4, Page 4-36. The last part of sentence 3 and all of sentence 4 have different shading. Please correct.

85. Supplemental Draft Environmental Impact Statement, Section 4.9, Table 4.9-1, Page 4-37. Columns 3, 4 and 5 in the Water Resources Row should have the "/or" deleted from the entry. Any storage reallocation will result in an adverse impact to hydropower. Please correct.

86. Supplemental Draft Environmental Impact Statement, Section 4.9, Table 4.9-1, Page 4-38. Entries in columns 3, 4, 5, and 6 in the Socioeconomic row should be deleted and replaced with "Original authorization and construction provided benefits to National, regional and local area due to reduction in flood damages, hydropower production and growth potential from increased recreation opportunities.

87. Supplemental Draft Environmental Impact Statement, Section 4.12, Paragraph 4, Sentence 2, Page 4-40. The purpose of the project, as described in PL 109-103 is to enhance the trout fishery. Therefore, please delete the sentence and replace it with "The purpose of the project is to enhance the trout fishery. Improvement of dissolved oxygen in the tailwaters of Bull Shoals and Norfork Lakes will be an additional benefit of the project."

88. Supplemental Draft Environmental Impact Statement, Section 4.12, Paragraph 18, Sentence 2, Page 4-43. "CONGRESSIONALLY MANDATED" is in all capital letters and shaded. Why? Please correct by giving the words the same font as the rest of the paragraph.

89. Supplemental Draft Environmental Impact Statement, Section 4.12, Paragraph 19, Sentence 2, Page 4-43. Please change sentence from "…participate as "Cooperating "Agencies" in the development…" to "…participate as "Cooperating Agencies" in the development…"

90. Supplemental Draft Environmental Impact Statement, Section 4.12, Paragraph 19, Sentence 4, Page 4-43. The last portion of the sentence is capitalized and shaded "…TO ENSURE NO UNFORSEEN IMPACTS RESULT FROM THE PROJECT." Please un-shade the words and put them in lower case.

Project Report – White River Minimum Flow Study, August 2008:

Executive Summary:

1. Executive Summary, Sections a and d, Page 1. There are several instances where a "-" is used to separate a number from a measurement descriptor. Please delete the "-" between numbers and measurement descriptors throughout the Executive Summary.

2. Executive Summary, Section a, Paragraph 1, Sentence 1, Page 1. The minimum flow release will consist of leakage, house unit discharge and an additional discharge from the main turbine at Bull Shoals. Please revise the sentence to include the leakage and house unit discharge as components of the minimum flow release.

3. Executive Summary, Section a, Paragraph 1, Page 1. A statement should be included in this paragraph that specifies that the BS-3 alternative includes the seasonal pool at Bull Shoals that was established to partially mitigate for the releases that Southwestern schedules during the summer to maintain cool water temperatures downstream for the trout fishery. The SUPER modeling for the BS-3 alternative included the seasonal pool at Bull Shoals and the Executive Summary of the Project Report should explicitly state that the seasonal pool will remain in place at Bull Shoals.

4. Executive Summary, Section d, Paragraph 1, Page 1. It appears as though this section has been mislabeled. Please re-label this section "b."

5. Executive Summary, Section d, Paragraph 1, Sentence 2, Page 1. The minimum flow release will consist of leakage, house unit discharge and an additional discharge from a siphon at Norfork. Please revise the sentence to include the leakage as a component of the minimum flow release at Norfork.

6. Executive Summary, Section d, Paragraph 1, Page 1. A statement should be included in this paragraph that specifies that the NF-7 alternative includes the seasonal pool at Norfork that was established to partially mitigate for the releases that Southwestern schedules during the summer to maintain cool water temperatures downstream for the trout fishery. The SUPER modeling for the NF-7 alternative included the seasonal pool at Norfork and the Executive summary of the Project Report should explicitly state that the seasonal pool will remain in place at Norfork.

7. Executive Summary, Section d, Paragraph 2, Sentence 2, Page 2. For clarity, please delete sentence 2 and replace it with "Section 132 of PL 109-103 de-authorized implementation of Minimum Flows at Beaver, Table Rock and Greers Ferry by repealing the previous Minimum Flows project authorities in WRDA 1999 and WRDA 2000."

8. Executive Summary, Environmental Summary Section, Paragraph 1, Sentence 3, Page 2. For consistency, please delete "99" and "00" and replace them with "1999" and "2000."

9. Executive Summary, Environmental Summary Section, Paragraph 1, Sentence 4, Page 2. At the end of the sentence please add "…Report, and de-authorized implementation of Minimum Flows at Beaver, Table Rock and Greers Ferry by repealing the previous Minimum Flows project authorities in WRDA 1999 and WRDA 2000."

10. Executive Summary, Environmental Summary Section, Paragraph 1, Sentence 6, Page 2. EWDAA is not defined in this paragraph. Please define EWDAA prior to its usage.

Project Report:

1. Section I, Paragraph 1, Page 1. A sentence should be added that states that the previous WRDA 1999 and WRDA 2000 authorizations of minimum flows at Beaver, Table Rock and Greers Ferry were repealed. Please add the sentence.

2. Section 1, Paragraphs 2 and 3, Page 1. There are several instances where a "-" is used to separate a number from a measurement descriptor. Please delete the "-" between numbers and measurement descriptors throughout the Project Report.

3. Section 1, Paragraph 2, Sentence 1, Page 1. The minimum flow release will consist of leakage, house unit discharge and an additional discharge from the main turbine at Bull Shoals. Please revise the sentence to include the leakage and house unit discharge as components of the minimum flow.

4. Section 1, Paragraph 2, Page 1. A statement should be included in this paragraph that specifies that the BS-3 alternative includes the seasonal pool at Bull Shoals that was established to partially mitigate for the releases that Southwestern schedules during the summer to maintain cool water temperatures downstream for the trout fishery. The SUPER modeling for the BS-3 alternative included the seasonal pool at Bull Shoals and the Project Report should explicitly state that the seasonal pool will remain in place at Bull Shoals.

5. Section 1, Paragraph 3, Sentence 2, Page 1. The minimum flow release will consist of leakage, house unit discharge and an additional discharge from a siphon at Norfork. Please revise the sentence to include the leakage as a component of the minimum flow release at Norfork.

6. Section 1, Paragraph 3, Page 1. A statement should be included in this paragraph that specifies that the NF-7 alternative includes the seasonal pool at Norfork that was established to partially mitigate for the releases that Southwestern schedules during the summer to maintain cool water temperatures downstream for the trout fishery. The SUPER modeling for the NF-7 alternative included the seasonal pool at Norfork and the Project Report should explicitly state that the seasonal pool will remain in place at Norfork.

7. Section 1, Paragraph 4, Sentence 3, Page 1. For clarity, please delete sentence 3 and replace it with "Section 132 of PL 109-103 de-authorized implementation of Minimum Flows at Beaver, Table Rock and Greers Ferry by repealing the previous Minimum Flows project authorities in WRDA 1999 and WRDA 2000."

8. Section I a., Paragraph 1, Sentences 4 and 8, Page 3. The sentences use the word "sustain" when describing the purpose for minimum flows. It should be

noted that "sustain" is the WDRA 1999 and 2000 language which was repealed. Please add a sentence to this paragraph that notes that the minimum flows projects are to "enhance" the downstream fisheries according to PL 109-103.

9. Section I a., Paragraph 1, Sentence 8, Page 3. Please add "...of storage:" to the end of the sentence.

10. Section I c., Paragraph 1, Sentence 4, Page 6. Please change the sentence from "...temperatures base..." to "...temperatures based..."

11. Section I c. 1., Paragraph 1, Sentence 1, Page 6. Please change the sentence from "...Lakes are..." to "...Lakes is..."

12. Section I c. 2., Paragraph 1, Sentence 9, Page 8. This sentence does not reflect the Corps' current operation. Typically, once Southwestern is notified that the project(s) will be restricted to firm power, the Corps allows Southwestern to utilize the entire amount of firm power at the project(s), regardless of how many hours are left in the day. Please revise the sentence to accurately reflect the operations of firm energy.

13. Section I c. 3., Paragraph 1, Sentence 2, Page 8. The sentence states that the warm water fisheries were destroyed. Southwestern has commented previously on statements of this nature in the SDEIS and in previous Minimum Flow Reports. It is has been documented that a viable population of smallmouth bass exist in the White River below the projects. According to the Corps' responses to Southwestern's comments regarding the White River Minimum Flow Study Draft EIS (May 2006), the Corps concurred with Southwestern's comment on the use of "destroyed" when describing what happened to the White River fisheries after Norfork and Bull Shoals were constructed. Please continue the concurrence and replace "...to the destruction..." with "...to the change..."

14. Section I c. 3., Paragraph 1, Sentence 12, Page 8. There are words missing from this sentence. Please correct for clarification (suggest changing the sentence to "...operations guide curves include seasonal top of conservation pool increases to elevations 657 and 555, respectively.").

15. Section I c. 3., Paragraph 1, Sentences 13 and 14, Page 8. The sentence does not describe the seasonal pool at Bull Shoals correctly (the seasonal pool at Bull Shoals starts May 1 and raises the conservation pool elevation to 655.00, and transitions the conservation pool elevation to 657.00 by May 15 and is held at 657.00 through June 15, then transitions the conservation pool elevation to 656.00 by July 15, and holds the conservation pool elevation at 656.00 until October 1 when the conservation pool elevation returns to 654.00). Please revise the sentences with the correct description of the Bull Shoals seasonal pool.

16. Section I c. 3., Paragraph 1, Sentences 15 and 16, Page 8. The sentence does not describe the seasonal pool at Norfork correctly (the seasonal pool at Norfork starts May 1 and raises the conservation pool elevation to 553.00, and transitions the conservation pool elevation to 555.00 by May 15 and is held at 555.00 through June 15, then transitions the conservation pool elevation to 554.00 by July 15, and holds the conservation pool elevation at 554.00 until October 1 when the conservation pool elevation returns to 552.00). Please revise the sentences with the correct description of the Norfork seasonal pool.

17. Section I c. 3., Paragraph 1, Sentence 22, Page 9. Please change the sentence from "... curves providesan..." to "...curves provide an..." Also, at the end of the sentence please add "...to make required releases for downstream temperature requirements."

18. Section I c. 3., Paragraph 1, Page 9. A statement should be included in this paragraph that specifies that the NF-7 and BS-3 alternatives include the seasonal pools at Norfork and Bull Shoals that were established to partially mitigate for the releases that Southwestern schedules during the summer to maintain cool water temperatures downstream for the trout fishery. The SUPER modeling for the NF-7 and BS-3 alternatives included the seasonal pools at Norfork and Bull Shoals and the Project Report should explicitly state that the seasonal pools will remain in place at Norfork and Bull Shoals.

19. Section I d., Paragraph 1, Sentence 2, Page 9. It is has been documented that a viable population of smallmouth bass exist in the White River below the projects, and therefore, a warm water fishery is still sustained in the White River near the projects (Arkansas Democrat Gazette article published on 07/06/06). Please change the sentences to state that the warm water fisheries were changed and delete "...could not sustain..."

20. Section I d., Paragraph 2, Sentence 4, Page 9. Sedimentation concerns have not been previously mentioned in the EIS and should be deleted from this section.

21. Section I d., Paragraph 2, Sentence 9, Page 10. Please change the sentence to "...and it repealed Section 374 of WRDA 1999 and Section 304 of WRDA 2000."

22. Section I d., Paragraph 2, Sentence 12, Page 10. At the end of the sentence, please spell "criteria" correctly.

23. Section I d., Paragraph 3, Page 10. Please add a space between Paragraphs 2 and 3.

24. Section I d., Paragraph 3, Sentence 2, Page 10. Please remove the space between "303" and "(d)."

25. Section I d., Paragraph 3, Sentences 4 and 6, Page 10. Southwestern is not aware of any Arkansas-Missouri DO Committee. Please delete "Arkansas-Missouri DO Committee" and replace it with "White River DO Committee."

26. Section I d., Paragraph 3, Sentence 5, Page 10. Please delete the space between "out" and "side."

27. Section I d., Paragraph 3, Page 10. A paragraph should be inserted after paragraph 3 that describes the Environmental Protection Agency's (EPA) recent Water Transfer Rule and the Corps' interpretation of the EPA's Water Transfer Rule as it pertains to DO conditions in the tailwaters of Bull Shoals and Norfork. The EPA's Final Water Transfer Rule was published on June 13, 2008 in the Federal Register.

28. Section I e., Paragraph 2, Sentence 1, Page 10. According to PL 109-103, BS-3 and NF-7 will "enhance" the fishery. Please delete "…water to sustain…" and replace with "…water to enhance…"

29. Section I e., Paragraph 2, Sentence 2, Page 10. Please delete "…at each lake." and replace with "…at Bull Shoals and Norfork."

30. Sections I e. and I f., Page 11. Please change every occurrence of "buy-out" or "buyout" to "payment".

31. Section I e., Paragraph 2, Sentence 5, Page 11. According to PL 109-103, BS-3 and NF-7 will "enhance" the fishery. Please delete "…intended to sustain the…" and replace with "…intended to enhance the…"

32. Section I e., Paragraph 2, Sentence 6, Page 11. Please insert "are allocated," after "(PED)" in the sentence.

33. Section I e., Paragraph 3, Sentence 3, Page 11. Arkansas Game and Fish Commission had been defined in Section I b. of the Project Report as AG&FC. Please stay with uniform acronyms throughout the Project Report.

34. Section I e., Paragraph 4, Sentence 3, Page 11. Southwestern Power Administration is already defined as SWPA in Section I of the Project report. Delete "Southwestern Power Administration."

35. Section I e., Paragraph 4, Sentence 3, Page 11. Please change the sentence from "…one-time Empire Electric Company payment…" to "…one-time Empire District Electric Company payment…"

36. Section I f., Paragraph 1, Sentence 3, Page 11. Please change the sentence from "…impacts at to Corps…" to "…impacts to Corps…"

37. Section I f., Paragraph 1, Sentence 5, Page 11. Please change the sentence from "…the AG&FC to their…" to "…the AG&FC to utilize their…"

38. Section I f., Paragraph 1, Sentence 7, Page 11. Please delete the sentence and replace it with "FERC License No. 2221 is a 'run of river' license. The license and Corps policy clearly state that the Corps reservoir operations are not required to consider the licensee when operating Bull Shoals and /or Table Rock Lake."

39. Section I f., Paragraph 1, Sentence 10, Page 12. Please change the sentence from "…SWPA to determine reduction…" to "…SWPA to determine the reduction…"

40. Section I f., Paragraph 1, Sentence 13, Page 12. Please change sentence from "…slightly higher losses to revenues foregone…" to "…slightly higher revenues and benefits foregone…"

41. Section II, Paragraph 1, Sentence 4. Please change reference from "Paragraph d. (1)" to Paragraph d.

42. Section II a., Paragraph 1, Sentence 5, Page 12. Please change the sentence from "…Tennessee Valley Association (TVA)." to "…Tennessee Valley Authority (TVA)."

43. Section II a., Paragraph 2, Sentence 1, Page 13. Please change the sentence from "…with it's main…" to "…with its main…"

44. Section II a., Paragraph 2, Sentence 2, Page 13. To provide a more accurate description of the "marketable power," please change the sentence from "…producing marketable power." to "…producing marketable, but less valuable off-peak power."

45. Section II b., Figures 1 and 2, Pages 13 and 14. Please change storage zone designations "Fishery" to "Minimum Flows."

46. Section II c., Paragraph 2, Sentence 1, Page 14. Please change "impact" to "impacts."

47. Section II c., Paragraph 2, Sentence 2, Page 14. Please spell "foregone" consistently throughout the Project Report.

48. Section II d., Sentence 3, Page 15. Please change the Norfork elevation of "555.75" to "556.75."

49. Section II d., Paragraph 1, Sentence 4, Page 15. The sentence is incorrect. Please delete the sentence and replace it with "The hydrologic output is presented in daily values.

50. Section II d. (b), Reservoir Leakage and Water Supply Withdaw Table, Page 15. The column alignment is off on the table making it very hard to interpret the data. Please correct.

51. Section II d. (c), Paragraph 1, Sentence 2, Page 15. Please un-capitalize "Unimproved."

52. Section II d. (c), Paragraph 2, Sentence 1, Page 15. The SUPER run cited in the sentence was previously identified as W01X01. Please be consistent with the citations.

53. Section II d. Flood Pool Reallocation and 50%/50% Reallocation, Page 16. Please insert annual plots of current seasonal pool plans and proposed seasonal pool plans for clarity.

54. Section II d. 50%/50%Reallocation, Page 16. Previous designations for this alternative have been "50:50." Please change the heading of this section to "50:50 Reallocation" for consistency.

55. Section II d. Required Minimum Flows Release, Paragraph 1, Sentence 4, Page 16. The sentence is incorrect. The release alternatives were neither formulated nor evaluated counting 100 percent of the losses against the minimum flows storage. Please correct.

56. Section II e., Paragraph 1, Sentence 4, Page 17. Please change "fishery needs" to "minimum flows."

57. Section II e., Paragraph 1, Sentence 7, Page 17. The sentence refers to "WRDA" storage. All WRDA specified storage for White River Minimum Flows projects was repealed and de-authorized by PL 109-103. The only storage available for the projects is from EWDAA. Please correct.

58. Section II e., Paragraph 2, Sentence 1, Page 17. Please delete "fishery flow."

59. Section II e., Table 2, Page 17. The column headings contain the phrase of "WRDA Storage." All WRDA specified storage for White River Minimum Flows projects was repealed and de-authorized by PL 109-103. The only storage available for the projects is from EWDAA. Please correct.

60. Section II e., Paragraph 3, Sentence 4, Page 17. Please change the sentence from "...with the fishery storage accounting..." to "...with the minimum flows storage accounting..."

61. Section II e., Table 2, Page 17. The storage amounts shown for Norfork are incorrect. Please refer to the July 2004 White River Minimum Flows Reallocation Report, Page 18, for the correct storage amounts from the conservation pool and the flood pool.

62. Section II f. 3., Table 4, Page 21. Footnote 3 indicates that the seasonal pool at Bull Shoals will be one month longer than the current seasonal pool duration. The BS-3 plan does not elongate the seasonal pool. Please change footnote 3 to "Proposed Seasonal Pool May 15 – June 15 then a 30 day transition to 661 Seasonal Pool through September 30."

63. Section II f. 3., Table 4, Page 21. Footnote 4 indicates USFWS elevations of concern. However, the table only has footnotes 1 through 3 identified in data columns. Please delete the footnote 3 indicator from the Fish and Wildlife Service elevation row and replace it with footnote 4.

64. Section II f. 3., Table 6, Page 24. Footnotes are identified in the interest column; however, no footnotes are included at the bottom of Table 6. Please include the footnotes for Table 6.

65. Section II f. 3., Paragraph 5, Sentence 3, Page 26. The Energy and Water Development Appropriations Act was previously identified as EWDAA. Please delete "Energy and Water Development Appropriations Act" and replace it with "EWDAA."

66. Section II f.3., Table 8, Page 26. Please include "$" signs for Norfork data.

67. Section II i., Paragraph 1, Sentences 3 and 4, Page 27. For consistency, please refer to WRDA 99 and 00 as WRDA 1999 and 2000.

68. Section II i., Paragraph 1, Sentence 3, Page 27. The Energy and Water Development Appropriations Act was previously identified as EWDAA. Please delete "Energy and Water Development Appropriations Act" and replace it with "EWDAA."

69. Section II i., Paragraph 1, Page 27. For correctness, the paragraph should contain the statement "Section 132 of PL 109-103 de-authorized implementation of Minimum Flows at Beaver, Table Rock and Greers Ferry by repealing the previous Minimum Flow project authorities in WRDA 1999 and WRDA 2000."

70. Section II j., Paragraph 1, Sentences 3, 4 and 7, Page 28. There is no Arkansas-Missouri DO Committee. The committee is named the White River DO Committee. Please correct.

71. Section II j., Paragraph 1, Sentence 5, Page 28. "Outside" is one word. Please correct.

72. Section II j., Paragraph 1, Sentence 8, Page 28. The sentence states that the United States Geological Survey (USGS) and the U. S. Fish and Wildlife Service (USFWS) are members of the White River DO Committee. The USGS and USFWS are not members of the White River DO Committee. Please delete them from the list of members.

73. Section II k. iv), Paragraph 1, Sentence 2, Page 28. Please change "...Hydropower Center of Expertise..." to "...Hydroelectric Design Center..." and "...Tennessee Valley Association..." to "...Tennessee Valley Authority..."

74. Section II k. iv), Paragraph 1, Sentence 3, Page 29. Please change "...flows in the White, Norfork Rivers." to "...flows in the White and North Fork Rivers."

75. Section II k. iv), Paragraph 1, Sentence 5, Page 29. Please define what "Dr. Checks" is and how it was used by the Nashville District to perform a detailed independent technical review of the Project Report and Environmental Impact Statement.

76. Section III a., 4., Paragraph 1, Page 32. The paragraph should contain a statement that describes the potential for DO improvement via the minimum flow releases due to the highly aerated turbine release at Bull Shoals and the highly aerated siphon release at Norfork. Please include a statement regarding the potential for DO improvement.

77. Section III b., 1., Table 11, Page 34. The duration values for the Current and Flood Columns are different than the duration values in Table 4 on page 21 of the Project Report. Please correct.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
P. O. Office Box 26567 (MC-9)
Albuquerque, New Mexico 87125-6567

TAKE PRIDE IN AMERICA

ER 08/0987
File 9043.1

October 29, 2008

Mike L. Biggs
Project Manager
U.S. Army Corps of Engineers
Little Rock District
Programs and Project Management Division
P.O. Box 867
Little Rock, Arkansas 72203-0867

Subject: Draft Supplemental Environmental Impact Statement (DSEIS) for the White River Minimum Flow Reallocation Study, AR and MO

Dear Mr. Biggs:

The U.S. Department of the Interior has reviewed the subject DSEIS prepared by the U.S. Army Corps of Engineers, Little Rock District. Comments were provided by the U.S. Fish and Wildlife Service and the U.S. National Park Service. We anticipate that they will be of use as you prepare the final document.

U.S. Fish and Wildlife Service Comments

The Arkansas FWS Field Office did not provide comments in addition to those previously provided to you in our comment letter dated July 17, 2006. If you have questions regarding those comments, please contact Lindsey Lewis at (501) 513-4489.

U.S. National Park Service Comments

The National Park Service, Buffalo National River, Arkansas, reviewed and submitted the following comments and mitigation strategies for your consideration. Please note that many of the mitigation strategies, research, and long-term monitoring recommendations are based on previous input provided to you in "Synopsis of Impacts to Buffalo National River by the Cold Tail-Waters of the White River" and the comment letter submitted by our Midwest Regional Office on August 8, 2000, located in Appendix C of the DSEIS.

This evaluation and analysis is based on the NPS mandate to:

> ...conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. (NPS Organic Act, 16 USC § 1)

Consequently, there are several mitigation issues we would like the COE to address. These issues relate to existing and potential impacts of White River flow modifications and temperature alterations to our legislated mandate to manage Buffalo National River for:

> ...the purposes of conserving and interpreting an area containing unique scenic and scientific features, and preserving as a free-flowing stream an important segment of the Buffalo River in Arkansas for the benefit and enjoyment of present and future generations. (Buffalo National River enabling legislation 16 USC § 460m–8)

The original White River impoundment mitigation measures were inadequate and focused solely on the main stem effects of the cold tail-water. Historical events indicate, and the DSEIS verifies, that those measures did not compensate for the loss of fisheries and ecosystem alterations in the warm-water tributaries of the White River. Scientific studies have shown that the exclusion of appropriate mitigation measures has deleteriously impacted numerous biological attributes and abiotic parameters associated with the warm-water ecosystem of the Buffalo National River and may be adversely influencing insectivorous avian species and endangered bats such as the Indiana and gray bat, which consume copious quantities of aquatic invertebrates.

It is our understanding that the proposed White River Minimum Flow DSEIS management measures have been synthesized to correct the inadequacies of the original mitigation strategy, as they failed to produce appropriate habitat and water qualities required to support a cold tail-water fishery. The DSEIS now provides the NPS with an opportunity to cooperate with the COE to correct past mitigation deficiencies and craft a strategy that will fully and comprehensively compensate for proposed minimum flow modifications upon the Buffalo National River ecosystem, to the greatest degree possible, by applying best management mitigation measures.

Specifically, we recommend the COE include a mitigation strategy to counteract the decreased warm-water fish migrations that would occur by significantly reducing White River water temperatures by 3-4 degrees centigrade at the Buffalo National River confluence as a result of altering the existing minimum flow regimen. The NPS believes this mitigation is essential to maintain Buffalo River's "scientific features and wildlife" since this temperature reduction would further impair the migration patterns and exacerbate population declines of several warm-water fish species, which include the channel catfish, American eel, gizzard shad, spotted sucker, freshwater drum, black crappie, least brook lamprey, and quillback. Additionally, the minimum flow modifications would impair the NPS's ability to restore American brook lamprey, black bullhead, blackside darter, highfin carpsucker, speckled darter, spotted bass, white bass, and gilt darter populations. According to previous NPS scientific evaluations (described in "Synopsis of

Impacts to Buffalo National River by the Cold Tail-Waters of the White River"), these species have been extirpated due to the current cold water releases from the Bull Shoals and Norfork Dams, which created a temperature-induced migration barrier, preventing these native fish from moving into the Buffalo River from the White River.

We recommend the COE create a mitigation strategy to offset the precipitous declines of fresh water mussels that rely on the aforementioned warm-water fish as intermediate hosts required for reproduction and recruitment. Because native mussels filter copious quantities of water and thereby remove suspended particulate matter, the water quality and ecological functions of the Buffalo River would likely be adversely affected by native mussel population declines as a result of fish-host absence. Preferably, the mitigation strategy would include research and long-term monitoring to evaluate the ecological ramifications associated with fish and mussel population alterations, and decreased water temperatures and quality, so that scientifically valid restoration and resource management measures can be employed to counteract White River minimum flow modifications.

The DSEIS Section 4.4.2.3 on tail-water fishery effects states: "In both tail-waters the proposed action benefits include large scale trout habitat increases, potential trout reproduction, and an increase in trout growth rates" (page 4-20). Additionally, the DSEIS states: "The minimum flow operation at Bull Shoals Lake would improve 66 miles of trout fishery" (page 4-2). The DSEIS also states: "Native fish and invertebrates cannot tolerate cold water conditions, and a downstream extension of the transition zones would further reduce available habitat" (page 3-33) for these species. Consequently, we prefer a mitigation strategy that would include investigations to evaluate the influence of reduced water temperatures, an increased cold water fish assemblage and enhanced trout densities on the Buffalo River food web. We would expect an emphasis on research and long-term monitoring capable of determining how increased trout populations and reduced temperatures would alter food availability (primarily benthic invertebrates) for native warm-water fish, crayfish, the alligator snapping turtle, and avian species that consume benthic invertebrates and fish as their principal food source.

The overall preferred mitigation strategy would employ knowledge of warm-water fish migration patterns with modifications to the hydrologic release patterns from the dams during critical fish migration seasons (primarily in the spring) in order to facilitate passage of warm-water species through the White River cold water zone into the Buffalo River. One critical component of this mitigation strategy includes the installation of temperature data loggers within the Buffalo River confluence. This would provide temperature data that can be compared to fish migration patterns to determine the ideal temperature ranges conducive to facilitating warm-water fish migrations into Buffalo River.

The NPS is willing to devote biological and fisheries staff expertise to enhance, refine, and implement minimum flow mitigation measures and is willing to work with the COE and other agencies to conduct biological and water quality assessments, and assist with development of restoration and long-term monitoring strategies. Please contact Mark DePoy, Chief of Resource Management, at Buffalo National River, telephone 870-577-7106, or at mark_depoy@nps.gov if you have questions regarding these comments.

The U.S. Department of the Interior looks forward to working with the COE to make minimum flow modifications that are beneficial to all parties involved in the project. We appreciate the opportunity to provide these comments.

Sincerely,

Stephen R. Spencer
Regional Environmental Officer

United States Department of the Interior
NATIONAL PARK SERVICE
Buffalo National River
402 N. Walnut, Suite 136
Harrison, AR 72601

IN REPLY REFER TO:

L76 (BUFF)

September 16, 2008

Mr. Mike Biggs
U.S. Army Corps of Engineers
Little Rock District
Planning Branch
P.O. Box 867
Little Rock, Arkansas, 72203-0867

Dear Mr. Biggs:

We have evaluated the White River Minimum Flow Supplemental Environmental Impact Statement (EIS). Therefore, we would like to submit the following comments and mitigation strategies for your consideration. Please note that many of the mitigation strategies, research and long-tem monitoring recommendations, subsequently described, are based on previous input elucidated in the paper "Synopsis of Impacts to Buffalo National River by the Cold Tail-Waters of the White River" and the August 8, 2000 comments letter submitted by Acting Regional Director David N. Given.

This evaluation and analysis is also based on the National Park Service's (NPS) congressional mandate to "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (NPS Organic Act, 16 USC § 1)." Consequently, there are several mitigation issues we would like you to address in the EIS. These issues relate to existing and potential impacts of White River flow modifications and temperature alterations on our legislated mandate to manage Buffalo Nation River "For the purposes of conserving and interpreting an area containing unique scenic and scientific features, and preserving as a free-flowing stream an important segment of the Buffalo River in Arkansas for the benefit and enjoyment of present and future generations."

Historical events and the EIS indicate the original White River impoundment mitigation measures were inadequate and focused solely on the mainstem effects of the cold tail-water, and did not compensate for the loss of fisheries and ecosystem alterations in the warm water tributaries of the White River. Scientific studies have shown that the exclusion of appropriate mitigation measures has deleteriously impacted numerous biological attributes and abiotic parameters associated with the warm water ecosystem of the Buffalo National River, and may be adversely influencing insectivorous avian species and endangered bats such as the Indiana and gray bat, which consume copious quantities of aquatic invertebrates.

It is our understanding that the proposed White River Minimum Flow EIS management measures have been synthesized to correct the inadequacies of the original mitigation strategy, as they failed to produce appropriate habitat and water qualities required to support a cold tail-water fishery. The EIS now provides us with an opportunity to cooperate with the Army Corps of Engineers (ACOE) to correct past mitigation deficiencies and craft a strategy that will fully and comprehensively compensate for proposed minimum flow modifications upon the Buffalo National River ecosystem, to the greatest degree possible, by applying best management mitigation measures.

Specifically, we recommend the EIS contain a mitigation strategy to rectify the decreased warm water fish migrations that would occur by significantly reducing White River water temperatures at the Buffalo National River confluence by three to four degree's centigrade, as a result of altering the existing minimum flow regimen. NPS analysis of the EIS indicates this mitigation is essential to maintain Buffalo River's "scientific features and wildlife" as this temperature reduction would further impair the migration patterns and exacerbate population declines of several warm water fish species such as the channel catfish, American eel, freshwater drum, highfin carpsucker, and quillback. Additionally, the minimum flow modifications would impair the National Park Service's ability to restore the aforementioned warm water fish along with extirpated species such as the American brook lamprey, spotted bass, and white bass. According to previous scientific studies, these extirpated fish have been lost as a result of extant cold water releases from the Bull Shoals and Norfork Dams that creates a temperature induced migration barrier, preventing these native fish from moving into Buffalo River from the White River.

We recommend the EIS include a mitigation strategy to offset the deleterious declines of freshwater mussels that rely on the aforementioned warm water fish as intermediate hosts, required for reproduction and recruitment. Additionally, because native mussels filter copious quantities of water and thereby remove suspended particulate matter, native mussel population declines as a result of fish host absence, would likely adversely affect Buffalo National River water quality and the ecological functions of Buffalo River. Preferably, the mitigation strategy would include mussel population recovery, research and long-term monitoring to evaluate the ecological ramifications associated with fish and mussel population alterations, and decreased water temperatures and quality, so that scientifically valid restoration and resource management measures can be employed to counteract White River flow modifications.

The Supplemental Draft EIS tail-water affects section states that "In both tail-waters the proposed action benefits include large scale trout habitat increases; potential trout reproduction and an increase in trout growth rates" Additionally, the EIS states on page 4-2 that "The minimum flow operation at Bull Shoals Lake would improve 66 miles of trout fishery." On page 3-33 the EIS states "Native fish and invertebrates cannot tolerate cold water conditions, and a downstream extension of the transition zones would further reduce available habitiat" for these species. Consequently, we prefer the mitigation strategy include investigations to evaluate the influence of reduced water temperatures, an increased cold water fish assemblage and enhanced trout densities on the Buffalo River food web, with emphasis on research and long-term monitoring capable of determining how increased trout populations and reduced temperatures would alter food availability (primarily benthic invertebrates) for native warm water fish,

crayfish, the alligator snapping turtle and avian species that consume benthic invertebrates and fish as their principal food source.

The overall preferred mitigation strategy would employ knowledge of warm water fish migration patterns and modifications of hydrologic release patterns from the dams during critical fish migration seasons (primarily the spring) to facilitate passage of warm water species through the White River cold water zone into the Buffalo River. One critical component of this mitigation strategy includes the installation of temperature data loggers within the Buffalo River and Norfork confluences. This would provide temperature data that could be compared to fish migration patterns to determine the ideal temperature ranges conducive to facilitating warm water fish migrations into Buffalo River.

The NPS is willing to devote biological and fisheries staff expertise to enhance, refine and implement minimum flow mitigation measures and will work with ACOE and other agencies to conduct biological and water quality assessments, and assist with development of restoration and long term monitoring strategies. Please contact Mark DePoy, Chief of Resource Management at phone number (870) 577-7106 or email Mark at mark_depoy@nps.gov if you have questions or comments regarding this letter. We look forward to working with the ACOE to make the minimum flow modifications a win-win situation for the Buffalo River ecosystem and all parties involved in the project.

Sincerely,

Kevin G. Cheri

Kevin G. Cheri
Superintendent

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

NOV 07 2008

Mr. Mike Briggs
EIS Manager
Little Rock District
Corps of Engineers
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mr. Briggs:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality Regulations (CEQ) for Implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the Supplemental Draft Environmental Impact Statement (SDEIS) for the White River Minimum Flow Reallocation Study, Arkansas. The study examines the impacts of reallocating storage in Beaver, Table Rock, Bull Shoals, Norfork, and Greers Ferry Reservoirs to improve trout fishing in the White, North Fork, and Little Rock Rivers.

EPA continues to express a lack of objection to the implementation of the proposed action." EPA reviewed and commented on the Draft EIS on July 14, 2006, and rated the document **"Lack of Objections."** EPA has no additional comments to offer on this project.

Our classification will be published in the Federal Register according to our responsibility under Section 309 of the Clean Air Act to inform the public of our views on proposed Federal actions. If you have any questions, please contact Mike Jansky of my staff at (214) 665-7451 or by e-mail at jansky.michael@epa.gov for assistance.

EPA appreciates the opportunity to review the SDEIS. Please send our office two (2) copies of the Supplemental Final EIS (SFEIS) when it is sent to the Office of Federal Activities, EPA (Mail Code 2252A), Ariel Rios Federal Building, 1200 Pennsylvania Ave, N.W., Washington, D.C. 20004.

Sincerely yours,

Cathy Gilmore

Cathy Gilmore, Chief
Office of Planning and
Coordination (6EN-XP)

2008 SDEIS Written and Email Comments from Individuals and Corresponding Responses

Written Comments received by individuals on the Supplemental Draft Environmental Impact Statement were in most cases similar in context. Therefore individual comments were grouped together and responded to on the following pages. The actual comments are listed following these response pages for the reviewer's information.

Comment: **The SDEIS does not include a Drought Contingency Plan.**

Response: **The Drought Contingency Plan will be developed during Design, prior to implementation of the White River Minimum Flows operation, and included in the White Master Manual.**

Comment: **With the recent flood events in 2008, the Corps SUPER models need to be rerun to include the last 5 years.**

Response: **The 2008 flood event has not been modeled because it is not over. For the event to be correctly modeled, the lake elevations must recede to the top of conservation pool. During Design phase, after lake have receded to the top of conservation pool, the SUPER model will be updated to include the entire 2008 flood event and the minimum flow operation will be routed and compared to an existing conditions run.**

Comment: **The benefit to cost ratio's do not justify the project. So why is the Corps moving forward with it?**

Response: **Under the Water Resource Development Acts of 1999 and 2000, the 2004 White River Minimum Flows Report was developed indicating several economically justified options. The report accurately captured qualifying costs and benefits, per the Corps Planning Principals and Guidelines, identifying a Benefit to Cost ration greater than 1 for both BS-3 and NF-7. The Corps is moving forward because Section 132 of the FY 2006 Energy and Water Development Appropriations Act (P.L. 109-103) (EWDAA) authorizes and directs the implementation of plans BS-3 at Bull Shoals and NF-7 at Norfork Lakes.**

Comment: **The true cost of this project is 850% increase in specific costs that Congress was not aware of.**

Response: **132 of the FY 2006 Energy and Water Development Appropriations Act (P.L. 109-103) (EWDAA) authorizes and directs the implementation of plans BS-3 at Bull Shoals and NF-7 at Norfork Lakes. The costs to reduce the Federal Hydropower purpose, the cost associated with paying the non-Federal hydropower FERC license no.**

2221, and the cost to the non-Federal Sponsor for maintaining reasonable continued use are required by law.

Comment: **The project would cut down on the "Green" energy that is generated in the dams.**

Response: **The Energy and Water Development Appropriations Act, 2006, (PL 109-103), Section 132, White River Basin, Arkansas subset (3), requires the Administrator of the Southwestern Power Administration (SWPA), in consultation with the project licensee and the relevant state public utility commissions, to determine any impacts on electric energy and capacity generated at Federal Energy Regulatory Commission Project No. 2221 (Ozark Beach hydroelectric project) caused by the storage reallocation associated with plan BS-3 at Bull Shoals Lake. Ozark Beach hydroelectric project shall be fully compensated by the Corps of Engineers for those impacts on the basis of the present value of the estimated future lifetime replacement costs of the electrical energy and capacity at the time of implementation of the White River Minimum Flows project. Ozark Beach hydroelectric project is located in the extreme upstream reaches of Bull Shoals Lake and is directly affected by the BS-3 storage reallocation. The reallocation will result in a reduction of the amount of gross head (headwater elevation minus the tailwater elevation) available for generation at Ozark Beach hydroelectric project. The estimated loss related to the reduction in gross head is an annual total of 8,998 MWh of energy loss and 3.00 MW of capacity. The operations at Norfork Lake have no effects on Ozark Beach hydroelectric project operations. The demand for electric power varies from hour to hour, from day to day, and from season to season in response to the needs and living patterns of the power users. The daily demand for power is at a low point in the early morning hours, when most of the population is at rest. The daily demand increases markedly at 6 am, as people get up and begin going to work, and reaches a peak in the late morning hours. The daily demand remains high through the daytime hours, often reaching another peak about suppertime, and then decreases in the evening hours, as activity drops off. The daily demand, which is at a high level during the five weekdays, is somewhat lower on Saturdays and at their lowest levels on Sundays and holidays, reflecting the impact of industrial and commercial activity on power demand.**

The daily demand, or load, can further be divided into three segments: the base load, the intermediate load, and the peaking load. The base load is the minimum load in a stated period of time and is usually satisfied by fossil-fuel powered steam plants. The intermediate load is the load between the base and peaking loads and is usually satisfied by nuclear powered plants. The peaking load is that portion of the load which typically occurs eight hours per day or less and is usually satisfied by conventional hydropower plants. Hydropower produced at Corps dams in this region is marketed by the region's power marketing agency, Southwestern Power Administration, SWPA. The degree to which SWPA exercises control on the quantity and timing of hydropower releases depends on the elevation of the water stored and the stages at the downstream regulating control points. When the lake elevations are in the flood pool, the Corps of Engineers has absolute control on the quantity and timing of its releases. The one exception is the daily release volume needed for the generation of firm power.

Normally, hydropower production is constrained during downstream flood conditions. As it is, hydropower demands are met minimally through the provision of firm power, also known as "firm energy." Table 7-09, page 7-21 of the White River Master Manual, lists minimum daily hydropower release volumes. During flood control operations, hydropower will be reduced to a minimum provided by firm power. When restricted to firm power, the firm energy remaining for that day is computed by prorating the number of hours left in the day. If flooding conditions warrant greater restrictions, the Corps will declare a flood emergency and notify SWPA in accordance with the guidelines set forth in the draft Operating Arrangement between the Corps and SWPA. When in the flood pool, the primary objective of generation is to provide releases for recovery of flood storage space and operation requirements are forwarded to SWPA each weekday. The resultant energy provides an additional benefit to the flood control operation. Once in the conservation pool SWPA determines the amount and timing of releases based on power needs unless there is an overriding flood control or project need. Routine turbine releases are established at rates which will not exceed downstream regulating criteria.

Comment: **This project will take away all the sandbars on the White river that my family and I like to play on.**

Response: **The proposed White River Minimum Flows operation plan will not impact the sediment load entering Norfork Lake. The hydrologic and hydraulic mechanisms that cause sand to be deposited in the upper reaches of Norfork Lake will still occur with the White River Minimum Flows operation. Without further information concerning exact location of "Sand Island", it's elevation, who maintains visitation & maintenance records, and who owns the "Sand Island" I can't speculate on current or future recreation at the area. However, it is logical to speculate that the island will still form as a normal function of sediment deposition resulting form running water with a sediment load entering a reservoir.**

Comment: **Our parking lot (Marina Owner) and launching ramp goes under water depending on the duration of the high water condition. Who will pay for relocating these facilities?**

Response: **Lakeside facilities are any man-made improvements, including but not limited to structures, roads, and utilities, that are located in, at the shoreline or within an area of project effect adjacent to Bull Shoals and Norfork Lakes. The PDT visually inventoried all lakeside facilities at Bull Shoals and Norfork Lakes, using aerial photography and site visits at Bull Shoals and Norfork Lakes. Currently lakeside facilities are affected by a range of lake conditions. At Bull Shoals, the lake levels can range from as low as 628.5 up to as high as 695.0. At Norfork, the lake levels can range from as low as 510.0 up to as high as 580.0. Recreation is adversely affected by both drought and flooding. In summary, from a hydrologic and hydraulic perspective, the proposed minimum flows operation would have slightly higher flood pool elevations**

with minimum impacts to the duration that the pools are above conservation pool at both Bull Shoals and Norfork Lakes when considering operations during extreme flood events. During droughts it would be expected that Bull Shoals would have less severe minimums and Norfork would have slightly lower minimum pool elevations. At both lakes it would be expected that it will take longer to refill the lakes to conservation pool. In the context of implementing WRMF, all Corps, private and public lake facilities, including but not limited to structures, roads, and utilities within the lake level elevations of 660 and below at Bull Shoals and 554.5 and below at Norfork qualified for modification or relocation if they were significantly impacted. Under utilized, non-maintained, facilities with the availability of substantively equal alternative facilities, or abandoned facilities were not eligible for modification or relocation. If your facility qualified, Arkansas Game and Fish Commission is identified as the Non-Federal interest responsible for modifying or relocating lakeside facilities.

Comment: **Too many parks, roads, campgrounds, & boat ramps will be eliminated by the implementation of minimum flows.**

Response: **There are 11 marinas, 48 private resorts, and 20 Corps parks at Bull Shoals Lake. The marinas are all located on Corps parks. There are 687 private boat docks permitted on Bull Shoals Lake. Around Bull Shoals Lake, 183 county, state, and, Federal roads were evaluated. For complete lists of parks, marinas, roads, and boat docks evaluated during the study process are included in Appendix F-A. At Bull Shoals, public facilities at 12 recreation sites will be relocated or modified, including: 11 boat ramps, 6 swim beaches, 1 light pole, 9 parking lots, 3 Corps roads, and 2 County roads. Evaluations determined that all private facilities at the lake, such as marinas, concessions, docks could accommodate the pool raise and operational changes and maintain reasonable continued use without any modifications or relocations. The cost to relocate roads and park facilities is estimated to be approximately $12,494,000, and is a non-Federal cost. For detailed information, reference Tables 3 of Appendix F, Lakeside Facilities.**

There are10 marinas, 21 private resorts, and 21 Corps parks at Norfork Lake. The marinas are all located on Corps parks. There are 314 private boat docks permitted on Norfork Lake. Around Norfork Lake, 125 county, state, and, Federal roads were evaluated. For complete lists of parks, marinas, roads, and boat docks evaluated during the study process are included in Appendix F-A. At Norfork Lake, public facilities at 9 recreation sites will be relocated or modified, including: 3 boat ramps, 7 swim beaches, and no parking lots. Evaluations determined that all private facilities at the lake, such as marinas, concessions, docks could accommodate the pool raise and operational changes and maintain reasonable continued use without any modifications or relocations. The construction cost to relocate park facilities is estimated to be approximately $6,656,000, and is a non-Federal cost. For detailed information, reference Tables 4 of Appendix F, Lakeside Facilities.

Comment: **Why should we sacrifice flood control and hydropower generation for trout fishing?**

Response: **Under the Water Resource Development Acts of 1999 and 2000, the 2004 White River Minimum Flows Report was developed indicating several economically justified options. The report accurately captured qualifying costs and benefits, per the Corps Planning Principals and Guidelines, identifying a Benefit to Cost ration greater than 1 for both BS-3 and NF-7. The Corps is moving forward because Section 132 of the FY 2006 Energy and Water Development Appropriations Act (P.L. 109-103) (EWDAA) authorizes and directs the implementation of plans BS-3 at Bull Shoals and NF-7 at Norfork Lakes.**

Comment: **Please clarify how AR Game and Fish or other non federal sponsors are obligated to pay for displaced usage of facilities.**

Response: **Section 132 of the FY 2006 Energy and Water Development Appropriations Act (P.L. 109-103) (EWDAA) authorizes and directs the implementation of plans BS-3 at Bull Shoals and NF-7 at Norfork Lakes. Section 132 states that the non-Federal interest must provide relocations or modifications for public and private lake facilities to allow for reasonable continued use. The Arkansas Game & Fish Commission, for the State of Arkansas, has been identified as the non-Federal interests, and has agreed to provide relocations or modifications for public and private lake facilities to allow for reasonable continued use relative to the change of operations at Bull Shoals and Norfork Lakes.**

Comment: **Are marina operators going to have to pay for all their relocations?**

Response: **Not for modifications or relocations that qualify as impacted based on reasonable continued use evaluation.**

Comment: **Will lake levels continue to drop during a drought in order to provide for tailwater minimum flows?**

Response: **No, during droughts, a drought contingency plan will implement storage conservation efforts until the conservation pool is refilled by rainfall runoff. If the minimum flows storage is depleted in a drought year, the minimum flow releases will be halted until the minimum flows storage is refilled by inflows.**

Comment: **Why should taxpayers pay for a buyout for Empire Electric?**

Response: **Per Section 132, EWDAA directed the Southwestern Power Administration (SWPA) to calculate the one-time Ozark Beach hydroelectric project payment for the**

present value of the lost benefits, and a reduction to Federal hydropower's allocated costs at Bull Shoals Lake.

***Comment*: Are there contingency plans for flooding conditions?**

***Response:* The Corps has existing flood operation plans and will continue to operate the dams as authorized.**

***Comment*: Will "Sand Island" remain a viable recreation area?**

***Response*: The proposed White River Minimum Flows operation plan will not impact the sediment load entering Norfork Lake. The hydrologic and hydraulic mechanisms that cause sand to be deposited in the upper reaches of Norfork Lake will still occur with the White River Minimum Flows operation. Without further information concerning exact location of "Sand Island", it's elevation, who maintains visitation & maintenance records, and who owns the "Sand Island" I can't speculate on current or future recreation at the area. However, it is logical to speculate that the island will still form as a normal function of sediment deposition resulting from running water with a sediment load entering a reservoir.**

***Comment*: What constitutes "minimum flow" compared to the output when one generator is running?**

***Response*: The target "minimum flow" for Norfork is 300 cfs. A single generator's release at Norfork depends on the difference between the head water elevation and tailwater elevation (known as head). So a main generator releases between 2,000 cfs and 4,000 cfs depending on available head and electrical demand. The minimum flow target release of 300 cfs is not large enough to spin the main turbines and will be release through the existing Station Service Unit and a new Siphon System.**

***Comment*: Will the river below Norfork Dam be accessible to "wade fishermen" when "minimum flow" is implemented?**

***Response*: Yes. During the White River Minimum Flows test releases it was determined that the tailwater would be about 6-inches higher with the minimum flows release. Also, input from the general public (mostly fishermen of all types) that participated in the test releases were enthusiastic and supportive of the minimum flows operation. There were a few anti minimum flows comments, but the vast majority of comments were positive.**

***Comment:* Table 4.3.1.1-1 Annual Pool Elevation-Duration for Elevations of Interest pg 4-6 and Table 4.3.1.2-1 Annual Pool Elevation-Duration for Elevations of Interest pg 4-10 both show in footnote 3 that the proposed seasonal pool duration would be one month longer then the current seasonal pool duration in footnote 2. Is footnote 3 correct? If correct, where did you account for this change in the impact modeling? If not correct, how will you fix the error?**

***Response:* The answer is NO; the seasonal pool duration for the proposed White River Minimum Flows operation is no longer or shorter than the current seasonal pool operation. The data used to populate Tables 4.3.1.1-1 and 4.3.1.2-1 were developed using the SUPER model. SUPER model runs W01X01 for the current operation plan and W06X03 for the proposed White River Minimum Flows operation plan included seasonal pool guide curves. In both runs, there are NO changes to the seasonal pool transition dates. The footnote is a type-o and will be corrected in the Final Supplemental Environmental Impact Statement. The only changes to the seasonal pool curves are the elevations, for Bull Shoals there is a 5-foot incremental increase to the seasonal pool and for Norfork there is a 1.75-foot increase to the seasonal pool. There are no changes in the timing for seasonal pool transitions for the White River Minimum Flows operation plan.**

***Comment:* SDEIS, Section 4.3.1.1, Pg 4-4 and 4.3.1.2, Pg 4-8 establish a "Proposed Lake Facility Filter Elevation" for both lakes with no explanation or details of how those elevations were determined. The SDEIS needs to re-evaluate these numbers and release the methodology to the public for review and comment before going forward with the project.**

***Response:* Comparison of lake elevation frequency and duration were used to determine the change in lake hydraulics between current lake conditions to the minimum flows' lake conditions. Lake elevation duration was determined to control impacts to lakeside facilities, peak monthly visitation and corresponding monthly lake elevation duration figures were used to measure reasonable continued use. The elevation were incremental change in duration peaked, followed by a decline in incremental change in duration at the next higher elevation is defined as the "filter elevation". All Lakeside facilities above the filter elevation do not qualify to be evaluated for reasonable continued use because the change in elevation duration will not change significantly with the minimum flows operation. SUPER model output was used to develop annual, seasonal, and monthly series lake elevation frequency and**

duration curves for the both the current operation and the proposed minimum flows operation. Due to the seasonal nature of recreation, the PDT determined monthly lake elevation duration as the best measure for comparing reasonable continued use at lakeside facilities. The current operation duration curve provided the baseline for existing recreational use, and the minimum flows duration curve provided a measure for future recreational use. The incremental change in recreation use was calculated by subtracting the current conditions duration from the minimum flows duration. Incremental change to the monthly elevation duration was used to measure the average number of days a lakeside facility was not available for use under the current operation and under the proposed minimum flows operation. At Bull Shoals the April through June season had the greatest increase in flooding based on analysis of elevation-duration. The data indicates that facilities at elevation 660 potentially lose 11 days of recreation opportunity in an average June. As the elevations increase, facilities at 662 potentially lose 6 days and facilities at 670 potentially lose 1 day of recreation. At Norfork the April through July season had the greatest increase in flooding based on analysis of elevation-duration. The data indicates that facilities at elevation 554.5 potentially lose 6 days of recreation opportunity in an average July. As the elevations increase, facilities at 555 potentially lose 5 days and facilities at 556.75 potentially lose 1 days of recreation. The trends for lake elevation-durations for minimum flows conditions begin to converge with current operational trends at the filter elevation. Simply stated, as the pool elevations get higher the differences in pool elevations-durations begin to get smaller, meaning the effects of the minimum flows operations are becoming less noticeable when compared to current operations.

Comment: **Little Rock COE continues a policy of denying printed copies of their Draft documents to the public which discourages and handicaps our organization as well as the affected public's entitlement to help build the information base upon which project decisions are suppose to rest. Moreover, this COE policy is contrary to 40 CFR 1502.19.**

Response: **The Little Rock District's decision to charge a fee for draft and final Environmental Impact Studies is consistent with 40 CFR 1506.6 paragraph (f). The District's distribution plan provides the public with reasonable access to the documents by placing hard copies of the reports in libraries, providing free compact discs, and making the report available on our web site. No private parties were provided a free copy of the report. The CFR states that the District can charge actual costs of reproduction to those wishing hard copies.**

Comment: **Since PL 109-103 assigns SPA/Dept. of Energy a major role in developing an impact analysis for BS-3 and NF-7 allocations, how will this energy marketing agency incorporate public involvement into their impact studies for FERC Project No. 2221 for a variety of flow regime/net head/turbine efficiency/upstream storage benefits produced by federal upstream White River projects? SPA is a major player in this study, but we at AWF have so far received no notices of availability from the Agency soliciting public review of their analytical data.**

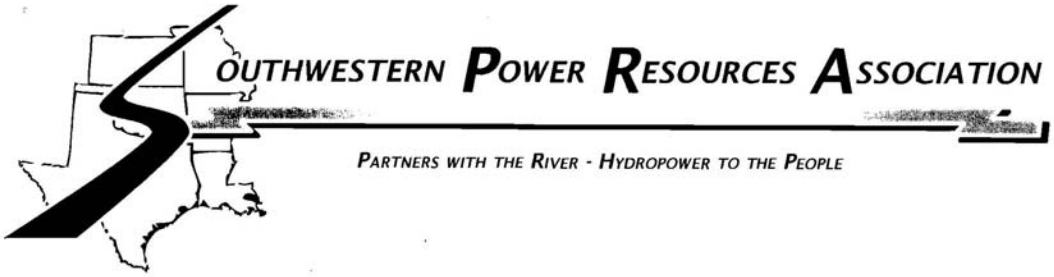
Response: **SWPA posted their hydropower determination for public review in the Federal Register on July 3, 2008, and provided a 30-day comment period ending on August 4, 2008 (73 FR 38198). The public comment period on SWPA's proposed determination of the Federal and non-Federal hydropower impacts of the White River Minimum Flows project was extended for an additional 45 days until September 18, 2008.**

Comment: **SDEIS, Section 4.7, Pg 4-32. The CVM study's $4.9 million benefit finding is a major component of several SDEIS conclusions and calculations. This raises the CVM study to the level of needing to be re-evaluated since it is over 7 years old and appears to contain major statistical flaws like estimating an additional 230,600 new trout fishermen when it only started with an actual 103,000 trout fishermen. Provisions were made for its updating if it became too old ("Study may require an economic update if implementation of the recommended plan does not occur expeditiously.")**

Response: **The number of current trout fishermen accounted for in the CVM study is 103,050. This information is based on data obtained from the Arkansas Game and Fish Commission. It was the most current information available to the Corps at the time the benefit estimation was done. The estimated increase in trout fishermen is based on responses of the survey used to acquire individual willingness-to-pay estimates for a better trout fishing experience. The benefit stimulation always included both current fishermen and an estimate of the incremental increase in fishermen with minimum flows implementation. The way in which the incremental increase was shown has differed over time due to the inclusion, and subsequent removal, of existence values. Without further explanation of the nature of the supposed "major statistical flaws", no additional response can be provided. The study was updated in 2008, in a method as practicable as possible given the time constraints of the schedule.**

Comment: **There is also the problem that the SDEIS in inferring statistical benefits from a report that states "sample sizes that were too small to convey any meaningful statistical inference."**

Response: **The commenter's quote from the report is inaccurate. The CVM appendix states, "At this point it is important to point out that because of small sample sizes, no meaningful statistical inference could be done to test for biases in the values." All data in the report, including benefit estimates, are statistical data. No meaningful statistical inference could be done to test for biases; that means that the willingness-to-pay values could not be tested to determine if respondents were biased in their estimates. Prior to the removal of existence values the sample size was large enough to test for bias. After the removal of existence values the sample sizes were too small to assume a normal distribution and no tests for bias could be done. The revised data required an assumption that no bias existed or was too small to account for a meaningful change in the responses.**



November 1, 2008

Mr. Mike Biggs, Project Manager
Planning and Environmental Office
Little Rock District
U.S. Army Corps of Engineers
P.O. Box 867
Little Rock, AR 72203-0867

RE: White River Minimum Flows Supplemental Draft Environmental Impact Statement

Dear Mr. Biggs:

Southwestern Power Resources Association (SPRA) represents the rural electric cooperatives and municipally owned electric utilities that purchase the hydroelectric energy and capacity generated at 24 Corps of Engineers multipurpose water resource projects in this area. This energy and capacity is marketed to our members by Southwestern Power Administration (SWPA), an agency of the U.S. Department of Energy. SPRA respectfully submits the following comments concerning the Supplemental Draft Environmental Impact Statement (SDEIS) for the White River Minimum Flows Project.

The SDEIS should explicitly state that seasonal pools will remain in place and operational at both Bull Shoals and Norfork Lakes. These seasonal pools were established to partially mitigate releases that SWPA voluntarily agreed to make during the summer when ambient air temperatures reach certain levels. The releases are made to help maintain cool water temperatures to benefit the trout, particularly in stretches farther downstream from the dams. The SDEIS notes (p. 4-23) that even with minimum flow releases at Bull Shoals and Norfork, "water temperatures would reach undesirable levels from Calico Rock to Guion." Thus, the generation releases tied to ambient temperatures (and partially mitigated by seasonal pools) would need to continue even with minimum flow releases. All SUPER computer runs made during the study period assumed continuation of the seasonal pools. If the seasonal pools were abandoned, losses of hydropower capacity and energy would be greater than those cited in both the Corps and SWPA studies, and compensation to hydropower would have to be increased accordingly (unless such releases were made from the storage dedicated to minimum flows).

In listing hydropower impacts (both federal and nonfederal), the SDEIS should use figures computed by SWPA in its determination of hydro impacts and compensation. The legislation authorizing minimum flows at the two lakes (see SDEIS pp. 1-2 and 1-3) provides

918.622.7800 • 918.622.8141 (fax) • www.sprahydro.com • information@sprahydro.com

P.O. Box 471827 • Tulsa, Oklahoma • 74147

that SWPA shall determine the quantity and value of hydropower energy and capacity lost due to the minimum flows project in determining required compensation for these losses. SWPA is now completing its determination of these impacts and required compensation. The final Supplemental EIS should incorporate SWPA's figures for all hydro energy and capacity losses, and the value thereof.

The SDEIS listings of air quality impacts (both immediate and cumulative) are inadequate. In four instances the SDEIS lists air quality impacts due to replacement of lost hydro energy with thermally generated energy (pp. ES-1-11, ES-1-12, 4-31 and 4-32) as a percentage increase of atmospheric gasses, apparently expressed in that way to make them appear to be minor. When our electric utility members apply for an air quality permit for new generation facilities, they are not allowed to express the increase in emissions as a percentage of total emissions of these gasses, as the SDEIS does. Instead, they are required to report the increase in pounds and tons of CO2, NOX and SO2 emissions. Although the SDEIS does list these figures in pounds and tons, it does so in only one table (p. 4-31), and then only for the impacts from minimum flows. The final Supplemental EIS should include a table that shows the annual increase in CO2, NOX and SO2 by pounds or tons attributable for minimum flows, as well as a similar table showing these impacts over the economic life of the minimum flows project (50 years). The report also does a poor job of quantifying cumulative impacts on CO2, NOX and SO2 emissions. Again, tables should be included in the final Supplemental EIS showing these impacts by pounds or tons of the three gasses over the 50-year life of the project that includes all previously approved, pending and potential future storage reallocations that could reduce hydro energy and capacity as well as the impacts attributable to minimum flows. Finally, in identifying air quality impacts, the SDEIS states that the minimum flows project "***may*** result in a decrease in hydropower production ***in a worst-case scenario drought condition"*** (pp. ES-1-11 and 4-29, emphasis added). In fact, the proposed action will result in a reduction of hydro energy (Bull Shoals and Norfork) and capacity (Norfork only) whenever minimum flow releases are made. It is not merely a *potential* loss, nor would it occur only in severe drought conditions.

The siphon for minimum flow releases at Norfork Dam should be designed to obtain minimum Arkansas standards for dissolved oxygen to the extent technically possible. To achieve the maximum benefits of the project every effort should be made to provide siphon releases that achieve a minimum DO level of 6.0 parts per million.

The minimum flows project is not designed to "maintain" the downstream trout fishery (p. 1-1), nor could the existing fishery be fairly described as "sub-optimal" (pp. ES-1-5 and 2-4). The legislation authorizing the minimum flows project states that it is for "fish and wildlife enhancement" (p. 1-2); that is, the *improvement* of the downstream trout fishery. Minimum flow releases are not required to "maintain" a fishery that already exists. Likewise, describing this fishery as "sub-optimal" is at best vague, if not downright misleading. The existing trout fishery

is sub-optimal to whom? The trout? The anglers? The downstream boaters? While the SDEIS twice describes the trout fishery as sub-optimal, it also includes these descriptions of the same fishery: "coldwater fisheries of major economic proportion" (p. 3-26); "the White and North Fork Rivers have produced eight line class world record brown trout" (p. 3-28); "both rainbow and brown trout flourished" below Bull Shoals and Norfork Dams (p. 3-29); "'world class' fisheries" (p. 3-31; "some of the best trout fishing streams in the world" (p. 3-31); and "more trophy size brown trout exist per mile in some reaches of the White River than any other river of the world" (p. 3-31). If the objective of the project is to improve the fishery for the fish's sake, it could be achieve much better and cheaper by simply limiting the fishing pressure on the resource. The proposed project would actually increase the fishing pressure, if successful. The results could be counter-productive.

The economic impact of the project is overstated. The SDEIS states that "the study area could experience a significant increase in economic impact" as a result of implementing minimum flow releases at the two dams (pp. ES-1-12 and 3-40). It quantifies this impact, however, as either $4 million (p. ES-1-12) or $7 million (p. 3-40) in annual benefits. Even if the larger figure is used, it could hardly be considered a "significant economic impact" when tables in the report show the existing economic benefit of visitor spending from Bull Shoals Lake to be $95.7 million annually (p. 3-15) and $29.67 million from Norfork Lake (p. 3-21), both measured within 30 miles of the project. The final Supplemental EIS should state that, based upon the data reported in the study, there would be a minor economic impact from the project. The correct number should be used uniformly in the final document.

SPRA has sent a signed copy of these comments to you via traditional mail. We look forward to a continued good working relationship in implementing the White River Minimum Flows project.

Sincerely,

Ted Coombes
Executive Director

Arkansas Wildlife Federation

9700 Rodney Parham Rd. Suite I-2, Little Rock, AR 72227-Telephone (501)224-9200 Fax: (501)224-9214

"Your voice for hunting, fishing and conservation since 1936"

Jim Wood, Member
Executive Board
AR Wildlife Federation
56 Delaware Bay Road
Dardanelle, AR 72834
September 18, 2008

Mike Biggs
White River Minimum Flow Project
Planning, Environment and Regulatory Div.
CESWL-PM
PO Box 867
Little Rock, AR

Ref: White River Minimum Flow Study Report dated 7-18-08 and Supplemental Draft EIS on minimum flow authorization at Bull Shoals and Norfork Lakes.

Less than a week ago I learned from AR Game & Fish that Little Rock District Corps of Engineers and Southwest Power Administration were soliciting public comments regarding a Supplemental Draft EIS for implementing authorized minimum flows at Bull Shoals and Norfork Lakes provided by PL 109-103 prior to completion of the NEPA Process and COE's ER 1105-2-100 planning process. COE has arbitrarily decided to modify and limit scope of the original WR minimum flow NEPA analysis of the connected five lake system to only Bull Shoals and Norfork, and limit public notification and involvement largely to only two nearby lake communities in AR and one in MO. Notwithstanding, that on 8-12-06 we at AWF had well established a standing of interest by submitted substantive comments on the DEIS, and continue to be handicapped because Mike Biggs, COE, declines to provide us with a printed copy of the document.

AWF has so far received no response from COE regarding issues and concerns we raised in the 8-12-06 DEIS comments. Therefore we attach this previous letter and reaffirm our opinion that unanswered points we raised continue to apply to this decision process now derailed by PL 109-103 authorization, and request that COE and SPA respond to issues and concerns we raised in our 8-12-06 comments. Although COE seems to be the Lead Agency under NEPA, we now find SPA has no less a major role in developing hydropower economic data for the b/c analysis, and thus has an obligation to provide transparency for their power benefits foregone findings. AWF continues to have unanswered questions regarding issues and concerns about COE study methodology, non federal cost sharing, mitigation vs recreation and reallocation accounting accuracy as regards to this now modified two project minimum flow NEPA documentation.

1. Little Rock District COE continues a policy of denying printed copies of their Draft documents to the public which discourages and handicaps our organization as well as the

affected public's entitlement to help build the information base upon which project decisions are suppose to rest. Moreover, this COE policy is contrary to 40 CFR 1502.19. Since PL 109-103 assigns SPA/Dept. of Energy a major role in developing an impact analysis for BS-3 and NF-7 allocations, how will this energy marketing agency incorporate public involvement into their impact studies for FERC Project No. 2221 for a variety of flow regime/net head/turbine efficiency/upstream storage benefits produced by federal upstream White River projects? SPA is a major player in this study, but we at AWF have so far received no notices of availability from the Agency soliciting public review of their analytical data.

2. Study Review: Corps declares that "a detailed independent technical review was conducted by Nashville and Walla Walla Districts". This constitutes a review situation where an agency grades its own performance. The scientific community has long held that an agency evaluating itself is not an objective process. We request that accounting accuracy of the analysis that finds buy out cost of $33.9 million for Empire Dist. Electric Co and $86.7 million reduction of the federal hydropower purpose be subjected by either SWPA or COE to Independent Peer Review. As for COE's mandate, WRDA '07 Sec. 2034 provides that IPR by an independent panel of experts is triggered where projects cost more than $45 million or there is a significant dispute as to economic cost of the project. Since fish, wildlife and recreation is an authorized purpose for Bull Shoals and Norfork Lakes, assigning $12.4 million as non federal cost to BS and $4.8 million to NF is highly controversial with the public, given that need for the flow regime is clearly compensatory mitigation for Corps choice of flow management. And although Sec. 2034 is now in some stage of implementation, it clearly reveals that Congress considers this BS-3 and NF-7 SDEIS as well as the DEIS to qualify for Independent Peer Review.

3. Cost figures for providing minimum flows, as regards revenue from hydropower the most impacted resource, is to be determined by data and calculations developed by SPA, the power marketing agency. Thus, responsibility for economic accounting accuracy for hydropower benefits foregone, or created, rests with SPA, and since COE relies upon SPA provided data for decisions, COE is obligated to assure accuracy of the data. There is a lack of transparency as to your accounting methodology which relies largely on imagination of unknown future conditions regarding buy-out of Empire Electric's Powersite Dam? We raised unanswered issues in our Draft EIS comments questioning COE failure to comply with the Data Quality Act (PL 106-554) which also applies to SPA, and we will later discuss.

4. Norfork Lake: (a) We find a lack of transparency as to how COE analysis for NF-7 has some connection to calculating buy-out cost for Empire Electric project upstream in Missouri. COE and SPA needs to accurately quantify this connection, in order to include the data in determining cost? (b) Your calculation of $977,500 in hydropower loss for NF-7 is totally inaccurate, because water storage claimed as a loss is all used for power generation, regardless how it is stacked up in the reservoir, and thus continues to be a benefit, not a cost. Absent a 50 year or so historic flood event, WR high head dams maximize power generation by discharging all water through their turbines. It is

unrealistic, nor consistent with common sense, to assume new siphon systems will likely be used to bypass turbines in preference to selling minimum flow generation. This is evidenced by fact that NF storage has been in the flood pool, no spill, for the past 6 months and all flows have been through the turbines. To claim hydropower loss for NF-7, AWF challenges SPA to incrementally quantify daily generation loss for the past 12 months, while also accounting for improved turbine efficiency resulting from the additional net head (Norfork Lake 9-16-08 remains 15 feet above normal).

5. Bull Shoals Lake: (a) The same NF-7 scenario described above fits Bull Shoals which currently is at elevation 684' and 30 feet above normal. Except for impacts the 5' storage for minimum flow imposes to generation at the private FERC #2221 Empire Electric project, we fail to see a loss of generation resulting from BS-3. COE and SPA needs to use criteria from the past 12 months of operation at Bull Shoals power plant to show how BS-3 creates a loss of generation instead of a benefit? We especially request accounting transparency on how this proposed BS-3 minimum flow regime over the past 12 months would result in a loss of $1,169,100 in hydropower benefits, given that currently at 30' above normal all discharges are used to generate power? This COE/SPA analysis that calculates a $87,712,100 reduction in the federal hydropower purpose should be subjected to Independent Peer Review. Factual situation that all this storage, regardless as to how it is allocated or stacked upon itself, is used for power generation, fails to qualify as a loss, but remains as a benefit.

6. Non Federal cost to relocate facilities: (a) BS-3 and NF-7 involves lands purchased in fee title by COE at time the two projects were constructed. Thus, there is a measurable lack of transparency as to justification for assigning relocation cost to non federal sponsors for facilities that are annually inundated for months at a time. Moreover, this minimum flow project clearly qualifies as compensatory mitigation. (b) Providing storage for minimum flows that affect permitted facilities on COE lands conveys no claim to property. Thus, COE needs to clarify how AR Game & Fish or other non federal sponsors are obligated to pay for displaced usage?

Arkansas Wildlife Federation appreciates this opportunity to offer further comments on White River minimum flow studies. We reaffirm our position that providing minimum flows associated with this now BS-3/NF-7 authorization constitutes compensatory mitigation and should be funded at full federal expense at no cost to AR Game & Fish or any other non federal sponsors. We reaffirm our conclusion that this study would greatly benefit from Independent Peer Review instituted by SPA. Since AWF has received no response from COE regarding our 8-12-06 comments, we are attaching them for your consideration.

Respectfully Submitted,

Jim Wood

Jim Wood, Executive Board
AR Wildlife Federation
Cc Southwest Power Administration

White River Minimum Flow Study DEIS

From: Jim Wood, Member
Executive Board
AR Wildlife Federation
56 Delaware Bay Road
Dardanelle, AR 72834

August 12, 2006

To: Mike Biggs
White River Minimum Flow Project
Planning, Environment and Regulatory Division
CESWL-PM
PO Box 867
Little Rock, AR 72203-0867

Ref: Solicitation of comments regarding White River Minimum Flow Study Draft EIS.

AR Wildlife Federation is a non-profit, statewide, 70 year old, resource conservation organization and state affiliate of National Wildlife Federation, with a particular interest in White River fish, wildlife, forest and water related issues. It is commonly recognized throughout AR/MO White River basin that this areas regional economy derives great benefit from protecting WR aquatic tail-water resources, the 5 Study reservoirs, and how System authorized purposes are best managed when they maximize net public benefits.

AWF believes protecting WR trout constitutes compensatory mitigation for adverse impacts resulting from flow regimes directly related to power generation scheduling. Mitigation is in the public interest, and the aquatic resource produces a vast range of annual NED and other un-quantifiable benefits and amenities, and is essential to the overall economy throughout WR basin and the region. Gen. Strock's letter Report to Congress seems to constitute arbitrary findings on a Study while the NEPA Process is still on-going, which is notably contrary to COE's six step Planning Process guidance at ER 1105-2-100, and "before decisions are made" NEPA mandate.

1. EXISTING SITUATION:

(a) Corps traditionally manages rivers under a fragmented, less than basin-wide approach, and the oversubscribed WR is an example. It is fragmented between Little Rock/ Memphis Districts and US Dept. of Energy. Like other river systems, it continues to suffer from a history of multi purpose/favor one output over the other management policy, instead of a strategy that maximizes net public benefits from a mix that best considers all authorized purposes, an approach that is actually required by ER 1105-2-100. Gen. Strock's 7-30-04 letter Report seems to noticeably view sharing WR cost/benefits as some sort of COE/SWPA/State contest between Agencies?

(b) Unlike other federal agencies such as US Forest Service, who modernized long range

planning 30 years ago with the National Forest Management Act, and which mandated resource outputs be modified from time to time in response to changing public demand, these 5 projects demonstrate how Corps continues under 50 year old outdated project allocation formulas. COE struggles largely under a Congressional "earmark" micro-management political interference system without a long-range national water policy. COE often fail to follow their own policy guidelines, which is supporting evidence that instead of a resolute policy they have one they change whenever the notion strikes. Although a fragmented approach, this Study is a good start to identify better ways to manage WR flow regimes and tail-water fisherie components at the five projects.

(c) Gen. Strock's letter Report limits protecting tail-water trout fishery to local sponsor cost sharing arrangements, likely to be AR Game & Fish Commission and MO Dept. of Conservation. Both states enjoy a Conservation Sales Tax to help fund their Wildlife Agencies. This results in passing cost along to both sportsmen who purchase license and general resident population of both states. Gen. Strock's proposal could cost both States millions of $ annually to mitigate adverse impacts resulting from changing power sales/seasonal flow management decisions exclusively left to federal agencies, over which States saddled with cost have no control.

(d) What measure minimum flows depend upon flood or conservation pools, is irrelevant though, for producing a flow "bench" to protect tail-water aquatic resources, whether bottomland hardwoods below Clearwater Dam/Petit Jean WMA below Blue Mtn. Dam, shallow water habitat along AR River Navigation System, or WR trout, is simply "compensating for the impact", an action NEPA calls "mitigation." At Truman Dam in MO, Corps modified turbine operation to eliminate pump-back all together and forego power generation benefits from this feature to protect tailrace fish. We were informed that Power Benefits Foregone at Truman is considered mitigation at total federal cost?

(e) Following Corps notice of DEIS availability and comment solicitation, we timely requested by letter a printed hard copy of the DEIS. COE never responded nor provided us with the document. For people with computers, your pdf double page small print screen display is impossible to read. Also, absent DEIS printed copies, it is unreasonable to expect members without computers to meet 40 CFR 1503.3 (Specificity of comments).

(f) COE limits public viewing of the DEIS to 5 Project Offices along WR and Little Rock District Office, and public meetings/workshops to Mt. Home and Bentonville, a long way from many affected folks in two states who may have to pay for reallocation . There is a broader MO/AR regional interest in WR that COE public involvement plan fails to include.1502.19 (Circulation of the environmental impact statement) provides,

> "Agencies shall circulate the entire draft---however the agency may circulate the summary instead, except that the entire statement shall be furnished to: (c) Any person, organization, or agency

requesting the entire environmental impact statement."

Power sales, exchanges, peak vs firm rates, dump power at market bid price, etc., is a complex array of options that determine hydropower generation and sale schedules managed by SWPA's interconnected system. Minus printed DEIS copies, essential for us to review total system power data, and review accounting methods and Appendix formulas, we can not reasonably review "power benefits foregone" and thus get an understanding as to why COE/SWPA calculated values differ? Moreover, COE accounting contradicts reservoir storage/power benefits foregone cost values for providing "bench" flows in AR River Study vs WR Study, while both are part of the same SWPA integrated grid and power marketing system? COE Policy seems to be little more than arbitrary notions that change from time to time?

Absent a hard copy we're forced to limit comments to information in the summary, Gen. Strock's Report and some file information. While some of the following concerns may overlap with our numbered additional issues, we will try to be specific as possible.

2. NARRATIVE/ACCOUNTING ISSUES AND CONCERNS:

(a) We conclude that tail-water aquatic resource impacts result exclusively from flow regime options Corps/SWPA employs in Operating the environmentally connected WR system's flow regime, and not from the concrete structure sitting in the stream. This position is supported by fact that all COE proposed solutions are based upon modified flow regimes. Gen. Strock's report, par 8, states, "Corps position is that the five authorized reservoir projects were fully mitigated when constructed and reallocation for purpose of sustaining tail water trout fisheries represent project modification for the purpose of recreation." COE past decisions have found habitat impacts from O&M flow regimes qualify for "mitigation."

(b) The General inappropriately associates mitigation with structures instead of their flow regime/scheduling operation, a contradictory situation for solutions involve modifying flows. Is COE now required to secure water certification from ADEQ? And does the State now have a role in how water is discharged from the 5 hydropower facilities based upon a recent US Supreme Court decision?

US Supreme Court held (S.D Warren Co. V. Main Board of Environmental Protection, 5-15-06) that turbine operation at Dams "result in a discharge" and fall under Clean Water Act Sec. 401.

(c) Regardless that COE/SWPA disagree in power benefits foregone accounting, a hard look must be taken on Corps past interpretation as to whether impacts to aquatic habitats resulting from flow regime modification is assessed either mitigation, recreation, or environmental restoration? Moreover, COE seems to rely on less than a transparent formula in valuing flood storage at other SWPA projects?

White River Minimum Flow Study DEIS

3. METHODOLOGY/FLOW BENCH ANALYSIS AR RIVER VS WHITE RIVER:

(a) COE uses flood storage at twenty-nine AR River Basin reservoirs to produce a controlled flow "bench" based upon their Van Buren gauge controlling point. Eleven of these larger reservoirs provide 7,680,200 acre-feet of storage upon which COE largely depends to produce their flow "bench". Some include hydropower. COE considered cost of storage on these 11 projects, solely to enhance navigation at expense of other authorized purposes including hydropower marketed by SWPA, to be "0"? Regardless who pays, Ex Summary, Calculating Storage Cost, pg 23, states, "The cost of storage and proportional share of O&M costs make up the total storage cost." COE analysis produces a convoluted storage cost between the two systems? How can trading off hydropower marketed by the same Agency (SWPA), transmitted over the same grid, have enormous cost on WR and "0" on AR?

(b) Last year COE found compensating for flow regime impacts to aquatic resources for AR River Navigation System qualifies as "mitigation." Agency's interpretation of flow regime mitigation/cost for completed AR River Study (ROD 9-27-05) vs WR presents a notable contradiction using the same Model, while claiming both complied with COE Policy? COE Policy seems to be a moving target. Creating "bench" flows on AR River calls for "mitigation" at federal cost, while on WR, creating a similar flow "bench" solution becomes either "restoration or recreation"?

(c) Moreover, on similar AR River flow regime modification, hydropower benefits foregone from flood/conservation pool storage that trade-off power generation to enhance navigation, is not charged to barge companies or some other local sponsor, but again is totally absorbed by federal government. COE reverses themselves on WR though by charging the State where flood/conservation pools/flow regimes are modified to protect or enhance tail-water fisheries. This AR/WR double standard, while using the same multi-system flow regime MODEL, fails to meet Data Quality Act's transparency mandate? Policy interpretation of what constitutes "mitigation", questions whether COE analysis is objective, accurate and unbiased? Policy is interpreted as a "guiding principle or procedure" and don't change to fit a Study.

We propose that COE institute external Independent Peer Review to evaluate cost accounting accuracy to produce "bench" flow regimes to protect aquatic resources, and whether Corps interpretations for requiring local cost sharing WR Minimum Flow to recoup hydropower benefits foregone is uniformly applied among other SWPA/COE projects? We are informed that, power benefits foregone, to protect fish at Truman Dam through modifying/eliminating turbine pump-back operation is absorbed as federal cost? Is this true? IPR would be in addition to Nature Conservancy Technical Review.

4. ADDITIONAL ISSUES:

White River Minimum Flow Study DEIS

(a) Data Quality Act (PL 106-554): DQA mandates maximizing the quality, objectivity, utility and integrity of information. Information must be presented in an accurate, clear, complete and unbiased manner. And scientific, financial or statistical standards require the information to be sufficiently transparent in terms of data and methods of analysis, that it would be feasible for a replication to be conducted by a third party.

(b) COE and SWPA are both required to comply with DQA, yet Executive Summary, Table 1 show calculated annual benefits foregone vary enormously between some of COE vs SWPA methods of analyzing Alternatives. Quality of Data being relied upon by Gen. Strock's Report is obviously based upon statistical standards used by one or both Agencies that is inaccurate, biased, or can not be replicated by the two parties, much less a third party. Either Dept. of Energy or COE is inaccurate.

(c) Gen. Strock found in his Report that "the alternatives are technically sound". COE vs SWPA accounting deviations seem sufficient evidence that there is major disagreement between the two Agencies as to whether "financial or statistical standards" used in the study are in fact technically sound? Both agencies analyze the same statistical data, but arrive at different findings? Both Agencies question which accounting formula is technically sound? And where COE runs the same Model on AR River System and finds impacts resulting from flow regimes qualify as "mitigation", how could a qualified third party arrive at less than the same finding on WR?

(d) SUPER model simulates regulation of a system of multipurpose reservoirs based on a specified plan of regulation: It is useful to review how COE Model is used to quantify aquatic impacts? It is useful to COE's policy compliance claim to compare how SUPER was also used on the 5 year AR River Navigation System Study to formulate and analyze managed flow regimes using upstream reservoir flood and conservation pools to create "bench" flows. On WR study SUPER is also used to evaluate flow regime impacts to the aquatic resource. Creating a flow "bench" depends entirely upon reservoir storage.

(e) Authorized purposes Congress assigned these 5 WR projects are also part of the multipurpose mix for which AR River Navigation System and tributary project reservoir flood/conservation pools are managed to produce flow/elevation "bench" targets. Tail-water trout needs are likewise quantified for WR projects with a flow "bench" varying from 136 cfs/Beaver to 800 cfs/Bull Shoals (Study background d. SUPER model, pg 15).

(f) On WR your target is cfs flow/wetted perimeter tail-waters, which is the same created situation called a "bench" on AR River Navigation System. Whether named a flow "bench" or "wetted perimeter", both are the same, and does not change fact that reservoir storage must be allocated up or down in some measure to produce either.

(g) WR Storage cost accounting obviously fails DQA "accurate, clear, accepted

scientific, financial and statistical standard". And lacks "transparency in terms of data and methods of analysis". COE contradicts cost methods to produce bench flows on AR vs WR. Using AR River System reservoir storage is "0", then why is it more on WR?

5. CONPENSATORY MITIGATION VS RESTORATION OR RECREATION:

(a) Compensatory Mitigation is conducted at total federal cost, while Restoration or Recreation must be cost shared with a local sponsor. Adverse aquatic resource impacts result from a WR flow regime tailored to maximize hydropower sales during highest price/peak demand times, a flow strategy solely developed and managed by the federal government under a unnatural regime that daily goes from bank full flow to complete zero flow shutdown. Thus, minimum flow problems result from ever changing incremental power generation schedules built around peak demand. Mitigation compensates, not for hydro plants themselves, but for the manner in which COE/SWPA choose power operations at each facility to either trade off or enhance tail-water fisheries. Consequence of the flow regime is totally created and controlled by federal agencies.

(b) NEPA (1508.20(e) declares "mitigation" is "compensating for the impact by replacing or providing substitute resources or environments." AWF agrees that protecting WR tail-water aquatic resources require minimum flows. Water is monitored and flow adapted to control water temperature. Whether a created flow "bench" on AR River, wetted area flow "bench" on WR, or eliminating pump-back at Truman Dam, if one qualifies for mitigation at federal cost then so does the other. COE also interprets "monitoring and adaptive management" on AR River System qualifies as mitigation. So protecting trout likewise constitutes monitoring water temperature/flow, and when a pre determined threshold is reached, flow is then adapted to compensate for this impact.

(c) The disagreement is whether WR flow regime modification, like AR River projects where both depend upon how water is allocated between conservation/flood pools, gets called Mitigation, Restoration or Recreation? It seems COE settles this question of who pays on WR through their AR River Study, where they interpret a similar "monitoring and adaptive management" method as constituting "mitigation" of adverse impacts upon aquatic habitat. And using flood pools to produce a "bench" cost "0".

(d) Thus, we question whether the Corps can be meeting DQA's "objectivity/ transparency" test by declaring "monitoring and adaptive management" to be mitigation on AR River System, while changing interpretation of the same process when applied to WR as being recreation/restoration or anything other than mitigation? WR Study lacks COE Policy consistency in their convoluted interpretation of mitigation and fails DQA, "to be sufficiently transparent in terms of data and methods of analysis that it would be feasible for a replication to be conducted. " Moreover, it fails DQA "accurate, reliable and unbiased" test. If impacts from establishing a flow "bench" constitutes "mitigation" under NEPA for AR River, then the same process is likewise "mitigation" when applied

to a WR flow "bench". COE needs to clarify their accounting Policy and why they differ?

IN SUMMARY:

The oversubscribed WR, managed by both Little Rock/Memphis Districts and with power marketed by Dept. of Energy, has a history of numerous fragmented studies that regularly pit competing upstream/downstream interests against each other. Grand Prairie Irrigation Project will draw 243,900 acre feet and dredging a 9'navigation channel 250 miles to Newport, where depth depends upon flow, is currently undergoing NEPA study. COE declares they have existing authority to draw down below minimum conservation pool levels to support navigation, which raises the question as to whether WR lakes may be Reallocated later to support a 250 mile 9'navigation channel?

The Corps convolutes their past interpretation of what constitutes mitigation when compared to similar situations on AR River System. COE relies upon a "bench" cfs flow management regime to protect WR tail-water aquatic resources through a common process called "monitoring and adaptive management", and which COE declares to be "mitigation" on AR River System, but not on WR. Why? Managing reservoir storage capacity to trade off hydropower in providing a "bench" on AR River Navigation System, to support barge traffic, is not charged to ports, barge companies, nor other navigation users, but totally absorbed as federal cost. If maintaining a flow regime "bench" to favor navigation users cost "0" on AR River System, then COE's accounting methods fail DQA's "transparency" mandate to clarify why it is not likewise "0" for allocating a measure of flood pools to establish a tail-water flow "bench" at these 5 WR projects?

DQA requires a high degree of transparency of data be ensured. And further describes transparency as, "The practice of describing the data and methods of developing an information product in a way that it would be possible for an independent individual or organization to reproduce the results."

Gen. Strock seems to present a "take it or leave it" attitude towards States of MO/AR, a position that also seems to say, "if you don't like it, sue us." Being realistic causes us to suspect military commanders have little interest in resolving interpretation of "mitigation", as it applies to WR, and prefer leaving the matter up to federal courts.

AWF continues our position that establishing a flow "bench", or any other compensatory approach whether through revising generation schedules, reservoir reallocation, or other alternatives, the action is brought about totally in response to federal flow regime operating decisions. Thus, mitigating flow regime impacts from these operations should be considered Mitigation and absorbed totally at federal cost between SWPA and Corps of Engineers. AWF appreciates this opportunity to comment on WR Minimum Flow Study. Should you have questions, please call me at 479-229-4449.

Respectfully Submitted,

Jim Wood

Jim Wood, Member
Executive Board

White River Minimum Flow Study DEIS

AR Wildlife Federation
cc Sen. Blanche Lincoln
Sen. Mark Pryor
Sen. Christopher Bond
Sen. James Talent
Rep. Roy Blunt
Rep. John Boozman
Rep. Marion Berry
Rep. Vic Snyder
Rep. Mike Ross
AR Game & Fish Commission
MO Dept. of Conservation
US Fish & Wildlife Service

Norfork Lake Chamber of Commerce
PO Box 177
Gamaliel AR 72537
www.norforklakechamber.com

October 29, 2008

Re: White River Minim Flow SDEIS Comment Period

To: US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
Mr. Mike Biggs
PO Box. 867
Little Rock, AR 72203

c.c. Col. Jackson
Mr. Thomas W Waters
The Honorable Marion Berry
The Honorable John Boozman
The Honorable Kit Bond
The Honorable Roy Blunt

Mr. Biggs,

The Norfork Lake Chamber of Commerce opposes the Current White River Minimum Flow Supplemental Draft Environmental Impact Statement because additional study has shown it is not economically justified, technically sound or environmentally acceptable.

In the last two years, this project has seen skyrocketing hydropower expenses and plummeting benefit ratios. We believe the best option for this Minimum Flow plan is to leave the project unfunded and unimplemented.

We feel particularly betrayed by the CORPS over the creation of "Plan B" (BS-3B and NF-7B). You were charged by Congress to fairly mitigate the lakeside impacts between lakeside interests and AGFC. But in an effort to create "more robust net benefit estimates", you chose to develop and endorse a plan that diminishes lakeside interests, including yours "for the greater benefit of the increased trout fishery"

The SDEIS reveals that the trout fishery receives only 400,000 visitors/year and is not a direct CORPS concern. The lakes, on the other hand, receive over 4 million visitors/year and are a direct CORPS concern. Shockingly, the 2006 DEIS put our yearly lake visitors at over 7 million. It appears the CORPS has managed to lose 40% of our yearly lake visitors in only two years. Neglecting our infrastructure for the sake of implementing Minimum Flow when you have a Congressionally mandated sponsor will only make things worse for all of us.

Enclosed is our position paper to be included in the public record. Also enclosed is our comments and questions for your response and inclusion in the public record.

On behalf of the Board of Directors and Members of the Norfork Lake Chamber of Commerce,

x _____
Dan Weber, President

x _____
Shawn Egan, Vice President

Norfork Lake Chamber of Commerce
Minimum Flow Reallocation
Position Paper – Supplemental Draft EIS

The Norfork Lake Chamber of Commerce opposes the Current White River Minimum Flow Supplemental Draft Environmental Impact Statement because additional study has shown it is not economically justified, technically sound or environmentally acceptable.

Not Economically Justified

In this time of nation wide economic crises and billion dollar bailouts, it is time to admit that Minimum Flow is a costly, complex, unfeasible project that needs to remain unfunded and unimplemented.

- **Rising Costs**. Over the last two years of expanded study, the true costs of this pork barrel project have started to emerge. In 2006, hydropower impacts were estimated at just over $14 million but today those impacts have grown to over **$120 million**. That is an 850% increase in specific costs that Congress was not aware of when they authorized this project.

- **Declining Benefits.** Benefit/Cost (B/C) Ratios have declined up to **95%** in the last two years. Bull Shoals B/C Ratio has dropped from 70.86 to 3.34 and Norfork Lake B/C Ratio has dropped from 4.43 to **0.93**. (SDEIS pg 4-34) That means for every $1 spent on minimum flow at Norfork, the project makes back only 93 cents. By government standards, a project that loses money is not economically justified.

  Also, the Supplemental Draft Environmental Impact Statement (SDEIS) contains no impact study of any future carbon tax or non-renewable energy tax due to loss of hydropower to reallocation.

- **Questionable Valuation**. The Contingent Valuation Method (CVM), used to estimate the projects benefits of $4,990,300 has three problems.

  First, it has this caveat, "*It is important to note that the estimates are based on information from sample sizes that were too small to convey any meaningful statistical inference.*" (SDEIS pg 4-33)

  Second, the CVM is seven years old and in need of reassessment.

  Third, the CVM is based on an unlikely scenario stating, "*This calculation details that 24.7% of the remaining households in the state (or an **additional 230,600** households) may begin trout fishing and the benefit ...is $1,473,154.*" (see App. D) Keep in mind the CVM reports that actual residential trout permits totaled only 103,050. We are expected to believe that minimum flow will create 230,600 additional fishermen.

Not Technically Sound

Continued evaluation of the project and a series of historic events over the last two years have shown the SDEIS has not adequately considered several significant cumulative impacts.

- **Fishing Pressures.** The CVM estimates the number of trout fishermen will **increase 325%** from 103,050 to 333,650. While this number is highly unlikely, it remains that the SDEIS failed to account for the infrastructure necessary to accommodate this large number of new fishermen. The SDEIS also failed to study if the rivers can sustain the kind of fishing pressure increase that the CVM anticipates.

- **Drought Planning**. Drought contingency planning to insure that municipal water supplies and businesses are protected **has not been addressed** in the SDEIS. Last years disastrous low water event at **Lake Lanier**, when the State of Georgia threatened to sue the US Army Corp of Engineers and to call out their National Guard, demonstrates why all reallocation projects must include drought planning.

- **Flood Super Models**. The 2008 floods illustrate the need for an Operational Plan review and update before any major modifications like minimum flow are implemented. The Super modeling on lake levels and downstream flows is outdated and does not account for the most significant flood event in the history of the dams. The cumulative effect of high tributary flows and multiple uncontrolled releases from the dams during the spring rains led to backwater flooding of the North Fork River and other down stream areas. If, because of implementing minimum flow, we had been holding 5 feet more water in Bull Shoals and 1 ¾ feet more water in Norfork Lake, we would have **topped the dams sooner and ran over more days**. How much sooner and how many more days are unknown because this scenario has not been modeled. The coincidental frequency of the last five years of extreme weather events needs to be modeled and understood before making significant reductions in the flood pool capacity of Bull Shoals and Norfork Lake.

Not Environmentally Acceptable

A lot of study went into what is acceptable for the trout environment but there was almost no study for what is acceptable for the human environment.

- **Lakes Do Not Warrant Improvement?** No financial impact study has ever been conducted for the lake communities and the stage visitation curve greatly under estimated the recreational value of the lakes when compared to local tourism dollars. This low recreational value error has now been compounded in the 2008 SDEIS with the false suggestion that because of the low recreational value, lake facilities are not "*significantly impacted and do not warrant improvement. Therefore, the suggested analysis to consider is that which does not include road, bridge and recreational facilities in the first costs of the project: BS-3B and NF-7B.*" (see SDEIS pg 4-35) Plan B.

  The SDEIS then created a whole new B/C summary around this Plan B in direct conflict with the Congressional mandate that all significant impacts be corrected. Plan B was created because, "*This analysis yields much more robust net benefit estimates*" and the SDEIS makes the suggestion to ***"absorb the recreational benefit loss for the greater benefit of the increased trout fishery."*** (see SDEIS pg 4-35) The SDEIS says between 4.4 million people visit the two lakes while only 421,509 people visit the rivers each year. (see Appendix D Part II, #2) Whole communities depend on the lake facilities for work and play. It is unacceptable that local businesses, individuals or the Federal government facilities should be sacrificed for the benefit of the trout fishery.

- **Lake Impact Too Low**. 'Cost to Relocate Facilities' is the estimated value to correct significant impacts to lakeside roads, bridges and recreational facilities. That number has been steadily manipulated lower and lower over the last two years with Plan B being the ultimate lowering of the cost to zero. In 2006 it was $28,992,000. Around May 2008 it was $21,506,000. By mid July it was $19,150,000 and now the SDEIS has it at only $12,318,000. (see SDEIS pg ES-1-13 & 4-33)

  Part of the reason these costs have gone down is because the SDEIS set the lake levels for significant impact at a full **two feet below the new Proposed Seasonal Pool Elevation**. (see SDEIS pg 4-5 to 4-11) This is wrong and needs to be raised two feet. The SDEIS says Norfork Lake can expect an average of 7 additional days at the new Proposed Seasonal Pool level and Bull Shoals can expect 19 days during our 8 week prime tourist season. That's 12% impact for Norfork Lake and 33% impact for Bull Shoals. These are significant amounts when you figure that most businesses make 70-80% of their income during that time.

- **Energy Loses Significant**. Another significant change over the last two years is the value of 'Green Energy" and carbon footprints. The SDEIS estimates minimum flow reallocations will cause a renewable energy loss of 59,327 MWh/year. (see SDEIS pg 4-31) That's enough green, renewable energy loss to power **5000 homes every year or all the homes in Fulton County**.

  To make the environmental impact worse, the SDEIS estimates fossil fuel based replacement energy will generate carbon emissions of over 106,000 tons/year. (see SDEIS pg 4-31) In this time of high energy prices and shortages, this makes the SDEIS environmentally unacceptable.

Norfork Lake Chamber of Commerce
2008 WRMF SDEIS Public Comments

1 SDEIS, Section 1.1, Paragraph 2, Sentence 2, Pg 1-1. Trout are not stocked in Norfork Lake. Please correct.

2 SDEIS, Section 1.1, Paragraph 2, Sentence 3, Pg 1-1. The premise this sentence puts forth is false as evidenced by other statements in the SDEIS. This sentence is erroneous opinion and needs to be deleted. It is clearly stated in other parts of the SDEIS that AGFC wants to "*optimize*" the fisheries not save a dying fishery.

i.e. "*world class trout fishery*", "*more trophy size brown trout exist per mile in some reaches of the White River than any other river in the world*", "*Once stocked, both rainbow and brown trout flourished*", "*Since the mid 1980's the brown trout fishery has become increasingly more prominent due to the production of many large brown trout including the former world record of 38 pounds, 9 ounces caught in 1989 from the North Fork River*", "*increasing fishing pressure combined with changes in hydropower operations served to prevent most rainbow trout from reaching the sizes present in the 1950s and 1960s*".

Further more, documented fish kills are rare (averaging <20 fish/year over the last 15 years) and reflect the '*boom or bust*' nature of a hydropower reservoir as stated in the SDEIS. Finally, low DO is a problem only in the tail waters (3 miles below BS and 4.2 miles below NF) and the SDEIS acknowledges that "*low DO concentration below the dams has been a prominent issue since the early 1990s and is outside the scope of the White River Minimum Flow reallocation project*". The SDEIS also acknowledges that increased minimum flows are not nearly enough in themselves to maintain water temps along the length of the river. "*Based on further simulation results, to maintain temperatures during June 2000 within the AGFC thermal ceilings (<22-23 °C per Table 4.6-3), the upstream dams would have had to provide a combined daily volume of up to about 3000 dsf*", "*It is apparent from the simulations that large flow volumes are required for hot-day temperature control*".

3 SDEIS, Table 3.5.2.1-1: Natural and recreational resource benefits at Bull Shoals Lake Pg 3-15 and Table 3.5.2.2-1: Natural and recreational resource benefits at Norfork Lake Pg 3-21 along with a stage visitation study were used to determine lakeside recreational benefits. This severely underestimates the value and benefits of the lakes. Undervalued lakes and overvalued rivers is one more sign of a biased study project and flawed EIS. The two tables put yearly visitors at 5,552,500 BS and 1,658,300 NF while Appendix A lists the 2007 yearly visitors at 3,028,080 BS and 1,423,857 NF. That discrepancy shows a lack of consistency and puts all recreational evaluations in question. The SDEIS needs to contain a full economic impact study to put lake recreational interests on an equal footing with river interests.

4 SDEIS, Section 3.8, Paragraph 4, Sentence 5, Pg 3-40. Estimated benefits amount is wrong. Correct estimate should be 4.9 million according to other parts of the SDEIS. Please correct.

5 SDEIS, Section 4.0, Paragraph 6 & 7, Pg 4-4. Benefit to Cost Ratios and First Costs have no consistency throughout the SDEIS, Executive Summery, Project Report and Project Appendix. They show signs of being manipulated to achieve a desired benefit.

i.e. While BS-3 summaries shows a B/C of 3.34 they simultaneously show varying "*First Costs*" of $11,248,453 or $12,494,000, or $12,366,100. Norfork shows the same changing first costs and a consistent B/C. Also, a "*Plan Evaluation*" chart in Attachment 6 of Appendix A shows the one and only negative Benefit Cost ratio on BS-3A.

This is inconsistent with the rest of the published B/C information and points to a total collapse of the original 2006 B/C ratios and the reason to further manipulate the numbers with the creation of BS-3B and NF-7B so as to maintain a positive B/C ratio. This appears to be willful manipulation of the facts and figures to achieve a desired benefit. The SDEIS should be fully reviewed by an outside independent source or, more appropriately, completely dismissed as a failed, bias study.

Norfork Lake Chamber of Commerce
2008 WRMF SDEIS Public Comments

6 SDEIS, Table 4.3.1.1-1 Annual Pool Elevation-Duration for Elevations of Interest, Pg 4-6, footnote 3, date is inconsistent with rest of data in reports. Date should be June 15th. Please correct. If this date is allowed to stand, then it is a major deviation from the study.

7 SDEIS, Table 4.3.1.2-1 Annual Pool Elevation-Duration for Elevations of Interest Pg 4-10, footnote 3, date is inconsistent with rest of data in reports. Date should be June 15th. Please correct. If this date is allowed to stand, then it is a major deviation from the study.

8 SDEIS, Table 4.3.1.2-1, Pg 4-10 "*Increased Days*" column appears to have results in the wrong rows. Numbers do not total to the corresponding data in SDEIS, Table 4.3.1.2-2 Pg 4-10-11or make sense with the corresponding Percent Differences. Data needs to be fully evaluated to find and correct errors.

9 SDEIS, Section 4.3.1.1, Pg 4-4 and 4.3.1.2, Pg 4-8 establish a "*Proposed Lake Facility Filter Elevation*" for both lakes with no explanation or details of how those elevations were determined. The SDEIS needs to re-evaluate these numbers and release the methodology to the public for review and comment before going forward with the project.

Suspicions of willful manipulation of data to achieve a desired end are raised with this kind of hidden criteria, consistently decreasing "*Cost to Relocate Facilities*" numbers since 2006 and the fact that "*Filter Elevations*" are 2 – 2 ¼ feet lower then the newly proposed seasonal pool elevation. Official CORPS Yearly Average Pool Elevation charts (which surprisingly are not part of the SDEIS) show that the only time pool elevation meet or exceed the current Seasonal Pool Plans is during the maximum elevation months of May through July. This just so happens to be peak tourism season and therefore actual reallocation impact levels would be 2 feet higher then proposed.

10 SDEIS, Section 4.3.2.1, Pg 4-16, points out that "*800 cfs represents an effective upper limit for a minimum flow that is safely wadeable at all locations*" yet it fails to explain how fly fishing benefits will be impacted along the majority of the 95 miles of river that will always exceed that flow rate with minimum flow. If 800 cfs is released from BS-3 then "*safe*" limits will be exceeded past Crooked Creek, exceeded more past the Buffalo and always be at least 50% above the safe wadable limit from the Norfork on down the remainder of the river. This is a cumulative impact that the SDEIS failed to identify or study.

11 SDEIS, Section 4.4.2.3, Pg 4-20, explains how studies show the wetted perimeter will increase and improve through a "*series of steady flow runs using plots of wetted area and wetted usable area*" but fails to study what the overall long term effects of the current operating plan will be on those new wetted areas. The EIS failed to adequately study how long the newly saturated wetted perimeter will last before it re-develops its own bathtub ring.

In the previous section it is pointed out that "*productivity of the lake fisheries is currently, and will continue to be, largely influenced by water level management of the multipurpose reservoirs. Flood control reservoirs are inherently not conducive to maintain stable fisheries due there fluctuating water levels and rapid water releases. After a period of 2-3 years the characteristics of the ATOC will be similar to that of the current TOC which is commonly known as the "bathtub ring"*." If this is true of the lakes then it would follow that it is true of the rivers, especially since the SDEIS point out that "*operational changes resulted in increased scouring, destroying both stream substrate and the once extensive aquatic vegetation (Jones and Aggus 1983)*". The increase in wetted area is the only real improvement for the trout fisheries created by minimum flows (permanent temperature and DO control is not achieved with this project) and its benefit may be short term since there was no consideration given to this point.

12 SDEIS, Section 4.6, Pg 4-29, says "*air quality would not be significantly impacted*" and "*the increase in pollutants … would be minor* ". This is an opinion not a fact and one that is now out of date with current concerns about carbon footprints and loss of 'green' energy. The

Norfork Lake Chamber of Commerce
2008 WRMF SDEIS Public Comments

SDEIS fails to evaluate the added costs of impending Federal Carbon Tax or Missouri Renewable Energy requirements when it reallocates enough renewable energy off the grid to power all the home in Arkansas's Fulton County every year just to "*optimize*" an already world class trout fishery. This is a wasteful use of precious energy and should be important enough to stop this project.

13 SDEIS, Section 4.7, Pg 4-32. The CVM study's $4.9 million benefit finding is a major component of several SDEIS conclusions and calculations. This raises the CVM study to the level of needing to be re-evaluated since it is over 7 years old and appears to contain major statistical flaws like estimating an additional 230,600 new trout fishermen when it only started with an actual 103,000 trout fishermen. Provisions were made for its updating if it became to old ("*Study may require an economic update if implementation of the recommended plan does not occur expeditiously.*") There is also the problem that the SDEIS in inferring statistical benefits from a report that states "*sample sizes that were too small to convey any meaningful statistical inference.*"

14 SDEIS, Table 4.7-2 Recreation Facility Costs and Benefits Foregone, Pg 4-33 contains "*Cost to Relocate Facilities*" BS-3 $8,594,000 and NF-7 $ 3,724,000 and they are different from TABLE 8: Recreation Facility Costs and Benefits Foregone, "*Cost to Relocate Facilities*" BS-3 $12,494,000 and NF-7 $6,656,000 and they both are different from Table I "*Cost to Relocate Facilities*" BS-3 $17,380,000 and NF-7 $4,126,000. Yet all these tables reference the same B/C ratios. This appears to demonstrate willful manipulation of facts and figures to achieve a desired benefit and requires that the SDEIS be fully reviewed by an outside independent source or more appropriately completely dismissed as a failed, bias study.

15 SDEIS, Section 4.7, Paragraph 1, Pg 4-35. The paragraph attempts to minimize the significance of lake impacts and create a false premise that there are two ways to look at those impacts, i.e. fix them or forget them. Congress was quite clear that there is only one way to look at lake impacts and that was "*The non-Federal interests shall provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities* " This paragraph needs to be deleted and lakeside impacts fully mitigated.

16 SDEIS, Section 4.7, Paragraph 2, Pg 4-35. This paragraph notes that the mandated lakeside "*improvements of this type are very expensive* " and reduces the B/C ratios. It proposes "*absorbing the annual loss*" in order to have "*more robust net benefit estimates.*" This appears to be more evidence of willful manipulation of a public study to achieve a desirable benefit finding. It also begs the question, since when does not fixing CORPS facilities make for a project better? (especially when there is an entity mandated to fix anything the CORPS says needs fixing) This paragraph needs to be deleted and lakeside impacts fully mitigated.

17 SDEIS, Section 4.7, Paragraph 3, Pg 4-35. There is no "*speculation*" as the paragraph starts out. There is simply a Congressional mandate to fix all impacted lakeside facilities. Previously faulty conclusions about the low value of lakeside recreation are used to circumvent Congressional mandates and manipulate B/C ratios to allow the false conclusion that BS-3B and NF-7B are justified. This appears to demonstrate willful manipulation of facts and figures to achieve a desired benefit and requires that the SDEIS be fully reviewed by an outside independent source or more appropriately completely dismissed as a failed bias study. This paragraph needs to be deleted and lakeside impacts fully mitigated.

Lake Norfork Arkansas

Quarry Marina

870-499-5388
www.quarrymarina.com

Hwy. 177 at Lake Norfork Dam • P.O. Box 431 • Mountain Home, AR 72654-0431• Richard & Cheri Hanson • Owners

October 30, 2008

Mr. Mike Biggs
White River Minimum Flow Project
P O Box 867
Little Rock, AR 72203-0867

Dear Mr. Biggs:

My name is Richard Hanson, owner of Quarry Marina on Lake Norfork, and **I oppose** the White River Minimum Water Flow Supplemental Draft EIS based on my belief that data used is flawed and inaccurate and has been manipulated to achieve a favorable outcome.

For an example, Table A9 page 4-34, Norfork Lake Summary, NF-7A shows a B/C Ratio of 0.93. I believe that NF-7B was created to show a positive 1.39 B/C Ratio as a biased, favorable outcome.

The Contingent Valuation Method (CVM) estimates the number of trout fisherman will increase 325% from 103,050 to 333,650 if minimum water flow is implemented. This is a totally unrealistic number because the river system would not be able to sustain that much fishing pressure. Almost 50% of the Cost to Benefit Ratio is derived using that number.

If an extra 200,000 licenses are purchased, there will be a high amount of revenue collected by the Arkansas Game & Fish. Environmentally, this could be devastating to the river fisheries. Financially, the 200,000 additional licenses make minimum flow a viable project. The AG & F states that realistically, only about 3,000 of the 200,000 licenses will be used. Environmentally, 3,000 licenses is a better picture, but make the minimum flow project economically unsound. Once again, the numbers were manipulated to achieve the desired outcome.

I believe that there have been several areas of public use (e.g. Sand Island) that have been left off the reconstruction estimates and were never included in the study. These are highly used public areas of Lake Norfork.

An example of a hidden change that has never been mentioned in any meetings but was found as a footnote on a chart: The seasonal pool time period will be increased an extra month, ending July 30th instead of June 30. (Table 4.3.1.2-1 Annual Pool Elevation-Duration for Elevations of Interest)

Common sense tells me that the government shouldn't spend $100,000,000.00 plus on a project to save approximately 50 fish per year on the Norfork River. See Table 3.5.4 page 3-27/Affected Environment/EIS. This table shows documented fish kills on the Norfork River.

Page Two
Mr. Mike Biggs
October 30, 2008

With the magnitude of the errors, discrepancies and the biased nature, this report seems to be on par with the Sweeney Test of the Upper Mississippi River Study. And before we approve minimum water flow, there should be an independent review of all facets of the study including the economic numbers that are being used.

I feel the studies done are inadequate and in error. This led to errors in the decision making process that affects the economic side of the rivers and lakes.

Sincerely,

QUARRY MARINA

Richard Hanson
Owner

cc: Colonel Jackson, USACE
Thomas W. Waters, USACE
Marion Berry, US Representative
John Boozman, US Representative

10-8-08

U.S. Army Corps of Engineers

YES! I am much in favor of Minimum flow. Time has come to stop talking about minimum flow and do it. Most people know it is the Correct thing to do. Unfortunately those that oppose Minimum flow on thinking more about there Wallet rathen than doing the Right thing.

Thank you for the opportunity to voice my belief.

Sincerely.
Michael J. Hulick

COMMENT SHEET-Supplemental Draft Environmental Impact Statement for the White River Minimum Flow Reallocation Study

October 14, 2008

U. S. Army Corps of Engineers-Little Rock District
ATTN: CESWL-PM (Mr. Mike Biggs)
P. O. Box 867
Little Rock, AR 72203

Dear Mr. Biggs:

This letter is a follow-up to the recent public workshop held in Mountain Home, AR on the findings of the Supplemental Draft Environmental Impact Statement for the White River Minimum Flow Reallocation Study.

We are opposed to the implementation of this project as the costs far outweigh the benefits. After listening to the questions raised during the meeting and reading the study results, there are many issues with the proposed project. Many of the questions we raised in our August 2, 2006 and August 3, 2006 letters (attached) still have not been answered. Much of the additional data included in this supplemental study raised even more questions about the validity of the study process and the results.

Your study did identify more of the costs associated with implementing the siphon system on Lake Norfork and what the estimated cost Arkansas Game and Fish will incur to fix the public areas affected by the higher lake levels. There are many inconsistencies within the study on exactly what the costs would be. The actual cost would no doubt be substantially higher by the time both the Federal and State allocate the necessary funds. Are these expenditures really necessary to improve the existing "world class fishing?" Is the expected increase of 5" to 7" river depth between power generation on the North Fork/White Rivers really going to make that much of an improvement to the quality of the water and bring in 230,600 additional fisherman?

You previously stated the study of water quality resulting from run-off was outside the focus of your study. Shouldn't there be someone looking at this issue prior to spending money to implement the siphon system to make sure that the expected increase in oxygen levels is not negated by the run-off from land development along the North Fork River? This run-off is just another variable in the effectiveness of the proposed siphon system. The other variables are the oxygen levels/water temperature of the lake, the time of the year when the water will be drawn off, and the fluctuation of the river when power generation is taking place. There is no mention of what will happen during drought years when the lake levels are low. You surely would not continue to reduce lake levels in order to benefit the rivers!

We know there are other issues still associated with this proposal. We also know there are a few individuals who carry a big stick who are in favor of going forward with the implementation of minimum flow for their own personal gain. Spending Federal and State tax dollars on this project is not needed at a time when our country and state have more pressing needs to address.

If you have any questions on our comments please give us a call on 870-499-7315. We look forward to hearing your responses to the questions and issues we have raised.

Sincerely,

Wylaine J. Korbelik
78 Lake Point Vista
Jordan, AR 72519

James R. Korbelik
78 Lake Point Vista
Jordan, AR 72519

Attachments

cc Congressman Marion Berry
US Senator Blanche Lincoln
US Senator Mark Pryor
AR Senator Shawn Womack
AR Representative Curren Everett
Baxter County Judge Dan Hall

COMMENT SHEET-White River Minimum Flow Reallocation Study

August 2, 2006

US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, AR 72203

Dear Mr. Biggs:

I am a resident of Jordan, Arkansas. My husband and I had been coming to Lake Norfork since the early 1970's and built a home in the Jordan area in 1986. We were attracted to this area due to its excellent bass fishing, clarity of the water, numerous scuba diving sites and **the only natural white sand beaches** on the lake. After many years traveling here on weekends and vacations, we became permanent residents in 2000. We rent two boat slips at the Jordan Marina and spend a lot of time on the lake boating, swimming, scuba diving or fishing. While the lake is our primary source of recreation, we do trout fish on both the North Fork and White Rivers.

Over the years we have witnessed first hand the growth in the area as well as the increased use of the lake and rivers as a vacation destination for people from all over the United States. We have many relatives and friends who visit us every year and we spend most of the time they are here on the lake and beaches. Since we use both the lake and the rivers, we are concerned about what is needed to keep both the lake and the rivers viable into the future.

After attending the June 19th Mountain Home meeting and reading the on-line version of the Draft Environmental Impact Statement (EIS) White River Minimum Flow Reallocation Study, I have some **real concerns** about the Lake Norfork results and how they were presented in the study. The study states the major issue is the deterioration of the trout habitat in the rivers, and looked at nine alternatives before developing a recommendation. It didn't take long to realize the study is incomplete as it does not contain all the information necessary to make a recommendation that is both cost effective and economically feasible

My concerns with the study and the Lake Norfork Split Pool Reallocation NF7 Plan, in particular, are as follows:

1. Why is there no action to be taken at Beaver, Table Rock, and Greers Ferry Lakes?

2. The Cost to Implement slide for the Norfork Dam presented at the June 19th meeting shows the Preconstruction Engineering Design cost of $738,000 and the Construction Cost of $3,834,000.
   -Why doesn't the Norfork Lake Summary sheet in the study include the $738,000 engineering cost?

3. Where in the study are the implementation costs and recurring costs for:
   -Southwest Power Administration (in addition to the loss of $259K in generation)?
   -US Army Corps of Engineers to modify roads, campgrounds, access points?
   -Marina owners and the over 1000 private dock owners?

4. Since Arkansas Game and Fish (state agency) is the beneficiary of the 3.5 feet of reallocated (federally controlled) water, what implementation and recurring costs will the State of Arkansas incur?
   -If none are assigned to the state, shouldn't they be paying for it?

5. What effect will the increase in fluctuation of the lake levels from a longer period of higher water levels to a longer period of lower levels (during a drought) have?
   -What happens to the spawn with the shore vegetation dying off?
   -What will be the revenue loss to the area from poor fishing on the lake?
   -Will the Bass Cat tournament along with others be forced to go elsewhere?
   -When lake levels are lower, how will the Rodney Volunteer Fire Department and other area fire departments fill their tanker trucks?

6. The study states the Norfork Tailwater is defined as Norfork Dam to the confluence with the Bull Shoals Tailwater of White River, **a total of 4.7 miles** (p.72). Table 4.5.3.1 Tailwater Area Changes chart (p130) shows the Norfork Tailwaters wetted area (amount of bottom substrate that is always covered) will increase from 54 acres to 83 acres, **an increase of 29 acres**. The chart shows the current minimum flow cubic foot per second (cfs) **will increase from 115 to a Target Minimum of 340**, resulting in an increase depth of the North Fork River of **five inches**. As stated on p. 140, temperature improvement from minimum flow additions will be felt closer to the dam and **diminishes in the downstream direction**.
   -Why does Table 4.8-1 Potential Recreational Benefits from Tailwaters assign Lake Norfork 29 miles when the North Fork River is 4.7 miles long and the benefits from increased minimum flow will barely have any affect after the first mile or so?
   -Won't the change from 115 cfs to 6000 cfs or 340 cfs to 6000 cfs when generating still shock the fish and be just as stressful as it always has been?

7. As previously stated we have been in the area for over 20 years. Norfork Lake is still as clear and pristine as a result of the protection from the Corps property along the shoreline. While there is an increase in boat traffic, residents and visitors alike can always find a place to swim or fish and not interfere with others. The sand beaches in the Jordan Area are a **major attraction** to the area and are **very popular**. These beaches **would be lost** with the change in the Conservation Pool level proposed in the 50/50 Reallocation.
   -Where do families with little kids go to safely swim in the lake?
   -How much in tourism revenues will be loss when the beaches are gone?

8. We see many housing developments going up along the rivers resulting in numerous septic systems which have to drain somewhere. We watched a land developer strip the land above the North Fork River and no one was concerned the whole time he was grading. It wasn't until months later when we had a major rain that folks realized there was a problem.
   -Why isn't there any shoreline protection along the North Fork and White Rivers?
   -Whose responsibility is it to protect the river banks?
   -What is all this run-off doing to the water quality?

-Has there been any effort made to study ground water run-off and how much this is affecting the trout habitat?
-Isn't it possible the run-off is the problem as opposed to the minimum flow?

9. The increase in fishing pressure on the rivers is almost getting out of hand. We see more fishermen wading below the Norfork Dam (sometimes almost shoulder to shoulder) and a steady stream of boats lined up to access the river on the weekends. This increased pressure on the rivers is taking its toll.

-Will adding 29 more acres of wetted area on the North Fork River make that much difference?
-Will the increase in river depth of five inches make that much more of the river navigable or bring more boats in the area where fly fishermen like to wade?
-Since most trout are caught in short time period after being released into the rivers, wouldn't it be more cost effective to have Game and Fish release more trout, rather than spend millions of dollars to modify the Norfork Dam **hoping** it will improve the habitat?
-What about imposing a trout season like other states which would give the trout time to grow and possibly reproduce?

I know there are other issues associated with the proposal and hopefully others will be bringing them to your attention. You **cannot** go forward with implementing the proposed changes to the Norfork Dam. You **must** take into consideration all of the costs associated with the project, the revenues the lake brings into the area, and the recreation the lake provides both residents and tourists. Once you gather these figures, I **seriously doubt** there will be justification to proceed with the reallocation.

If you have any questions on my comments, please call me at 870-499-7315. I look forward to hearing your response(s) to the questions and issues I have raised.

Sincerely,

Wylaine J. Korbelik

Wylaine J. Korbelik
78 Lake Point Vista
Jordan, AR 72519

cc Congressman Marion Berry
US Senator Blanche Lincoln
US Senator Mark Pryor
AR Senator Shawn Womack
AR Representative Curren Everett
Baxter County Judge Dan Hall

COMMENT SHEET-White River Minimum Flow Reallocation Study

August 3, 2006

US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, AR 72203

Dear Mr. Biggs:

I am a resident of Jordan, Arkansas. My wife and I had been coming to Lake Norfork since the early 1970's and built a home in the Jordan area in 1986. We were attracted to this area due to its excellent bass fishing, clarity of the water, numerous scuba diving sites and **the only natural white sand beaches** on the lake. After many years traveling here on weekends and vacations, we became permanent residents in 2000. While the lake is our primary source of recreation, we do trout fish on both the North Fork and White Rivers.

Over the years we have witnessed first hand the growth in the area as well as the increased use of the lake and rivers as a vacation destination for people from all over the United States.

After reading the on-line version of the Draft Environmental Impact Statement (EIS) White River Minimum Flow Reallocation Study, I have some **real concerns** about the Lake Norfork results and how they were presented in the study. The supposed benefits of the plan are to aid fishing on the river by improving:

a. oxygen content
b. food sources for fish
c. temperature of water
d. navigation

is by the plan itself flawed due to no controls over the results of power generation.

Power generation can spill up to 30,000 cfs into the rivers shocking fish with under oxygenated, colder water as well as scouring the vegetation, all of which will be negating the benefits of minimum flow. The minimum flow will largely benefit a few short miles of both the White and North Fork Rivers below each dam, with much of the White River temperature and oxygen content little affected.

The plan's effect on Lake Norfork has not accurately addressed the economic impact to the businesses on the lake. Consideration of the loss of revenues by the greater lake level fluctuations needs to be studied. I know the lakes weren't built with fishing and recreation as a reason for their construction. I think it is time to consider this aspect, as fishing, recreation as well as development around the lakes brings millions of dollars to the economy of the region. This has as much impact as revenues produced through power generation at the dams or the increased fishing

minimum flow will produce. The study does very little to address the true economic effect on the lakes beyond the impact to Corps of Engineer properties.

Development on the White River could become a bigger issue and negate any benefit minimum flow could produce. The past 5 to 10 years has seen a very rapid sale of shoreline property along both sides of the rivers, along with homes being built on many of these properties. The developments will lead to lawns producing run-off of chemicals, fertilizers, septic fields, etc into the river, causing pollution from the dams to Sylamore Creek. This impact is not considered in the conversations I have had dealing with the river issue. Corps of Engineers personnel say that it is not in their realm of jurisdiction and Arkansas Game and Fish isn't addressing it at this point. The impact of runoff on water quality over a much greater part of the trout fishery negates much of the benefits listed for increased minimum flow.

I know there are other issues associated with the proposal and hopefully others will be bringing them to your attention. You **cannot** go forward with implementing the proposed changes to the river basin and the lakes. You **must** take into consideration all of the costs associated with the project, the revenues the lakes bring into the area, the recreation the lake provides both residents and tourists as well as the runoff issue. Once you gather these figures, I **seriously doubt** there will be justification to proceed with the reallocation.

If you have any questions on my comments, please call me at 870-499-7315. I look forward to hearing your response(s) to the questions and issues I have raised.

Sincerely,

James R. Korbelik

James R. Korbelik
78 Lake Point Vista
Jordan, AR 72519

cc Congressman Marion Berry
US Senator Blanche Lincoln
US Senator Mark Pryor
AR Senator Shawn Womack
AR Representative Curren Everett
Baxter County Judge Dan Hall

White River Minimum Flow Reallocation Study (SDEIS)
Comment Sheet

I am against minimum flow. My reasoning has to do with mitigation of negative lake impacts. The SDEIS Abstract (pg ii) states "in-lake recreation will be fully compensated." The document, however, contradicts this statement.

The SDEIS studied roads, parking lots and swim beaches impacted at CORPS parks and marinas but no study was done for privately owned docks and access areas. The SDEIS on (pg1-2) states "the non-Federal interests shall provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities…" Private residents and private businesses should be studied also. This is a **huge oversight.**

The SDEIS sets the level of impact at 554.5 at Norfork Lake. This is ½ foot below the current seasonal pool level and, therefore, 2 ¼ feet below the new minimum flow seasonal pool. This will occur during the May through July peak tourism season on the lakes. There is no study in the SDEIS showing how the 554.5 impact level was decided or why it was set 2 ¼ feet below the new seasonal pool level. This is a **major oversight**.

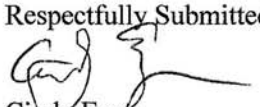
The SDEIS in Appendix A, Attachment 6, shows that the costs to mitigate the negative lake impacts make minimum flow financially not feasible. This is true even without considering privately owned dock accesses or parking and with studying the impact on facilities at over 2 feet below where the water will actually be during peak public use. Since the costs are so high, the SDEIS proposes on page 4-35 that we "absorb the recreation benefit loss for the greater benefit of the increased trout fishery." Lake users, lake property owners and lake business owners have been assured repeatedly that the negative lake impacts would be mitigated as mandated by congress. This is an **unbelievable betrayal of trust**.

My questions are as follows.
1. Did the SDEIS study the impact of higher lake levels on privately owned accesses and areas? If not, why were these not considered?

2. Did the SDEIS study where to set the lake level that would be used to determine impacts on in-lake recreation? If yes, where is the study?

3. Did the WRDA Act passed by Congress authorizing minimum flow establish that negative in-lake recreation impacts be mitigated? If so, are plans BS-3B and NF-7B going to be removed from the SDEIS?

Respectfully Submitted,



10/30/08

Cindy Egan
Bayou Resort
2325 Fout Rd
Gamaliel, AR 72537

BRICKFIELD BURCHETTE RITTS & STONE, PC

November 3, 2008

Mr. Mike Biggs, P.E.
Project Manager
Planning & Environmental Office
Little Rock District, U.S. Army Corps of Engineers
P.O. Box 867
Little Rock, AR 72203-0867

BY ELECTRONIC MAIL (mike.l.biggs@swl02.usace.army.mil) AND USPS

RE: White River Minimum Flows – Supplemental Draft Environmental Impact Statement

Dear Mr. Biggs:

This is in response to the Little Rock District's Federal Register Notice of Availability Supplemental Draft Environmental Impact Statement for the White River Minimum Flow Reallocation Study, Arkansas, published on August 6, 2008, and the Little Rock District's News Release on August 21, 2008 requesting comments on the White River Minimum Flow Study - Supplemental Draft Environmental Impact Statement (SDEIS) dated August 2008.

The Northeast Texas Electric Cooperative, Inc. ("NTEC") and Tex-La Electric Cooperative of Texas, Inc. ("Tex-La") (hereinafter the "Cooperatives") appreciate the opportunity to comment on the SDEIS. The Cooperatives are members of the Southwestern Power Resources Association ("SPRA"), which represents the interests of cooperative and municipal utilities that purchase hydropower generated at Corps of Engineers dams and marketed by the Southwestern Power Administration ("Southwestern"). By letter dated November 1, 2008, signed by Ted Coombes, Executive Director, SPRA submitted comments on the SDEIS to the Little Rock District. The Cooperatives fully support and join in SPRA's comments.

In addition, while the Cooperatives recognize that the Corps is operating under legislative mandates that somewhat restrict its discretion, the Cooperatives wish to note for the record their belief that the White River Minimum Flow Project is not economically justifiable. The recreational benefits outlined in the SDEIS are greatly overstated by the assumptions used in the Contingent Value Method. The hydropower capacity and energy that will be lost is more beneficial to the Nation because of energy shortage than the potential increase in trout fishing and boating recreation time that will

1025 THOMAS JEFFERSON ST., N.W. – EIGHTH FLOOR, WEST TOWER – WASHINGTON, D.C. 20007
PHONE: 202.342.0800 FAX: 202.342.0807 WWW.BBRSLAW.COM

be attained by the implementation of the project. If the goal of the project is to improve the White River trout fishery, that could be achieved much more effectively and cost-efficiently by simply limiting the fishing pressure on the trout resource.

If you have any questions concerning the Cooperatives' comments, please contact the undersigned counsel or the Cooperatives' economic/engineering consultant, Thomas G. Gebhard, P.E., Ph.D., GDS Associates, Inc., at (512) 494-0369 x-123 . Thank you for the opportunity to provide feedback and comments on the Supplemental Draft Environmental Impact Statement.

Respectfully submitted,

Michael N. McCarty
Christian D. McMurray
BRICKFIELD BURCHETTE RITTS & STONE, P.C.
1025 Thomas Jefferson St. NW
Eighth Floor, West Tower
Washington, DC 20007

Counsel to Tex-La Electric Cooperative of Texas, Inc. and Northeast Texas Electric Cooperative, Inc.

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY

SDEIS COMMENT PERIOD – Ending November 3, 2008

My name is Cheri Hanson, and **I oppose** the White River Minimum Water Flow Supplemental Draft EIS.

The EIS states that there were 12 confirmed/documented trout kills in the two tail waters between the years 1963 and 1981. Specifically, that is 6 trout kills for Norfork TW and 6 trout kills for Bull Shoals TW during a 19 year period. More specifically, there were 305 dead trout for Norfork TW in 19 years and 1,529 dead trout for Bull Shoals TW in 19 years. These figures were taken from your table listed on page 3-27. Why don't you just stock more fish? Would that not be a lot less expensive than the $100,000,000.00 plus that your WRMF project is estimated to cost?

On page 3-32, the study states "With the present minimum releases fishermen must either drag their boat over the shoals or turn back and limit their excursions. " I believe the study focuses only on fishermen who use boats on the rivers and does not address wade fishermen. I could find no figures on the numbers of boat fishermen vs. wade fishermen listed in the project study. Are these figures available? Is the information available on how these figures were determined? I believe with the present minimum releases that wade fisherman have no problems and no limitations. Can you determine how much a boat fisherman spends per visit vs. how much a wade fisherman spends per visit? If you can, what are those figures?

Also, on the economic side, what if those 200,000 extra trout licenses sold ARE all boat fishermen? Is there enough river for them all? Environmentally speaking, think of the damage all of those boats will do to the rivers (pollution and over-catching). Can these two rivers really sustain that much additional fishing pressure?

John Berry, a fishing guide from Cotter, has 25 years of experience fishing local rivers and writes fishing reports weekly for the Baxter Bulletin newspaper. This excerpt was from the November 1, 2008, Baxter Bulletin fishing report written by John Berry:

"Norfork Lake has fallen 1.3 feet to rest at 10.5 feet above the power pool of 552 feet or 17.5 feet below the top of the flood pool. The pattern has been to run one generator around the clock. Boating conditions on the White and North Fork have been uniformly good. **There has been no safe wading."**

Page 3-26 of the study states "This stratification condition is NATURAL and occurs in many water bodies especially deep reservoirs such as Bull Shoals and Norfork. The DO and temperature characteristics of the surface and hypolimnion vary greatly and are isolated from the other (no vertical mixing). While the colder water in the hypolimnion is essential for the trout fishery to exist, the low DO concentrations can be detrimental to the fishery." The last 2 sentences state, "The low DO concentration below the dams has been a prominent issue since the early 1990s and **IS OUTSIDE THE SCOPE** OF THE WHITE RIVER MINIMUM FLOW REALLOCATION PROJECT. The DO issue has been and will continue to be addressed primarily through the multi agency cooperative efforts of the White River Dissolved Oxygen Committee." If the DO is outside the scope of this project, why does the USACE consider it a factor in determining whether the project should go forward or not?

Another matter of concern is the USACE responses to some of the comments from the 2006 Public Comment period. "Do not concur" was used many times to answer public questions or comments.

Page Two
SDEIS Comment
November 3, 2008

I believe the USACE has the responsibility of addressing every comment whether or not they agree with it and to find the answer and report it if they don't know the answer.

Information on Lake Norfork High and Low Elevations by Year provided by the Mountain Home Project Office show that from 1944 thru 2008 the lake level exceeded the new 554.5 MSL 40 times out of a possible 65 (62%) times. Out of those 40 high water years, 22 (55%) of them were 6 feet above the 554.5 MSL mark.

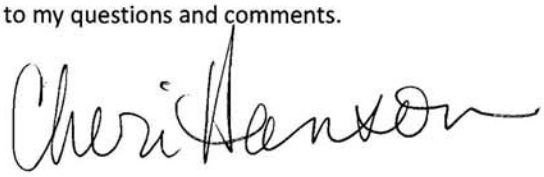
Economically, those 40 seasons were devastating to the growth of businesses on Lake Norfork. Why would the USACE want to hurt those businesses by increasing the occurrences of high water years due to the implementation of minimum water flow? Does the USACE not derive income from these businesses? Does the USACE prefer using tax dollars (for implementation of minimum flow) while not caring that their "income" from these lake businesses is decreasing due to high water?

Page 4-2 states that "the minimum flow operation at Bull Shoals Lake would improve 66 miles of trout fishery ..." "The minimum flows operation at Norfork Lake would improve 29 miles of trout fishery..." If the Norfork River is only 4.5 miles long, is it not double-dipping your figures to use the same miles for both fisheries as an economic benefit ?

Our country is currently trying to escalate the usage of alternative sources of fuel and power, one of them being hydropower. Would the water that goes through the proposed siphon create hydropower or not? If it does not, why the waste? Should the USACE not try to be part of the movement of "going green"?

I look forward to your response to my questions and comments.

Cheri Hanson
1712 Van Buren
Mountain Home, AR 72653
Cehanson45@yahoo.com



cc: Colonel Jackson, USACE
Thomas W. Waters, USACE
Marion Berry, US Representative
John Boozman, US Representative

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

The main reason I am against it is that it's not economically justified. The hydropower impacts were estimated at $14 million in 2006 but today have grown to $120 million. That is just one difference in the cost that Congress wasn't aware of when they authorized this project.

I think this is a perfect example of a "pork barrel" project and we should leave well enough alone.

Thank you,

Rachel Cox

712 Baxter Ave.
Mtn. Home, AR 72653

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think this is somebody's pet project and I believe it's wrong for the taxpayers in this country to have to pay for it. This minimum flow project must be what they call a pork barrel project. I am opposed to it.

Thank you,

[redacted]
[redacted] Baxter Ave.
[redacted] Home AR 72653

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think Minimum Flow is an unfeasible project that costs too much for the small benefit it will possibly produce. I think it needs to remain unfunded and unimplemented.

The Supplemental Draft EIS Contingent Valuation Method (CVM) has many flaws in it. The estimates are based on information from sample sizes too small to convey any meaningful statistical inference (SDEIS pf 4-33); the CVM is seven years old and needs reassessment; and it's highly doubtful that trout fishermen in this state will increase 325% from 103,050 to 333,650 if minimum flow takes effect.

With all that's going on in this country I think this project is shameful.

Thank you,

Tiffany Jennings
3915 Hwy. 101
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

Minimum Flow Reallocation is not environmentally acceptable. The SDEIS estimates minimum flow reallocations will cause a renewable energy loss of 59,327 MWh / year (SDEIS pg 4-31). That's enough green, renewable energy to power 5000 homes every year. The SDEIS also estimates fossil fuel based replacement energy will generate carbon emissions of over 106,000 tons/year (SDEIS pf 4-31). There has been no study of any future carbon tax or non-renewable energy tax due to loss of hydropower to reallocation.

This is just one of the reasons this project is unacceptable.

Thank you,

John R. Sandell Jr.

John Sandell, Jr.
3415 Hwy 101
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

November 2, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think this is somebody's pet project and I believe it's wrong for the taxpayers in this country to have to pay for it. This minimum flow project must be what they call a pork barrel project. I am opposed to it.

Thank you,

Frank Winters
67 CR 804
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

November 2, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think Minimum Flow is an unfeasible project that costs too much for the small benefit it will possibly produce. I think it needs to remain unfunded and unimplemented.

The Supplemental Draft EIS Contingent Valuation Method (CVM) has many flaws in it. The estimates are based on information from sample sizes too small to convey any meaningful statistical inference (SDEIS pf 4-33); the CVM is seven years old and needs reassessment; and it's highly doubtful that trout fishermen in this state will increase 325% from 103,050 to 333,650 if minimum flow takes effect.

With all that's going on in this country I think this project is shameful.

Thank you,

Robert Sparlin
3 Nov 08
311 County Road 804
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think it is totally unacceptable for the government to spend any money on this project. There are a lot more important things to be doing with our tax dollars than reallocating water for the trout, especially when we are supposed to have "world class" trout fishing already.

Thank you,

Lindsey Nuhfer

Lindsey Nuhfer
5350 Hwy 101
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I don't think adequate attention has been paid to a drought contingency plan or to the costs in the SDEIS. Also, the 2008 floods have not been accounted for in the super model of lake levels and downstream flows.

The frequency in the last five years of extreme weather events needs to be modeled and understood for both high water and low water.

I don't think the big picture is being looked at.

Thank you,
Patrick Nuhfer
Patrick Nuhfer
5350 Hwy 101
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

November 3, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mike,

I am against Minimum Flow on the White River.

The drought contingency plan is 60 years old. A few years ago another 1' 3" of water out of my lease area would have caused me to have to move all my docks out to the main lake channel. I would have been out of business just like what happened at the marina at Udall. Outflow will exceed inflows.

The loss of hydropower – to buy Empire Electric contracts on Bull Shoals and basically write a blank check to S.W.P.A. from Arkansas Game & Fish on Norfork Lake is a bad deal, especially when the electric grid is looking for power.

When the dams were constructed, the warm water fishing issue was mitigated for the river all the way to a "world class trout stream".

SDEIS has the smell of someone just pushing it through to get it done. The project planning team's objectivity has been compromised. When confronted with information that questions the SDEIS, the CVM, or the drought plan the answer I get back is a simple "I don't concur".

This project should end forever; the cumulative impacts are far greater than these few points.

Thank you,

Glenn Cox

Glenn Cox
Fout Boat Dock
2932 Fout Rd.
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

Congress mandated that all significant impacts be corrected, so "Plan B" was created to make it look like the recreational value of the lakes was very low and there was nothing significant to correct. The SDEIS makes the suggestion to "absorb the recreational benefit loss for the greater benefit of the increased trout fishery".

There has not been a financial impact study conducted for the lake communities. It is unacceptable that local businesses, individuals or the federal government facilities should be sacrificed for the benefit of the trout fishery.

Thank you,

Renee Cox

Renee Cox
P. O. Box 60
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 30th, 2008

To whom it may concern:

As a marina owner on Norfork Lake and mother of three children, I am opposed to Minimum Flow. I know that adding one and three quarters feet to the normal lake level does not sound like much to you, but it makes a world of difference to me.

By submerging the sandy beaches that exist only in the Jordan area of the lake, we lose a significant amount of business. I understand why customers don't show up when the beaches are flooded because my children love to go to the beach too!

As we look forward in our present economy, it also doesn't seem to be the right decision economically to implement Minimum Flow. The nation is looking for more opportunities for green energy, not to siphon the water away. It just doesn't make sense to spend $1.00 and get $.93 cents back at Norfork Lake. The North Fork River and White River system is already described as "World Class Trout Fishing." Why spend millions to improve that?

Sincerely,

Denise Weber

Denise Weber
Jordan Marina
3291 Jordan Landing Rd.
Jordan, AR 72519
(870) 499-7348

Daniel Weber
3291 Jordan Landing Rd.
Jordan, AR 72519

US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
Mr. Mike Biggs
P.O. Box 867
Little Rock, AR 72203

November 3, 2008

To Army Corps of Engineers,

I am writing you to oppose the White River Minimum Flow Study. I have been coming to the Lake Norfork area for about 35 years and I have owned Jordan Marina now for over 8 years. After reading the Environmental Impact Study, I can say that my opposition has only increased.

I believe the lake interests have not been adequately researched. Since a study was only done on Bull Shoals Lake, the unique features of Norfork were not taken into account. Such as the White Sand Beaches being under water for longer periods of time. Many of my customers come here specifically for the beaches. If the beaches are under water, they go somewhere else. The Corps of Engineers has several campsites on the beaches. At 554, the beaches are underwater. Nowhere is the EIS does it take into account the loss of the White Sand Beaches.

The cost of this project is very high, in the 100's of millions of dollars. The benefit numbers are wrong. There is no way that 238,277 more people from Arkansas are going to trout fish on the river because of minimum flow. This unreal number accounts for almost ½ of the benefit number. No surveys were ever done outside the white river region and 230,600 people of the 238,277 come from outside the region. The whole CVM numbers are very unrealistic.

If this many more people are going fishing, how do we know if the river can handle the additional fishermen? The study states that Arkansas Game and Fish was not able to provide an estimate of how many people the river could handle. This study must be done to ensure the river is not negatively affected. The study did try to calculate the number of additional fishing days on the river. However the 230,600 additional trout fishermen number was not used in the calculation, the number used was 8,287. If the correct number is used, the answer goes from 3 increase in fishers per day per mile to 45 increase in fishers per day per mile. This is a big difference, what is the right number? The study can not use big numbers to get big benefits and small numbers in other places.

The EIS does not include the latest 2008 Flood event which the worst lake flood event in history. This event should be included in the flood super models. I understand you must stop and draw the line somewhere but not to include the worst event in history is wrong.

The study assumes that every mile of river will produce an equal amount of benefit. This is not accurate since the farther down river the water goes, the less of an

impact it has on the river. Temperature advantage is lost upon reaching Calico Rock (mile 359). However the study claims full benefits down to mile 329 (another 30 miles downstream). That is an extra $1,363,140 in questionable benefits. Also, Norfork benefits include ½ of the miles downstream of the North Fork and White connection (mile 379). Since Bull Shoals puts out 3 times the water increase as Norfork, 590 cfs vs 185 cfs. Norfork should at most get 25% of the full benefit downstream. This would drop the Norfork benefit. If only North Fork miles are used then the b/c is even more negative. The bottom line is that Lake Norfork does not provide enough economic benefit to be included in the minimum flow plan.

There is a new NF-7B plan which recommends not fixing the lakeside impacts. This is in direct conflict with the Congressional mandate that all significant impacts be corrected. Trying to get out of fixing the lake make the Corps look biased toward a project that they are supposed to be the neutral party.

These days there is a great emphasis on green energy. This plan would loose about 59,000 MWh/year of green energy. I believe this is the wrong decision.

The cutoff level in Lake Norfork to do repair facilities is 554.5. This is too low and has no basis. Most of the repairs are to swim beaches. The beaches are only used in the summer so the summer impact should be used to determine the lake level cutoff. From April thru September the lake will flood at 544.5 18 more days, at 555 the lake will flood for 19 more days. If 18 was significance, then 19 is even more significant. The cutoff to do repairs needs to be reevaluated.

The following is a list of errors in the report.

1. Table D1 in the APPENDIX D RECREATION (CVM) ANALYSIS, several of the percentage numbers are not correct. For example Cleburne should be 7.34% not 9.04%, Independence 6.42% not 8.48% and there are others

2. The CVM states in the APPENDIX D RECREATION (CVM) ANALYSIS that "This calculation is detailed in cell G25. This calculation details that 24.7% of the remaining households in the state (or an additional 230,600 households) may begin trout fishing and the benefit, based of the average WTP, is $1,473,154." **Cell G25 is blank. How is this unrealistic number generated?**

3. In Table 4.3.1.2-1, the percent difference numbers do not match the increase in day numbers.

4. In Table 4.3.1.2-1, footnote 3 says July 15 when it should be June 15.

5. ATTACHMENT 6, ALTERNATIVE PLANS shows that Bull Shoals has an average annual net benefit of -$57. Is this correct?

In conclusion, I believe the lake interest need to be reexamined before any changes to the system are made.

Daniel Weber

October 28, 2008

Mr. Mike Biggs
US Army Corps of Engineers
White River Minimum Flow Project
P O Box 867
Little Rock, AR 72203-0867

Dear Mr. Biggs:

My name is Betty Hanson and I am opposed to the White River Minimum Flow Project.

I live in Salesville, Arkansas, which is 2 miles from Lake Norfork and 1.5 miles from the Norfork River. I don't fish on either body of water, but I enjoy pontooning on Lake Norfork and going to Sand Island. My children wade fish on the banks of the Norfork River.

At the last meeting in Mountain Home, you said, "99 percent of wade fishermen surveyed in the process of developing the Minimum Flow Plan so far are in favor of the proposal." Reading the EIS, I found that the public response to the 2006 study was a total of 63 email comments (18 for, 26 against, 19 neither). I saw no figures showing how many written or typed letters were received. If you use the same percentages from the email comments, 42% are against while only 28 are for the project. There was no survey done on Lake Norfork or the Norfork River so there is no way you could possibly know that 99% of wade fisherman are for minimum water flow on Lake Norfork. Please include me in your Lake Norfork survey.

The EIS also was missing any revenue figures from lake tourism during high water years and low water years. The tourism dollars should include revenue from marinas, resorts, local tackle shops, etc.; not just USACE facilities. If that information can be provided, I would like to see how the figures were determined and what sources were used.

I've also noticed that the dissolved oxygen level is a major issue for Lake Norfork. Will putting water into the river that is already low in dissolved oxygen not have an adverse affect on the trout? What are the costs for including equipment to correct this problem at Norfork Dam?

I look forward to getting a response to my concerns.

Thank you,

Betty Hanson

Betty Hanson
270 Pine Street
Salesville, AR 72653

cc: Colonel Jackson, USACE
Thomas W. Waters, USACE
Marion Berry, US Representative
John Boozman, US Representative

LORIE DAWKINS
4841 Hwy 5 South
Mountain Home, AR 72653

October 29, 2008

Mr. Mike Biggs
US Army Corps of Engineers
White River Minimum Flow Project
P O Box 867
Little Rock, AR 72203-0867

Dear Mr. Biggs:

My name is Lorie Dawkins and I am opposed to the White River Minimum Flow Project.

My children and I like to swim in the lake using the various day use areas at Lake Norfork. This year we were not able to use them due to the high water conditions. I am very concerned about the EIS because there is no provision for fixing any of the facilities on the lake due to the increased lake level because of minimum water flow. Also, please let me know why lakeside recreation is so immaterial in this study.

I look forward to getting a response to my concerns.

Thank you,

Lorie Dawkins

Lorie Dawkins

cc: Colonel Jackson, USACE
Thomas W. Waters, USACE
Marion Berry, US Representative

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I think that we should keep the ~~[illegible]~~ Minimum flow the same because I cant be able to fish on my grave bar any more or skip rocks with my 2 year old little sister

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Zelle Cedar

Organization:

Address: 1019 Baer St
Mtn Home AR 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am against any minimum flow project outside of what is currently in place. All lake/river concerns can be achieved through alternate methods at a lesser cost. In addition, low water conditions offer an abundance of activities not available through deeper water conditions (ie anything relating to wading).

Additionally, all lake/river concerns addressed by the minimum flow project (on White river) will have little to no effect beyond Crooked creek & or White Buffalo.

Finally, and probably most important, the dams were built for 2 reasons flood controll & power generation. Seems to be working well so far, with the exception of the benefit of the flooding this year. Id rather see the volume of the minimum flow go towards an annual or twice a decade flooding to rejuvinate the rivers.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
[illegible]

Organization:

Address:
1019 Baer St. Mtn Home

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose, minimum water flow I miss the beaches main reason for coming to the lake. In fact have only been to lake 1 time in 2008 because of the fact of No Beaches.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Howard Flock

Organization:

Address: 14 Trotter Acres
Pineville AR 72566

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose White River Minimum Flow –

This is a huge waste of a renewable energy source.

Trout fishing on the White River is already outstanding! –

Do not reduce Energy production when it is so sorely needed.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: [signature] "Lucky"

Organization:

Address:

Gamaliel AK –

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Meeting
Reallocation Study and SDEIS please write your comments

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

We oppose funding & implementation of the WRMF Supplemental Draft Environmental Impact Study -

AGAINST IN GENERAL

YOUR NAME: B & M. Baker

Organization: N/A

Address: 1469 LAKEPOINT DR
JORDAN, AR 72519

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I OPPOSE THE WHITE RIVER MINIMUM FLOW WOULD BE WORSE IMPACT ON THE ENVIRONMENT, AND ALSO WOULD DECREASE BEACH AREAS.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
DENNIS G. BAKER

Organization:

Address:
1570 LAKE POINT DR.
JORDAN, AR. 72519

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

We don't want this to happen. I don't think our tax money should be used for the White River Minimum Flow Study. With the dame we have clean energy.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
John + Carmen Brewer

Organization:
Tax payer

Address:
505 W. State St.
Caraway, AR. 72419

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I don't want this to happen. Our tax dollas need to be used in other then this. We have clean entey from the use of the dam.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Kristen Brewer
Organization: Tax payer
Address: P.O. Box 123
Caraway, AR. 72419

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

In these days of talk of energy independence + government bailouts + overspending it is totally incomprehendable that this project would even be studied much less seriously considered. The benefet of this is far outweighed by the costs.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Mike Bright
Organization: Tax Payer
Address: Red Eagle Rd
Cabot

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to WRMF Supplemental Draft FEIS it is 7 years old. It is not economically justified or ~~Expired~~ environmentally acceptable.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Carole Bishop

Organization:

Address:
974 CR 804
Gamaliel AR 72537

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed To WRMN Supplemental Draft EIS because the benefits does not shows That there is a need for the lakes to warrant a chanege in Minimum Flow and it not environmentally acceptable

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Steve Brokopp

Organization:

Address:
974 CR 804
Damaliel AR 72537

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

(Very oppossed)

My Wife and I have enjoyed Recreational activities on lake Norfork for over 4 decades. Our children and grandchildren enjoy the only sandy beach's on the lake that may be negatively impacted.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Garry A. Bunting

Organization: Retired - Dept. of Homeland Security, ICE

Address: 2259 Castlegate DR.
Imperial, Mo 63052

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I'm opposed to the White River Minimum Flow Reallocation Project because we should produce more power at the dams, not less. We don't need to spend $150,000,000 to produce less clean power.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 367
Little Rock, Arkansas 72203

YOUR NAME:
Rayleen Cochran
Organization:
Taxpayer
Address:
56 Vidette Road
Cepp, AR 72538

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimal flow because my family and I love to play on the peaches and in the sand

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: [signature]
Organization: Bryce Conway

Address:
515 Buzzard Roost cutoff
Mt Home AR

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public meeting.

I don't want Minimum Flow.
Lake level good at 552 FT.
at this level no EXTRA Cost for Fossil
fuel, Roads, & ect. Use Lake for
intendent purpose to Generate Elect.
Power.

NO - Minimum Flo. Please

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Wm. Dale Couch
Organization:
Address: 7566 Hand Cave Rd.
Elizabeth AR 72531

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

The Thought of allowing Water to pass through a Electric generating dam, without producing electricity is very Concerning. Global warming, pollution, limited supply of Fossil fuels, the people in charge of any elec. producing Dam should put producing electricity first, reducing the need to burn Fossel fuels of any kind. As a taxpaying U.S. citizen I refuse to support such a waist of renewable resource. The Waters below Norfork & Bull Shoals Dams are already world reknown; want to make it better by stocking more fish??

State & U.S. Engineers apparently are out of touch with the Energy Crisis the world faces, after reading this minimum flow proposal.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Timothy L. Crawford
Organization: Legal U.S. Citizen
Address: 114 CR 245 Gamaliel AR

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

- no drought contingency plan done
- no study completed for increase rises fishery
- against Minimum flow.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Barbara Crotts

Organization:

Address: 618 Leatherwood Dr.
Mtn. Home, AR. 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

- against minimum flow
- No study completed for increased river fishing
- No study for contingency plan for droughts

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
THELMA CROTTS

Organization:
616 LEATHERWood Dr,

Address:
616 LEATHERwood Dr.
MTN. HOME, AR. 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose min water Flow my baby likes the beach

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Donna Dempski

Organization:

Address:
HC62 Box 241A
Calico Rock AR 72519

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

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I oppose min water flow- My child needs beaches to play

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Donald Derpski

Organization:

Address: HC 62 Box 241 A
Calico Rock AR 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose WRMF supplemental Draft EIS
Because it is not Economically Justified

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Charles V Doering

Organization:

Address:
1616 CR 806
Camalick AR 72532

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose WRMF Supplemental Draft EIS because there is no way to calculate the future cost of the loss of 'green' hydropower to the environment or the economy.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Sharon Doering

Organization:

Address:
1616 CR 806
Gamaliel, Ar. 72537

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow because of the economic benefits I to see the gained from the project do not justify the cost.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Kim Doerr

Organization:

Address: 134 Rolling Hills Dr
Norfork, AR. 72658

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to the minimum flows

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Joseph L. Eisele

Organization:

Address:
1159 CR 806
Gonzalez Co.

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I do not support minimum flow. We have a business on the lake and this will affect us in the worst way. It will also affect tourism & revenue from that. No high water = no boat launches, no beaches, no money. It will affect our fishing & hurt it (in the lake).

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Gloria Elstnel
Organization: Kellers Cove Resort + Restaurant
Address: 141 CR 851
Elizabeth, AR., 72531

additional space on the back ——→

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to the Minimum Flow
1. We need the Beaches
2. To expensive
3. Higher Electric, Less Generation
4. Tourist for Lake & Businesses

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Carolyn Finney

Organization:

Address: 6765 Hwy 177 So
Jordan Ark. 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Definitely need a drought Plan Contingency we cannot allow a minimum flow plan that during a drought year would endanger the lake level at Lake Norfolk

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Eugene Gonsales

Organization:

Address: 12 Hal Drive
Mtn Home, AR 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am against Minimum Flow because it is not Economic Justified

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Norman Haley

Organization:

Address: 256 Morgan Dr
Mountain Home Ark 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

not economically justified

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Phyllis J. Haley

Organization:

Address: 256 Marquis Drive
Mtn. Home AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the Minimum Flow leave our Resorted Camp grounds the way they are We want our Roads & Boat Ramps & Parking to stay at Normal Pool of 552 feet

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Dale Herring

Organization:

Address: 14 Sunburst TRL
Elizabeth Ar. 72531

additional space on the back ——>

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I'm opposed to minimum flow because the cost is to high for the tax payer.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Barbara Helm
Organization:

Address:
2913 Jordan Road
Mountain View Ar. 72560

additional space on the back ——→

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow because my children and our family likes to spend the majority of our time in the Summer playing on sand island. Minimum flow will raise the lake level and put the beaches underwater for greater lengths of time.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Jennifer Helm
Organization: Jennifer Helm
Address: 2913 Jordan Rd.
Norfork, AR 72658

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to the minimum flow because of the negative impacts to the lake & beach areas.

This will not fully fix the issues causing problems with the lake & rivers. for example nowhere in the report does it mention keeping sand island and other frequently used beach areas usable.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Marcia Helm

Organization:

Address:
2913 Jordan Rd
Norfork Rd 72658

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am against Minim Flow as it now stands.

There need to be a lot more study done on the impact to the lake and it's use. Also I do not believe that we can gain 230,000 more fishermen just because of minim flow.

The worst of all is the loss of green power just to satisfy a few trout fishermen and bureaucrats.

Also we need more pork projects like we need a hole in the head.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Bill Stipps

Organization:

Address: 82 Diamond Bay Rd
Elizabeth Ar. 72531

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I have been coming to Lake No-fork For the last 15 years. The two years that the lake was real high I came only 4 Times ~~that~~ was I would have come around 16 Times. High lake level is very bad For local business, I would hate to see any small business go out due to the decrease of people that would have came to the lake. I think the lake needs to be kept at 552'. That way the lake would not flood. I would Also like to see the boat ramps that have been deserted be kept up I pay TAXES.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Jessie Hogan

Organization:

Address: 4122 Forest Hill
Jonesboro AR 72404

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

We do not approve of the White River Minimalsn Flow project.
We think the project will have a detrimental effect on both the environment and upon the availabulity of electric power.
We urge that the policy not be adopted and that lake levels be brought down to normal pool levels as quickly as possible.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Donna M. Hunn Col USA (Ret.)
Joan M. Hunn

Organization:

Address: 156 Green Tree Lane
Elizabeth, Ar. 72531

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I do not support this. It will negatively affect the future of Lake Norfork.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Nancy Jacobi

Organization:

Address: 320 Mallard Point Rd
Mountain Home, AR 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I don't support Minimum flow. It is ridiculous to reduce electric generation and increase tax payer costs.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Richard Jacobi

Organization:

Address: 1320 Mallard Point Rd
Mountain Home, AR 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I OPPOSE WRMF SUPPLEMENTAL DRAFT EIS

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Lyle D. Jacobs

Organization: RETIRED

Address: 586 COUNTY ROAD 804
GAMALIEL ARKANSAS
72537

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I OPPOSE THIS WRMF SUPPLEMENTAL DRAFT, AND I SUPPORT FIREING ALL INDIVIDUALS WHO CAME UP WITH THIS IDEA OF MINIMUM FLOW. SOMEBODY BETTER WAKE UP BEFORE ITS TO LATE.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

ROBERT H JACOBS
YOUR NAME: Robert H Jacobs

Organization: RETIRED

Address: 886 COUNTY ROAD 804
GAMALIEL ARKANSAS
72537

additional space on the back →

October 23, 2008

White River Minimum Flow Project
c/o Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mr. Biggs,

My wife and I are strongly opposed to the WRMF Supplemental Draft EIS project. My wife and I have been enjoying the recreational facilities of Lake Norfork since 1969. Now my children and their families, a total of thirteen of us, are continuing our tradition of vacationing every year at "the lake". We enjoy the beaches, skiing, boating, and scuba diving. We believe this project will have an adverse affect on these activities and the business of the many resorts and marinas on the lake. We also know from experience that higher water levels greatly reduce the numbers of recreational boaters enjoying the beaches in the Jordan/Hand Cove area of the lake.

Yours truly,
Hugh C. Jones, Rita Jones
Hugh C. Jones
1053 Wrenwood St.
Memphis, TN 38122

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I AM OPPOSED TO MIN FLOW, THIS YEAR I HAVE HAD MY BOAT OUT OF THE SLIP TWO TIMES DUE TO HIGH WATER.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: William D Jones

Organization:

Address:
75 PINE FOREST
JORDAN, ARK 72519

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I BELIEVE THAT MINIMUM FLOW STUDIES HAVE NOT TAKEN THE IMPACT TO LAKE FACILITIES AS IT SHOULD HAVE. THE LOSS OF ROADS, PARKING, LAUNCH AREA, & THE ABILITY TO HOLD FLOOD POOL LEVELS WHEN HEAVEY SPRING RAINS COME AS WE HAD IN 2008.

WHAT OF THE LOSS OF HYDROPOWE ADDING MORE COST TO GENERATE ELECTRICITY WITH FOSSIL FUEL, CAUSING HIGHER CARBON EMISSIONS & HIGHER COST.

THIS IS TOTALY UNACCEPTABLE TO BENIFIT ONLY A FEW ON THE RIVER WHICH IS ALREADY A WORLD CLASS TROUT FISHERY

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
GERALD F KENYER SR

Organization:

Address:
1908 ARBOR ST
MTN. HOME, AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I OPPOSE THE MINIMUM FLOW REALLOCATION, AS I DON'T THINK IT IS ECONOMICALLY OR ENVIRONMENTALLY ACCEPTABLE.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: ANN KENYERI

Organization:

Address: 1908 ARBOR ST.
MTN. HOME, AR. 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose Minimum Flow Reallocation, for it will take away from the business's in town and have a negative impact on the lakes and the surrounding areas; this act will only benefit the white and Norfork rivers.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Samantha Henyen

Organization:

Address: 1908 Arbor Street
Mtn. Home, AR 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the Minimum Flow Reallocation because it will cause more of enviromental crisis in this time of need to go green.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Stephen Kenyer

Organization:

Address:
1908 Arbor St.
Mtn. Home Arkansas, 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I do not want minimum-flow because it not a natural occurance in the normal order of life and detramental to the environment in my opinion.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Alfred J. Klaus 10-26-08

Organization: ALFRED J. KLAUS

Address: 2457 JORDAN LANDING RD.
JORDAN, ARK. 72579

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I do not want minimum flow because there hasn't been enough studies to determine the effects on the lakes & enjoy the river & lakes and there should not be any changes made that would negatively affect one for the good of the other.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Deanna Klaus 10-29-08
Organization: Deanna M Klaus
Address: 21451 Jordan Landing Rd
Jordan, AR 72576

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow on the white river due to the lack of real benefit to the river. The study is flawed in facts, and questions from previous comments in 2006 are yet to be answered. the impact on the lake, in particular, Lake Norfork is much greater than pointed out in the study.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: James R Korbelik

Organization: JAMES R. KORBELIK

Address: 78 LAKE POINT VISTA
JORDAN, AR. 72519

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the implementation of minimin flow on the Norfork and White River. My reasons are the result of the effect it will have on the lakes which were not included in the study, the enormous costs when our county has more pressing issues to deal with, and the loss of our sand beaches in the Jordan Area on Lake Norfork. The study results are very incomplete.

Wylaine J Korbelik

YOUR NAME: Wylaine Korbelik

Organization:

Address: 78 Lake Point Vista
Jordan, AR 72519

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I OPPOSE THE MINIMUM FLOW REALLOCATION BECAUSE ITS BAD FOR THE ENVIRONMENT ALSO BECAUSE I THINK IT WILL TAKE AWAY FROM TOURISM WHICH WILL HURT OUR ECONOMY

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: ROSE KUBAL

Organization:

Address: 114 EXCALIBER
MTN HOME AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose WRMF because it is not environmentally acceptable.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Rachael Leatherbarrow

Organization:

Address: 56 CR 953
Mtn. Home, AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I would like to see the lake levels left alone as they are ~~at~~ now.

The impact on the resort owners would be disasterous, on them financially.

At a time when the government is pushing for green, they want to cut back on Hydro-Generation and make up for it with coal or oil fired generation.

All of the reason's I have read for supporting the minimum flow project seems to be slanted ~~to match the~~ by incomplete and flawed research.

The impact on the ~~state~~ city of Mountain Home could be a lot worse than they are forecasting Please stop this project until more unbiased data on its impact can be studied.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Dennis Lemon

Organization:

Address: 1075 CR 153
Elizabeth, AR 72531

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow because:
1) It is not economically justified – too expensive
2) It will deprive me and other users of Norfork Lake's beautiful sandy beaches in the summertime, during peak usage. We treasure these beaches.
3) Lake Norfork boaters, fishermen etc should not be penalized to the advantage of river fishermen!

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Carol Lior

Organization:

Address: P. O. Box 2491
Jordan, AR 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow because I enjoy relaxing on the beach with my feet in the sand & the sun in my face. I enjoy camping out on warm summer nights. listening to the the water splashing on the beach shore. If the minimum flow would occur, I could not enjoy these relaxing events from my stressful life back in Illinois.. where we don't have such nice beaches.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Jennifer Lloyd

Organization:

Address:
2248 Benton St.
Granite City, IL 62040

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I'm against the minimum flow project for Lake Norfork because:

1) we are trading "green power" (hydro) for fossil fuel generation which increases our "carbon footprint"
2) the primary beneficiary is the river fishery - & the people on the lake take a back seat (except for costs)
3) We are in a tight bind for money - and since there is little gain in this - so we should not spend the money!

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Don Macdonald

Organization:

Address: 1310 County Road 852
Elizabeth, AR 72531-2506

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed To The minimum flow Because:
rising cost, declining benefits
IT would cut down part of The green energy currently
generated by the dam.

I'm asking you To drop this project

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: MANAN MaiTE [signature]

Organization:

Address:
405 BRENTWOOD
JONESBORO, AR

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to the White River Minimum Flow Reallocation Study.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Carter D Manor

Organization:

Address: 15 Manor Lane
Jordan Ar. 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose WRMF Supplemental Draft EIS. I don't Believe it is necessary.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Charlotte Mann

Organization: Home owner

Address: 83 Co. Rd. 954
Mt. Home AR.
72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

We are facing very serious times financially and we do not need to be pouring money into a project that basically only benefits a few. The projected increase in fishermen seems unrealistic in these projected hard times. At best this project should be put off indefinitely and reexamined when the economy turns around.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Vernita Mauship

Organization:

Address: 3173 Hwy 201 S.
Mtn Home, AR. 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

COMMENT SHEET

My wife and I have been coming to Lake Norfork for over 20 years at various times during the spring and fall to fish. Two years ago I retired and we moved to Mountain Home. We fished both the lake and Norfork River and what we observed during that 20 year time span was that whether the lake pool level was high (at most about 25 feet) or low (at most about 15 feet) that lake or river fishing did not seem to suffer. The one thing we noted this past year following the flooding after the heavy rain we received this spring was the damage to the area; this not only included homes and resorts (on both the lake and river), but also the land and adjacent roads. The study which was done most likely did not take into account this heavy rainfall and flooding which had never occurred previously. It would only make sense to include this new data in the study in order to make it more accurate. If the lake pool is increased it would cause additional damage to the area should it experience another heavy rain next spring -- it hasn't had a chance to recover from last spring's flooding.

Area tourism was probably not the primary reason the lakes were created, but it has, in fact, become important to the businesses in the area and should be considered with reference to the proposed minimum flow reallocation. A number of businesses, such as restaurants (not just resorts), depend on the fishermen who visit both the lake and the river. It is hard to imagine that this proposal will increase the number of trout fishermen by over 300%, especially since this area has long been known as an incredible fishing area, most recently in Field and Stream--which, incidentally, published an article about both the river and lake fisheries. If the resorts and campgrounds incur more damage, where would all of those additional trout fishermen stay?

Another important item to be considered is the decrease in generating electrical power for the area. It is critical at this time and in the future to be more environmentally responsible. Electricity has been shown to be one of the cleaner sources of energy. A shortage of electricity would most likely result in the use of more fossil fuels causing more pollution.

Reconsideration should be given, therefore, to the proposed minimum flow reallocation, to put off implementation until a more thorough study is made.

Robert C. Milani
33 Chickasaw Street
Mountain Home, AR 72653

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

COMMENT SHEET

My husband and I have been coming to Lake Norfork for over 20 years at various times during the spring and fall to fish. Two years ago we relocated permanently to Mountain Home. What we observed during that 20 year time span was whether the lake pool level was high (at most about 25 feet) or low (at most about 15 feet) the lake or river fishing did not seem to suffer. We fished both the lake and the Norfork River. The one thing which was most evident this past year due to the flooding following the unusual amount of heavy rain we received this spring was the destruction and devastation to the area, not just the homes and resorts (on both the lake and river), but to the land and adjacent roads. Certainly the study which was conducted could not have taken into account this never before experienced rainfall and flooding. Under the circumstances, it would only be logical to modify the study to include this data. Any increase in the lake pool would surely result in more damage should the area experience another spring of heavy rain -- it has barely recovered from last spring's.

Although area tourism was not the primary reason the lakes were formed, it has, in fact, become important to sustaining many of businesses in the area and should be considered with reference to the proposed minimum flow reallocation. A number of businesses (not just resorts) depend on the fishermen who visit both the lake and the river. It is difficult to picture that this proposal will increase the number of trout fishermen by over 300%. This area has long been touted as a fabulous fishing area, most recently in Field and Stream--which, incidentally, wrote about both the river and lake fisheries. If the resorts and campgrounds suffer additional damage, where will those trout fishermen stay?

One other important consideration is that generating electrical power for the area will be decreased. We are now entering a time when it is most important to be environmentally responsible. Electricity is one of the cleaner sources of energy. A shortage of electricity would result in the use of more fossil fuels resulting in more pollution.

Reconsideration should, therefore, be given to the proposed minimum flow reallocation, to postpone implementation until further study is made.

Dorothy L. Milani

Dorothy L. Milani
33 Chickasaw Street
Mountain Home, AR 72653

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose WRMF because it is not environmentally acceptable.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Danielle Morrell

Organization:

Address: 600 Montgomery Ave.
Mountain Home, AR, 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to the White Rive Minimum flow. I do not feel the trout fishing industry should supercede peoples libely hood on Lake Norfork.

Sincerely

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Gerald J. Vanfleet

Organization:

Address: 826 Cranfield Rd
Mtn Home Ark

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose minimum flow!
Needs a realistic study
& peer study

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: [signature]

Organization:

Address:
320 Pioneer Trail Dr.
Mountain Home, AR
72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY

SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow because:

- The current plans appear incomplete and possibly faulty ie:
  - hydropower buy expense
  - declining benefits, below 1 for Norfork Lake
  - no drought plan considered
  - recreational costs ~~benefits~~ to lake. businesses must be included

YOUR NAME: LES NORMAN

Organization:

Address: 320 Pioneer Trail Dr. Mountain Home, AR, 72653

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I have lived on the White River for 37 years. I am opposed to an increase in the flow of water because I like to walk on the shoreline for exercise. Please dont approve the increase in water level.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Mary C. O'Dell

Organization:

Address:
345 Rainbow Drive Landing
Cotter Ar. 72626

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow:

- All the studies are outdated. Costs have risen dramatically the past few years. For this reason I believe the Cost Ratio benefits are inaccurate and need to be re-evaluated.

- It is not economically justified or Environmentally Acceptable to cut Hydro generation which cost Less and is "Green Energy". Then make-up the loss of power by generating electricity with fossil fuels which cost more and are harmful to the environment.

- The White + Norfork rivers, technically already have minimum flow. They are also already classified as World Class Trout Fisheries

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: L.O. Kenyeri-O'Dell

Organization:

Address: 64 Scarlet Oaks Cr.
Cotter, AR 72626

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am against the minimum flow for many Reasons, foremost of which is the ever increasing cost of this Pork Barrell project, that Benefits mostly the few wealthy individuals Pushing the Proposal.

We have excelent trout fishing, right now, and that segment of our Tourism Economy is thriving, while the rest of our Tourism Economy is suffering from lack of attention & funding

more Studys need to be done on the environmental impact this proposal will have on our Lakes, & Rivers.

Lets put some funding into the whole Tourism Economy (our economy) and not just a certain segment of it.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Rod O'Dell
Organization: Home Owner on White River
Address: 64 Scarlet Oak
Cotter, AR 72626

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Norfork Dam was intended for flood control and this year unfortunately that control was needed. Fishing & recreation is a byproduct - yes a very beneficial one - but still a by product. Adding to the pool would not be good. We have more important issues to address in these times such as renewable energy to mention one.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: William J. Pinkston
Organization:
Address: 553 Baypoint DR
MTN Home AR

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow because it is too expensive and the end result does not not justify the costs to be expended.

Secondly, this project will deprive us at Norfork Lake of the beautiful sandy beaches we now enjoy.

Finally, Lake Norfork boaters, fishermen, etc should not be penalized to enable river fishermen to have "better fishing".

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Jack Prior

Organization:

Address: P.O. Box 2491
Jordan, AR 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I do not want minimum flow because it will affect our beaches during the summer by making them inaccessible. It will also be cost prohibitive to do this. Let's use our tax $$ wisely - not by doing this!! We love our lake. Let's not ruin what we have.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Diane Reimann
DIANE REIMANN

Organization:

Address:
2880 JORDAN RD
NORFORK, AR 72658

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the minimum flow project. Our whole family comes here to spend the weekend and enjoy the beaches.

Sincerely,
Debra Reynolds

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Debra Reynolds

Organization:

Address: 14 Trotter Acres
Pineville, AR 72566

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to the minimum flow project. I live about two miles from the lake and this year was really bad for me and my family, because we could not enjoy the lake as much as we have in past years. With the high water the beaches were not accessable and with this project in action we would face the same problem year after year and that is not acceptable. The cost of the project is also much too high for our struggling economy. I urge you to please drop this project from your to do list.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Donald Rodgers

Organization:

Address:
862 Jordan Landing Road
Jordan, AR 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Costs are too high. Benefits to low; with the negative impact on the lake it could effect my place of employment and then me. With the way the economy is, do you really think that this is something that we should be focusing on?

I am opposed to the Minimum Flow.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Devin Rodgers

Organization:

Address: 709 Birdsong Ave
Gassville AR 72635

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Minimum flow - No Way.
Our family moved up here to enjoy the lake.
My children work on the lake.
This minimum flow effects the economy in
many ways, if the water is too high on the
lake people cannot camp, or launch boats
which is vital to this economy!!!

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Patricia Rogers

Organization:

Address: 862 Jordan Landing Rd
Jordan, AR 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I AM OPPOSED TO MINIMUM FLOW BECAUSE IT IS TO EXPENISIVE AT THIS TIME.
WITH THE ECONOMK THE WAY IT IS

MY WIFE AND I USE THE LAKE ALMOST EVERY DAY

I HAVE BEEN USEING THE LAKE EVERY TIME 1960 IT IS ONE OF THE MOST BEAUTIFUL LAKES AND WHERE

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Paul N Rogers
Organization:
RETIRED
~~2784 JORDAN LANDING~~
Address:
JORDAN LANDING Road
JORDAN ARK 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the minimum flow. I live right down the road from the lake and this year with the high levels was not good. Also I work on the lake and without our beaches due to the water levels [redacted] not near as many people came out to the lake and we were not near as busy as usual. I oppose the minimum flow.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Sarah Rodgers

Organization:

Address:
862 Jordan Landing Rd
Jordan, AR 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I think the minimal Flow is a bad idea. It will effect the lake in a negative way. If fishermen are coming to the White River now then what makes you think a minimal flow will make it better. Everybody is happy with things the way they are. Why ruin a good thing.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Whitney Rodgers
Organization:

Address:
709 Birdsong Ave
Gassville AR 72635

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow. We Use the Lake on almost everyday in the summer. We feel that the loss of Money from generation & the amount spent for this is unacceptable at this time in our economy.

Wilma Rogers

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Wilma J Rogers

Organization:

Address: 2784 Jordan Landing Road
Jordan, Ar. 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow on the White River
There have not been enough recent studies as to the impact of continued increase flow on the habitat, wildlife and shore erosion along the upper river course.
Also not taken into consideration is the loss of use (read: tourism) from wading / shoreline activities if water levels are raised and current gravel bars are underwater.
The potential for conflict between low lake levels, minimum flow, and a possible new water system based on BS Lake has not been addressed.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Lori Sanborn
Organization:
Address: 1019 Baer Street
Mtn Home AR 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

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- MINIMUM FLOW WORKS TO WHO'S BENEFIT?

- THE PROGRAM(S) COSTLY & CERTAINLY DOES NOT HELP A LAKE FISHERMAN IN THE SPRING I NEED WATER KEPT AT A STABLE LEVEL FOR THE SPRING & IN THE FALL AT 550 ON NORFORK & 650-654 BULL SHOALS (MAKES FOR VERY GOOD CRAPPIE FISHING)

THE HELL WITH TROUT FISHERMAN ()

D.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
JOE SCHILLING

Organization:
PRO LAKE GUIDE

Address: NOT GIVEN

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

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Trout fisherman are not the only people who like's to fish. My husband & I fish Norfork Lake year-round. We prefer not to have our waters disturbed. Leave well enough alone! Try putting your money to better use.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
LISA SCHILLING

Organization:
Lake enthusiast

Address:
10910 VARGAS DR
ST. LOUIS, MO 63123

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow because the Jordan Area will Be flooded more and not a Benefit to us that Use the Lake. The Cost doesn't out weigh the Benefit

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Josie Seaman

Organization:

Address:
3678 Jordan Rd.
Norfork, Ar 72658

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am against this project because the Corp has been closing parks all around the lakes due to lack of money. Camping is a family tradition and needs to be continued. If you don't have money to maintain the camp grounds that have been here for years where are you going to get the money for this project to accomodate the trout fisherman?

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Mary Shaw

Organization:

Address:
4114 Hard Cove Rd
Elizabeth, AR 72531

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I, D.M. SLAUGHTER, AM OPPOSED TO MINIMUM FLOW BECAUSE IT IS NOT ECONOMICALLY JUSTIFIED, NOT TECHNICALLY SOUND AND NOT ENVIRONMENTALLY ACCEPTABLE.

D M Slaughter

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
D.M. SLAUGHTER

Organization:

Address:
1280 CR 93
ELIZABETH, AR 72531

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I don't want this to happen. We have a dam that we can use for Clean energy and our tax dollars should not be used for this, like this

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Wendna Slaughter
Organization: Tax Payer
Address: 1282 E CR. 850
Osceola, AR 72370

additional space on the back ——→

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I THINK THE COST COMPARED TO THE BENEFITS ARE QUESTIONABLE ALSO THE POSSIBILITY OF THE LAUNCH AREA IN ROBINSON POINT PARK WOULD BE UNUSABLE

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: [signature]

Organization:
CITIZEN

Address:
360 FOREST HILLS DR.
MTN HOME AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose WRMF Supplemental Draft EIS

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Robert L. Snider

Organization:

Address: 125 CR 820
GAMALIEL AR 72537

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

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Runing water Through The Dam Without Generating Electricity is NONSENSE. We are suppose To be Living in a Green environment. ALSO This WILL Just Raise everyone's Texs because Thats what The Dam was Built For. (Eletricty)

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Chris Stemkis

Organization:

Address: 10740 HW 201 N
MT Home AR
72653

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

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Higher priority issues include national energy sources, specifically to reduce oil demands and improve and increase alternative options, including hydro power.

Any additional tax expenditures should be first allocated to energy production, especially to sources that are "free", such as water flow, wind, etc.

Thus, I oppose the White River Minimum flow project

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Sally Strickwire
Organization: Legal U/S Citizen / Tax-payer
Address: 114 CR 245
Jamaica, AR 72537

additional space on the back ——→

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

first of all If the water is higher then then more kids would get hurt because they would want to jump of briges and Clifs more. Second It would make it harder for people to get to the lake, if there was less lake access. Also very hard for handy capt people. (like my little brother) If you have the money to replace all the parking places and parks then it would be ok. Also, if they did do this then the Corps of engineers (our taxes) would have to pay milions of dollars to the electric Componey. Creating electricty with the dam is very clean. So if we did any thing else then it would be way more pollutant to the air in our area. Which also affects Globle warming.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Virginia Steinhiser
Organization:
Address: 10740 Hwy 201 North
Mt. Home AR 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I Respectfully Request that this project Dosel not Happen

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: David Stewart

Organization:

Address: Po Box 40
Black Oak Ar 72414

additional space on the back ——>

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I respectfully request that this project be reviewed with more consideration and scrutiny. I feel the high water held by Lake Norfolk this summer was detrimental to tourist trade. I also feel the dam should be used to create energy.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Nancy Stewart
Organization:
Address: P.O. Box 40
Black Oak, AR 72414

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I adamantly oppose the current White River Minimum Flow as an unfeasible project detrimental economically, technically & environmental. The nation's economic crisis can not be fixed by a project that appears to be based on promoting Trout Fishing and a Sports Mega-Retail endeavor. The original intent of the Norfork Dam was to create hydro-energy in 1949. Some 60 yrs. later, we're facing an energy crisis that can be helped by using this existing alternate power source. It's totally illogical to sacrifice this energy source to promote a fishing industry (that may or may not increase).

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Jim Clutfield

Organization:

Address: 513 Holiday Dam Rd.
Edwardsville, IL 62040

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the White River minimum flow as a long-time visitor to the Twin-Lakes area for 30 yrs. I've purposefully brought my family & friends to Arkansas as Illinois & Missouri can't match what these ~~WTR~~ natural waters offer. The Norfork Dam was created by a govt. that wanted to protect the lands from flooding & create necessary energy. Recreation was a by-product with the lake that the dam created. Boating & diving make use of the lake in it's natural state, not requiring artificial means to create fishing. I've paid alot of taxes to Arkansas to keep my boat docked here & feel my opinion against this needs to be heard.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Mike Unfried

Organization:
513 Holiday Dam Rd

Address: Edwardsville, IL 62025

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am appose d to min.imum flow — because I can't enjoy the beaches, the only reason I come down here from Illinois.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Jared Unfried

Organization:

Address: 2248 Benton Granite city, IL

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

everyone shud oppose white River minimum Flow the dams whar built to make electricity Not to make fishing better the fishing is fine Know to spend mone money for minimum flow is a waste of money

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Van Leach

Organization:

Address:
299 Lone Star PL
Gamaliel AR 72537

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the White River Minimum Flow as it doesn't make sense for water to go over dam without making electricity.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Marshall Wabel

Organization:

Address:
189 CR 245
Gamaliel, AR 72537

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I opposed to the min. Water flow because it will take all of the beautiful beaches away from me + my friends to play on.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Autumn Wallace

Organization:

Address: 17 Valley Heard Hardy Ar. 72542

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I Opposed to the min Water flo, We Lose are beachs the Whole family wont come to the Lake with no beaches or Parking

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Kevin Wallace

Organization: @

Address: 17 Valley heart DR
HACOT, AR, 72542.

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am ~~op~~ opposed to Minimum Flow. My family enjoys the beaches. Because of the flooding this summer, we did not enjoy the beaches! Our trips to the lake were minimized. It doesn't make sense to flood the lake for the river. The river can be enjoyed without flooding the lake, the lake can't be fully enjoyed by this. It would only hurt the lake's economy.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Carrie Weber

Organization:
Carrie Weber

Address:
515 Buzzard Roost Cutoff
Mountain Home, AR 72653

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow because of the negative effects to the Beaches on Sand Island. I have been coming to the lake for 30 years and do not believe there will be any substantial benefit to the River. How can the study assume about 230,000 People will start to trout fish under this Plan the benefit numbers in this are so unrealistic, that no one can possibly Believe them. We are in a time where Green Energy is at a premium and this Plan wants to dump Water down the River with no gain in Energy. I dont think we need to spend 100's of Millions of dollors to fix something that is not Broken!!!

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Dennis L. Weber

Organization:

Address: 129 Pine Forrest Way
Jordan AR. 72519

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

We oppose the minimum flow because I enjoy the beaches that we have around the lake. It isn't fair to ruin the lake for the sake of the river.

I boat all spring, summer and fall. We have been coming down to the lake for 40 years and finally moved here because of boating.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Peggy Weber

Organization: Peggy Weber

Address: 129 Pine Forest Way
Jordan, AR 72519

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I Don't believe the impact study truely Identifies All AREAS Impactes by A change In Lake Level. I Already have A hard time Lanching my boat In high Lake Levels + you want to RAISE the Lakes even more. Also the Floods last year were bAd enough and would have been worse IF the Lake was held at higher Levels. Were is the impact study of more Floods?

I oppose the ~~Corps~~ Minimum Flow!

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: John Webb
Organization: John Webb
Address: 515 Buzzard Roost Cutoff
Mountain Home AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I think it would Be ok if you create new parking spaces so its not a hassel to get people on the lake and where its not soo crowded unless it decreases electricity because we dont need to use electricity and I dont think it makes sense to run watter out of the dam and not have it goes threugh the generaters and the watter wouldnt be as polluted if you ran it threugh the generators

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Robert Wyatt
Organization:
Address: 89 Honeydew lane Cassville

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2006

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the minimum flow project because we should not spend our tax dollars on such things. Also, we need to make as much clean electricity as possible. Minimum flow will reduce the amount of electricity generated by the Norfork and Bull Shoals Dam.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Ernestine Weinmann
Organization:
Address: 672 Shorecrest Dr.
Mtn Home AR 72653

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Leave Norfork Lake as is now - Take Care of the parks like Hand Cove, Wood's Point, With part of the money they have - Let Rangers help, With part of the Jobs, instead riding Around in Government trucks all time.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Ona L. Whitehead

Organization:

Address: 7833 H.C. Road
Ellis - Ar. 72531

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the White River Minimum Flow as it doesn't make sense to me. To have water going over the dam w/o making electricity.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Don Williams

Organization:

Address:
14 Black Forest Ln
Cabot, AR 72537

additional space on the back ⟶

Opposed to minimum Flow !!!

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am "opposed" to minimum flow. Reasons: Cost & mainly we bought on Lake Norfolk because of its "beach" areas. We also own a home in Hot Springs Vil. near Lake Ouachita also checked out Bull Shoals, Greers Ferry etc. & it was due to pristeen shoreline & the beaches on Norfork that sold us on this area.

The trout hatcheries can't handle stocking more fish to the river.

We WANT our beaches BACK - especially in summer!

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Mary Ann-Wood
Organization: Property owner
Address: 137 Rolling Hills Lane
Norfork, AR 72658

additional space on the back

OPPOSED

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I AM OPPOSED TO MINIMUM FLOW BECAUSE IT COSTS TOO MUCH FOR ANY POSSIBLE BENEFIT. IT ALSO WOULD MAKE SAND BEACHES AT JORDAN INACCESSIBLE FOR MUCH OF THE SUMMER.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Richard B. Wood
Organization: RICHARD B. WOOD

Address:
6 LOYOLA LANE
HOT SPRINGS VILLAGE, AR 71909

additional space on the back

2008-10-20 08:32 J & J Midwest Sales (636)273-4299 >> 5363051222 P 1/1

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

As a homeowner at the Norfork Lake, I am against the, White River Minimum Flow.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Daniel A. Wurst

Organization: N/A

Address: 167 Manns Ln
Jordan, AR.

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I Appose the White River Minimum Flow intiative. to me this would have a negative effect on the Recreational boating on the Lake.

thanks
Douglas C West
314-517-7712 cell phone

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Douglas C. West

Organization: None / Resident.

Address: 2478 Jordan Landy Road
Bldan AR 7250

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I OPPOSE THIS SIMPLY BECAUSE IT LOOKS LIKE THE ONLY BENEFACTORS WILL BE THE WHITE RIVER "TROUT FISHERMEN".

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Vivian L. Yaeger

Organization:

Address: 1154 CR 804
GAMALIEL AR 72537

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to this project.
So far all the studies are incomplete and have not proved to be feasible.
The only one to benefit – "The Front fisherman". Oh yes - there already is outstanding front fishing on the White and North Fork Rivers.

Most importantly shouldn't we be concerned about making more "Green Power" not cutting back on Hydro-power?

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: John R. Yarger
Organization:
Address: 1154 CR 804
Gemaliel, AR 72537

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am against the Minimum Flow because economically with the crisis + billion dollar bailouts, with probably more to come, it don't see the justification. The cost of this pork barrel project that was estimated at $ 14mil. + now has gone to $ 120 mil, I find this more reason not to go forward with this project. Then you look at the cost: $1 spent on minimum flow at Norfork and it will only make 93¢. We have a real money pit here. Water is good now with the unusual amount of rain this last year, but what happens if we go into a drought? Whole communities depend on the lake facilities for work + play. It is unacceptable that local businesses, individuals, or the Federal government facilities should be sacrificed for the trout fishery!!!

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Mark Cozzens
Organization: "Cozzens Country Cabins"
Address: 3352 Hwy 101
Gamaliel, AR 72537

C.C.: Mr. Thomas W. Waters, Colonel Jackson, Marion Berry and John Boozman

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

BY:

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I live on Norfork lake. I am very much opposed to the minimum flow.
There were months this year that we were unable to get on our dock.
I feel this area has been very much and will continue to be impacted if this Project is allowed to pass. Our roads to & from the docks, the launching ramps, area parks and our energy bases will suffer greatly around this community.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Dana McAdridge

Organization:

Address: 60 Hunter Lane
Elizabeth, AR 72531

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

45-Day Public Review Period – **Ending September 22, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

The total disregard for the inconvenience to the common citizens of the area when the minimum flow is enacted is quite disturbing.

The areas that flood now will flood more frequently causing citizens to drive further to work, church, school or to shop. This affects not only their time away from home but will cause additional expense.

I feel that when our government does something that adversely affects many citizens so that others can benefit by attaining greater wealth it is morally wrong and contrary to the fundamentals we live by in this country.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: MAYNARD WALLACE

Organization: MO. LEGISLATURE

Address: HC 77, BOX 75
THORNFIELD, MO.
65762

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Why Should we Sacrifice flood Control, LAKE Shore parking and Ramps and Generation Revenue for Trout? Most of The Fly Fishermen do NOT WANT flow for wade Fishermen. It has Always been, (1) flood Control (2) Power generation. (3) Recreation - Why Change Now AT TAX payers Expense. The river people knew what the rules were when They built below the Dams.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Steven C. Street - Blackburn's Resort.
Organization:
Norfork Chamber of Commerce,
Address:
734 CR 989
Mountain Home, AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose minimum flow! Letter enclosed.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Bruce C. Bell

Organization:

Address: 277 Lake Point Vista
Jordan, AR 72519

Bruce C Bell

additional space on the back

Date 10-23-08

The cost alone does not justify minimum flow because we will lose too much hydropower (KWH). Also there is no way they will have the increase in the number of fishermen they have estimated. And, if they did the rivers would be crowded and over fished to the point where they would be seriously compromised.

It will also have a negative effects on the lakes by eliminating some beaches, campsites, parking and boat ramps.

The White River System became a great trout fishing area without minimum flow because of it's stocking program. It does not need the added costs and enviormental effects of minimum flow to remain that way.

I believe this is an effort by guides and resort owners (on the river) to make it easier for them to navigate the rivers without regard to what effect it will have on the lakes and what it will cost the public.

The dams were built to provide flood control and generate hydropower. Don't let special intrest groups change that.

Sincerly,

Bruce C. Bell

Bruce C. Bell

WHITE RIVER MINIMUM FLOW PRODJECT
C/O MIKE BIGGS
POB 867
LITTLE ROCK, AR 72203-0867

October 23, 2008

TO ALL CONCERNED.

I OPPOSE THE WRMF SUPPLEMENTAL DRAFT EIS!!!
I HAVE OPERATED CRANFIELD BOAT DOCK ON LAKE NORFORK ALMOST 40 YEARS. EVERY MEETING WITH THE CORP OF ENGINEERS THAT I HAVE ATTENDED INCLUDED THE FACT THAT ALL OF THE WHITE RIVER LAKES WERE BUILT FOR #1 FLOOD CONTROL, #2 WAS HYDRO POWER. THE RECORD FLOOD OF 2008 IS NOT ENCLUDED IN THE SUPPLEMENTAL DRAFT.

THE 2008 LAKE TOURISM SEASON IS STILL SUFFERING FROM HIGH WATER AND ANOTHER RAINY SEASON COULD PUT US OVER THE DAM AGAIN.

EARLY SPRING 2008 MARCH 1ST, LAKE NORFORK WAS AT 552.00. THE LAKE LEVEL AT THAT TIME OF YEAR IS USUALLY 5 FEET LOWER TO ALLOW FOR SPRING RAINS. THE LAKE WAS THEN RAISED THE THREE AND ONE HALF FEET THE LEVEL MINIMUM FLOW WOULD REQUIRE. THEN WE HAD A TWELVE INCH RAIN PLUS MANY OTHER THREE INCH TO SIX INCH RAINS ALL SUMMER LONG.

THE WHOLE WHITE RIVER BASIN WAS FULL AND RUNNING OVER!!!!!!! I DO NOT FEEL THAT TROUT FISHING SHOULD BE PLACED ABOVE FLOOD CONTROL OR POWER GENERATION!!!!! THE TROUT INDUSTRY ALLREADY HAS AN EMERGENCY WATER RELEASE AGREEMENT WITH THE CORP OF ENGINEERS, THE SOUTH WEST POWER COMPANY AND THE GAME AND FISH COMMISSION TO RELEASE WATER ANY TIME THE TROUT ARE IN NEED OF MORE WATER.

THANK YOU FOR ENCLUDING MY COMENTS IN YOUR STUDY.

SINCERELY,

Robert D Grace

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2003

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I dont want Minimum Flow
Lake level good at 552 FT.
at this level no EXTRA Cost, for Fossil
fuel, Roads, & act. Use Lake for
intendent purpose to Generated Elect.
Power.

NO - Minimum Flo. Please

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Bigge)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Wm. Dale Couch
Organization:
Address: 7566 Hand Cave Rd.
Elizabeth AR. 72531

Additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY (SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (sdeis)

I, Roger Boskus oppose the WRMF Supplemental Draft EIS. The reason is that this project considers only the Trout Fishing on the White & Northfork Rivers without any consideration of the Negative Impact it will have on Norfork Lake in regard to Tourism, Fishing, Flooding and Economics here. The Norfork Lake Chamber of Commerce states the facts perfectly showing it is not economically justified, technically sound or Envornmentally acceptable. This project is a perfect example of Governmant Pork Barrel.

With the 2008 flooding this is the time to consider the expense and problems incurred by not only the Rivers but on Norfork Lake businesses as well. The corp stated that there will be significant damages and costs to repair the corp. parks on the Lakes. As resort owners and marinas there will also be significant costs to us to repair our Parking lot, concrete steps, and docks as well. Our business itself is down 20% due to high water all Spring and Summer and Fall.

Roger A. Boskus
Fish & Fiddle Resort
880 Fish & Fiddle Rd.
Mountain Home, AR 72653
Phone 870-491-5161

9-4-08

Dear Mr. Biggs

I am writing about the minimum Flows project. This reads like a done deal (Ozark County Times 9-3-08)

I think it's too bad.

1. Costs a lot of Taxpayer money.
2. Will reduce parking space at the boat ramps, Thinking of Spring Creek ramp (Bull Shoals) especially.
3. Will reduce Flood water storage.

That is only what I see, but I sure believe the cons out-weigh any possible pros.

I absolutely hope this project Falls off track.

Thank you

John Schultz
P.O Box 63
Theodosia MO 65761
417
273-4410

September 17, 2008

U.S. Army Corps of Engineers
Little Rock District
P O Box 867
Little Rock, AR 72203-0867

Attn: Mike Biggs CESWL-PE

Re: Host public workshop updated Draft EIS for Minimum Flow

The Minimum Flow draft meeting at Arkansas State University Mountain Home on August 27, 2008 was disappointing. We were not informed about the meeting until it appeared in the Baxter Bulletin Newspaper a few days before the meeting took place.

As important as 3 ½ feet of flood storage is to all of the lake businesses, the marinas should have had adequate notice to prepare and attend this meeting. Scheduling the meeting the week of our last major holiday and such short notice gave us the impression we were not wanted at the meeting.

Lake Norfork being at minimum flow stage this March before the 12" rain fell shows us how important 3 ½ feet of storage can be. We had no parking lot and 79 campsites unusable all season long. The original legislation said the Game & Fish Commission was responsible for constructing the facilities inundated by the additional water. We understand that the new draft states that the marinas should be responsible for that expense. We are already responsible for the additional expenses of high and low water.

During the course of the meeting no microphones were used and it was difficult to hear. You did not know who asked the question or what the question was. When addressing the person who asked the question it was difficult to hear or understand their answer at the other end of the auditorium.

Holding a meeting just to fulfill a requirement is a waste of time and money. We all need to know the true facts so the best decision can be made for all. We feel more public meetings, properly conducted, are in order.

Cranfield Boat Dock

Robert Grace, President

Kathryn Grace, Secretary/Treasurer

OCT 16 2008

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am against the Minimum Flow because economically with the crisis + billion dollar bailouts, with probably more to come, it don't see the justification. The cost of this pork barrel project that was estimated at $14 mil. + now has grown to $120 mil, I find this more reason not to go forward with this project. Then you look at the cost: $1 spent on minimum flow at Norfork and it will only make 93¢. We have a real money pit here. Water is good now with the unusual amount of rain this last year, but what happens if we go into a drought? Whole communities depend on the lake facilities for work + play. It is unacceptable that local businesses, individuals, or the Federal government facilities should be sacrificed for the trout fishery!!!

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Janice Cozzens

Organization: "Cozzens Country Cabins"

Address: 3352 Hwy 101
Gamaliel, AR 72537

C.C.: Mr. Thomas W. Waters, Colonel Jackson, Marion Berry and John Boozman

additional space on the back →

October 23, 2008

Colonel Jackson
P.O. Box 867
Little Rock, AR 72203-0867

Dear Colonel Jackson,

My wife and I are strongly opposed to the WRMF Supplemental Draft EIS project. My wife and I have been enjoying the recreational facilities of Lake Norfork since 1969. Now my children and their families, a total of thirteen of us, are continuing our tradition of vacationing every year at "the lake". We enjoy the beaches, skiing, boating, and scuba diving. We believe this project will have an adverse affect on these activities and the business of the many resorts and marinas on the lake. We also know from experience that higher water levels greatly reduce the numbers of recreational boaters enjoying the beaches in the Jordan/Hand Cove area of the lake.

Yours truly,

Hugh C. Jones, Rita Jones

Hugh C. & Rita Jones
1053 Wrenwood St.
Memphis, TN 38122

9-25-08

U.S. Army Corps of Engrs,

SUBJECT — Minimum Flow - White River

I am writing this for myself and many other residents of the Reds Landing area just South of Norfork, AR. As we are all fisherman as well as recent flood victims.

Lets protect the residents <u>instead</u> of the fish and keep the power pools where they are now.

Common Sense tells us, why increase lake levels and put us in jepordy again, as you can see by a recent poll (enclosed), people responded 2 to 1 to want a National Flood Ins. Program, but our "<u>Stupid</u>" Quorum Court Justices don't represent their wishes.

Why spend millions on a <u>gift</u> to the power companies to generate <u>less power</u>, let them buy it from their other sources?

Why spend additional funds on public areas that will demand changes due to higher lake levels?

Don't Spend — Save!

If we had the option to by flood insurance we may feel differently about minimum flow, but lets protect the residents "<u>first</u>" and the fish second.

Please <u>do not</u> allow the Min. Flow project to start!

Frankly Speaking,

James A. Dean

James A. Dean
#31 Reds Landing Trail
Norfork, AR. 72658
870-499-5111

Online Poll results

A majority of respondents to the most recent Online Poll questions at www.baxterbulletin.com don't support the Baxter County Quorum Court's decision on flood insurance and would vote against a proposal prohibiting unwed couples from adopting children or serving as foster parents.

On the News Poll, readers were asked, "Do you support the Baxter County Quorum Court's decision not to join the National Flood Insurance Program?" There were 215 responses; 128 said "no", 63 said "yes", and 24 said they were "unsure".

On the Opinion Poll, readers were asked, "How would you vote for the proposal to bar unwed couples from adopting children or being foster parents?" There were 54 responses; 32 said "against", 20 said "for", and two said "undecided".

The current Online Poll questions are:

News Poll: Do you think there are enough recreational opportunities for young people in Mountain Home?

Opinion Poll: How would you describe the presidential campaign advertising so far?

You can take part in the polls by going to www.baxterbulletin.com.

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I Am opposed to Minimum Flow. It (the EIS) needs to be put on hold until it Re-evaluates the 2008 Flood event. This was the most significant event in our history of the Lakes And Came on the heels of other high water events. The SUPER Models need to be run Again with the last 5 years included if And when we Reach normal pool level.

The 2008 Flood Also showed the EIS & CORPS lack in Address ing And modernizing Flood Control measures. Anything that is going to significantly Reduce Flood capacity should have dealt with this.

A story in the Baxter Bulliten showed declining O2 in the Lake. Since the USGS lake O2 studies ARe so old, they should be Re-evaluated too in light of recent high water And massive Flows to lower levels.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Corey S. Egan

Organization: Private Citizen

Address: 2325 Fout Rd
Gamaliel AR 72537

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am against minimum flow after looking at your assumed numbers. I don't see the benifits on the river out weighing the costs and losses on the lake.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Daniel F. Heeney

Organization:

Address: 198 Mc Hann Mountain Trail
Jordan Arkansas 72519

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I'm opposed to "minimum flow reallocation" because it is not economically justified. The true costs of this project is an 850% increase in specific costs that Congress was not aware of. In our current economic crisis this is a very questionable project. More research needs to be persued.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
B LaDonne Andrea Baber

Organization:

Address:
1570 Lake Point Drive
Jordan AR 72519-9643

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow because the economic benefits to be gained from the project do not justify the cost. From an environmental standpoint, the loss of hydroelectric power does not make sense, because we need renewable, clean energy sources.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Rhoda Doerr

Organization:

Address:
134 Rolling Hills Lane
Norfork, AR 72658

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I'M OPPOSED TO MINIMUM FLOW BECAUSE:
1) IT'S TOO COSTLY COMPARED TO THE BENEFITS IT WOULD BRING.
2) IT WOULD CUT DOWN PART OF THE GREEN ENERGY CURRENTLY GENERATED BY THE DAM

I AM ASKING YOU TO DROP THIS PROJECT.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: MARC MONTE

Organization:

Address: 405 BRANTWOOD
JONESBORO, AR. 72404

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I believe The proposition of a minimum Flow on the White River IS a terrible idea. My entire fishing expirence on the white River IS A WADE Fishermen. My family enjoys swimming, wading, and fishing on the white RIVER. You are taking that away. No more sand bars or safe areas for a family to have A DAY on the RIVER. The minimum Flow proposition IS only good FOR The fishing Resort owners, not ARKANSAS, AND NOT FOR wildlife.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
JASON MORRELL

Organization:
ARKANSAS Resident

Address:
600 Montgomery Ave
Mtn Home, AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

We oppose WRMF. Our parking Lot goes under water, as well as our Launch Ramp. Depending on the duration of the high water condition, it will cause us to loose From $10,000.00 to $200,000.00 / tourism season.

There has not been any effort to provide or give permission to replace our parking Lot Location. What and where was the impact study mandated at the inception of this flawed project? The economy of this whole area will be negatively affected if tourism declines.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Karl & Regina Niggemann
Organization:
Teal Point, Inc.
Address:
715 Teal Point Rd.
Mountain Home, AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

- does not have a Drought Planning contingency done.
- no study completed for increased river fishing.
- against minimum flow

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Mike Crotts

Organization:

Address: 613 Leatherwood Dr.
Mtn. Home, Ar. 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I OPPOSE WRMF SUPPLEMENTAL DRAFT EIS.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: James A. Preyer
Organization: CRANFIELD RESORT
Address: 1396 CRANFIELD RD
MTN. HOME, AR. 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I oppose the findings of the White River Minimum Flow Reallocation Study & the Supplemental Draft Environmental Impact Statement

It seems the study was made on such small samples, the end result could not be fair nor justifiable impact on the fishing & recreational value that the Lake provide

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Betty L. Prayer
Organization: Cranfield Resort
Address: 1396 Cranfield Road
Mtn Home, AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

My family & I vacation at Jordan's Marina on Bar Fork Lake at least 3 times a year. This past summer we only went once. The lake was so high we could not find any beach to swim at. I am had to be careful boating do to the trees under water. And half of the camp sites w under water. I can not see how the high level of the lake is good on the dam. I had never seen so many areas on the dam leaking like I did this past summer.
My family and I will not return to the lake with the high levels of water. I can not see many family's with small children going to the lake if they cannot find a safe place for swimming.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Donna Beffa

Organization:

Address:
9747 E Cottonwood Ln
Bloomsdale MO 63627

additional space on the back

10-23-08

Dear Mr. Biggs:

I am concerned about the WRMF Project. Lake Norfork has always been included as a priority for hydro-Power and first and foremost FLOOD CONTROL.

This year as I returned to Mtn. Home (Spring 2008) to visit (I lived there over 30 years until a job change), I was sorely disappointed to see the tourism decline due to high water. Then when I returned in summer 2008 & again in the fall 2008, I still see lack of tourism due to water heights.

I know that trout fishing is important. But can it be more important than flooding and power generation?

I plan to move back to Mtn. Home and I pray that our town (MH) will still be an excellent tourism draw to help the economy (which you know is suffering most everywhere).

Sincerely,

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I have been a property owner on the North Fork LAKE for 12 years. I have been here when the WATER was WAY to low, which cannit be controlled during a dry summer. During the winter and Spring when we have alot of rain, UNLIKE the tremendous amount we received this year, controlling was almost unbearable. My investment of a home, boats and other recreational activities was cut OVER 50%. When the WATER is NORMAL OR even a few feet than NORMAL, little activities are bothered. If the WATER is held any more than 5 to 6 ft than NORMAL, fishing, scuba diving, and ~~other~~ other activities are deminished. I trout fish, but I feel more ARKANSAS Residents are concerned with the lake level.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: DELANE HOGAN

Organization:

Address: 4504 Lochmoor Circle
JONESBORO AR 72401

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Take Care of the Lakes here in Baxter County - I have lived here in Hand Cove for Over forty years - haven't seen Road Graders in Hand Cove Park. They have a Launching Area there for Boats etc.
I feel this Change will only benefit the Money People -

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Billy J. Whitehead

Organization:

Address: 7833 N.C. Road
Elv3 - Ar. 72531

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

We have had a very unusual summer this year. I should Lake Norfork water level be high again next year businesses will sure fall. We need to maintain the lake for the business that depend on it for a living.

Thank You

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Karen Grace

Organization:

Address: 868 Crandfield Rd
Mtn Home ARK. 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Trout fisherman are not the only people who likes to fish. My husband and I fish Norfork Lake year-round. We prefer not to have our waters disturbed. Leave well enough alone! Try putting your money to better use.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
LISA SCHILLING

Organization:
Lake enthusiast

Address:
10910 VARGAS DR
ST. LOUIS, MO 63123

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

- MINIMUM FLOW WORKS TO W/HO'S BENEFIT?

- THE PROGRAM(S) COSTLY & CERTAINLY DOES NOT HELP A LAKE FISHERMAN IN THE SPRING I NEED WATER KEPT AT A STABLE LEVEL FOR THE SPAWN & IN THE FALL AT 550 ON NORFORK & 650-654 BULLSHOALS (MAKES FOR VERY GOOD CRAPPIE FISHING).

THE HELL WITH TROUT FISHERMAN ☺

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: JOE SCHILLING

Organization: PRO LAKE GUIDE

Address: NOT GIVEN

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - [illegible], November 6, 2009

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I'm Am Totally Opposed To This Project.

As A Nation, We Need To Make More Clean Hydro Power, Not Reduced It. And The Need To Compensate The Power Companies For That With Tax Dollars? This Is Silly!

As A Nation We Do Not Need To Undertake A Project That Will Create More Air Pollution.

All This To Better The Trout Fishing Industry In Northern Arkansas? The Corps And Congress Will Look Very Foolish If This Goes Forward.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: GREG WEINMANN

Organization: TAXPAYER

Address: 8685 Hand Cove Rd
Elizabeth, AR 72531

Additional space on the back ——→

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT WITH ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending on November 3, 2004

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I OPPOSE THIS MINIMUM FLOW BECAUSE IT WILL NOT HELP ANY ONE AND COST WAY TO MUCH.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Rebecca D. Eldridge
Organization:
30 Hunter Lane
Address:
Elizabeth ark 72531

Additional space on the back ——→

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I OPPOSE THE WRMF SUPPLEMENTAL DRAFT EIS

THE LOSS OF "GREEN ENERGY" IS NOT JUSTIFIED AND IS UNACCEPTABLE. AT A TIME OF HIGH ENERGY COSTS AND CONCERN FOF GLOBAL WARMING, THE REDUCTION OF THIS ENERGY SOURCE IS UNACCEPTABLE.

THE AFFECT ON LAKE RECREATION MUST BE REALISTIC. ANY REDUCTION TO THAT PART OF THE LOCAL ECONOMY IS UNACCEPTABLE. WITH RECENT EVENTS, THE REDUCTION IN LAKE STORAGE CAPACITY NEEDS TO BE FURTHER EVALUATED.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
THOMAS L. KUECK

Organization:

Address:
1109 DIAMOND BAY RD.
ELIZABETH, AR. 72531

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I do not support the "White River Minimum Flow Reallocation". I don't believe enough thought has been given to the cumulative effect it will have on Norfork lake or the local environment. I see no specific benefits to the community, at least nothing that will justify the 100 plus million that this project will cost at a time when our country is facing one of the worst financial crises ever! Minimum Flow? No Thank You

Thomas C. Elstner

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: THOMAS C. ELSTNER

Organization:

Address: 119 County Rd. 851
Elizabeth, AR. - 72531

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am opposed to minimum flow ~~of~~

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: MARK Garrett

Organization: Rollers Rose

Address: 141 CR 851
Elizabeth, AR., 72531

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

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I OPPOSE WRMF SUPPLEMENTAL DRAFT EIS.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: James A. Preyer
Organization: CRANFIELD RESORT
Address: 1396 CRANFIELD RD
MTN. HOME, AR. 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

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I oppose the findings of the White River Minimum Flow Reallocation Study & the Supplemental Draft Environmental Impact Statement

It seems the study was made on such small samples, the end result could not be fair nor justifiable impact on the fishing & recreational value that the LAKE provide

the LAKes need study on the impact they make as far as fisherman, Recreational visitors, family camp & use as it pertains to financial impact to areas compared to the Rivers. Have you done that??

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Betty J. Pruyer
Organization: Cranfield Resort
Address: 1396 Cranfield Rock
Mtn Home, AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

WRMF-Supp. Draft EIS

We do not approve of the White River Minimum Flow project.
We think the project will have a detrimental effect on both the environment and upon the availability of electric power.
We urge that the policy not be adopted and that lake levels be brought down to normal pool levels as quickly as possible.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Donna M. Hunn Col USA (Ret.)
Donna M. Hunn

Organization:

Address: 156 Green Tree Lane
Elizabeth, Ar. 72531

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

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We oppose WRMF. Our parking lot goes under water, as well as our Launch Ramp. Depending on the duration of the high water condition, it will cause us to loose From $10,000.00 to $200,000.00/tourism season.

There has not been any effort to provide or give permission to replace our parking lot Location. What and where was the impact study mandated at the inception of this flawed project? The economy of this whole area will be negatively affected if tourism declines.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Karl & Regina Niggemann
Organization:
Teal Point, Inc.
Address:
715 Teal Point Rd.
Mountain Home, AR 72653

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I disagree with Minimum flow. I think our county has enough problems already without spending money on this project

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

YOUR NAME: Chris Hulan

Organization:

Address: 2075 Fourt Rd
Gamaliel, Ar 72537

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I DISAGREE WITH THE MINIMUM FLOW
THE COST TO DO THIS IS UNJUST
FOR THE OUT COME

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

YOUR NAME: ALLAN B. STORTEVANT

Organization:

Address: 27 CR 766
MOUNTAIN HOME AR
72653

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

No Minimum Flow!!

With the economy as bad as it is this is a wasteful way to spend $.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

YOUR NAME: Jamie Cox

Organization:

Address: 164 CR 40
Gamaliel, AR 72537

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - Ending November 3, 2008

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I think Minimum Flow is a waste of tax payers money

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

YOUR NAME: Joshua Cox

Organization:

Address: 164 CR. 40
Gamaliel, AR 72537

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am strongly opposed to the whole concept of the White River Minimum Flow Reallocation Study. It is truly amazing that no research was performed to ascertain the effects of high water have on the users of the two lakes. This whole effort seems to be aimed at a very small number of trout stocks from Bull Shoals dam down the White River to Calico Rock and Down the Norfork River from Norfork dam to the White River. Both dams tail waters have reduced the use of the lakes completely damaging every boat dock on each lake. All normal pool beaches are lost all year. My ranch has inundation on my land using approx 10 acres of Barren Fork Creek.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Ted Swirty
Organization:
Barren Fork Ranch, Inc.
Address:
791 Barren Fork Ranch Rd
Jordan, AR 72519

additional space on the back

3 NOV 2008

MR. BIGGS,

I AM WRITING IN REGARD TO THE MINIMUM FLOW, AND I WOULD LIKE FOR THE CORPS OF ENGINEERS TO KNOW THAT I AM IN FAVOR OF A MINIMUM FLOW FOR THE WHITE RIVER.

I BELIEVE THAT A MINIMUM FLOW BELOW THE BULL SHOALS AND NORFORK DAMS WILL IMPROVE THE TROUT FISHERY, AS WELL AS THE OVERALL HEALTH OF THE RIVER.

I OWN PROPERTY ON THE BANKS OF THE WHITE RIVER, AND ALTHOUGH I LIVE IN TEXAS, I TRAVEL TO MY CABIN MANY TIMES ANUALLY TO ENJOY THE FISHING AND THE BEAUTY OF THE RIVER. I BRING MANY FAMILY AND FRIENDS, AND CAN ASSURE YOU THAT BECAUSE OF THE RIVER, IT IS ALWAYS MY FIRST CHOICE AS A DESTINATION. I AM SURE THAT PEOPLE COMING TO THE WHITE RIVER, AS I DO, WITH FAMILY AND FRIENDS, HAVE A POSITIVE ECONOMIC IMPACT ON THE AREA.

AS A RESULT, I STRONGLY BELIEVE THAT ESTABLISHMENT OF A MINIMUM FLOW IS IN THE BEST INTEREST OF THE RIVER AND THE PEOPLE THAT ARE IMPACTED BY IT.

THANK YOU FOR YOUR CONSIDERATION,

LEE MANN

LEE MANN
12801 CONIFER LANE
FORT WORTH TX 76040

(2) Annual Emissions from Shifting Generation to Fossil-Fired Plants

In its original comment letter, the department noted that:

> *The DEIS examines the increase in annual emissions of NOx, SO2 and C02 that may result from shifting generation to other fossil-fuel fired plants to compensate for the loss in generation at the Bull Shoals hydroelectric facility. The DEIS characterizes these increases as "minor." While this characterization may be accurate, the DEIS fails to document the methodologies used to make this evaluation or to substantiate their conclusion. In addition it may be difficult to sustain the position that the impact of increased emissions will be insignificant until it can be determined where replacement power might be generated. An increase in emissions at a plant in an SO2 or NOx non-compliance area could be significant. Similar increases in emissions for plants in air quality maintenance areas could have even greater impact on citizens in those areas should the resulting additional pollutants shift the area into noncompliance.*

Section 4.6 of the Supplemental DEIS contains revised estimates of the reduction in hydroelectric generation and resulting increase in annual emissions of NOx, SO2 and CO2 that is likely to occur under the recommended reallocation option. Comparing these estimates with those included in the DEIS indicates that revised assumptions and input data were used for the SWD-SUPER analysis. In the absence of any description of the model or explanation for the basis of the revision, it is impossible to evaluate the validity of these revisions. However, none of the revisions appear to address the issues noted in the department's August 18, 2006 letter. The Supplemental DEIS, like the DEIS, appears to justify its characterization of the emissions as "minor" by comparing projected emissions increases to total annual statewide emissions for Missouri and Arkansas. Not surprisingly, the resultant ratios tend to minimize any impacts. A better approach might be to base the comparisons of NOx and SO2 emissions on emissions where generation is likely to take place based on previous sales of electrical power to utilities with fossil fueled power plants. Neither the draft nor the Supplemental DEIS provides information concerning the location of any fossil-fired power plants where increased generation would occur.

The failure of the Supplemental DEIS to consider localized air quality impacts that may occur due to increased generation at fossil-fuel plants extends to Section 3.7 ("Air Quality") of the Supplemental DEIS, which largely reproduces Section 3.8 of the DEIS. Section 3.7 discusses only potential impacts on air quality in the vicinity of the proposed project and fails to consider possible impacts on air quality in the vicinity of fossil-fired power plants whose emissions may increase as a result of the project.

Geology

The department anticipates no negative geological impacts will result from a water level elevation change in the White River reservoirs. The SDEIS describes the geology accurately on the whole. However, there appears to be an inconsistency between the second and third paragraphs on Page 3-6. The department suggests that the document be amended to clearly state that the geology described in the second paragraph is location specific and the geology described in the third paragraph is strictly regional. If there are any questions related to geology, please contact Mr. Peter Bachle of our Division of Geology and Land Survey at 573-368-2472.

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I disagree with Minimum flow. I think our county has enough problems already without spending money on this project

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

YOUR NAME: Chris Hulon

Organization:

Address: 2075 Fout Rd
Gamaliel, Ar. 72537

additional space on the back →

November 3, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mike,

I am against Minimum Flow on the White River.

The drought contingency plan is 60 years old. A few years ago another 1' 3" of water out of my lease area would have caused me to have to move all my docks out to the main lake channel. I would have been out of business just like what happened at the marina at Udall. Outflow will exceed inflows.

The loss of hydropower – to buy Empire Electric contracts on Bull Shoals and basically write a blank check to S.W.P.A. from Arkansas Game & Fish on Norfork Lake is a bad deal, especially when the electric grid is looking for power.

When the dams were constructed, the warm water fishing issue was mitigated for the river all the way to a "world class trout stream".

SDEIS has the smell of someone just pushing it through to get it done. The project planning team's objectivity has been compromised. When confronted with information that questions the SDEIS, the CVM, or the drought plan the answer I get back is a simple "I don't concur".

This project should end forever; the cumulative impacts are far greater than these few points.

Thank you,

Glenn Cox

Glenn Cox
Fout Boat Dock
2932 Fout Rd.
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

Congress mandated that all significant impacts be corrected, so "Plan B" was created to make it look like the recreational value of the lakes was very low and there was nothing significant to correct. The SDEIS makes the suggestion to "absorb the recreational benefit loss for the greater benefit of the increased trout fishery".

There has not been a financial impact study conducted for the lake communities. It is unacceptable that local businesses, individuals or the federal government facilities should be sacrificed for the benefit of the trout fishery.

Thank you,

Renee Cox

Renee Cox
P. O. Box 60
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think Minimum Flow is an unfeasible project that costs too much for the small benefit it will possibly produce. I think it needs to remain unfunded and unimplemented.

The Supplemental Draft EIS Contingent Valuation Method (CVM) has many flaws in it. The estimates are based on information from sample sizes too small to convey any meaningful statistical inference (SDEIS pf 4-33); the CVM is seven years old and needs reassessment; and it's highly doubtful that trout fishermen in this state will increase 325% from 103,050 to 333,650 if minimum flow takes effect.

With all that's going on in this country I think this project is shameful.

Thank you,

Tiffany Jennings
3915 Hwy. 101
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

Minimum Flow Reallocation is not environmentally acceptable. The SDEIS estimates minimum flow reallocations will cause a renewable energy loss of 59,327 MWh / year (SDEIS pg 4-31). That's enough green, renewable energy to power 5000 homes every year. The SDEIS also estimates fossil fuel based replacement energy will generate carbon emissions of over 106,000 tons/year (SDEIS pf 4-31). There has been no study of any future carbon tax or non-renewable energy tax due to loss of hydropower to reallocation.

This is just one of the reasons this project is unacceptable.

Thank you,

John R. Sandell Jr.

John Sandell, Jr.
3415 Hwy 101
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think it is totally unacceptable for the government to spend any money on this project. There are a lot more important things to be doing with our tax dollars than reallocating water for the trout, especially when we are supposed to have "world class" trout fishing already.

Thank you,

Lindsey Nuhfer

Lindsey Nuhfer
5350 Hwy 101
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I don't think adequate attention has been paid to a drought contingency plan or to the costs in the SDEIS. Also, the 2008 floods have not been accounted for in the super model of lake levels and downstream flows.

The frequency in the last five years of extreme weather events needs to be modeled and understood for both high water and low water.

I don't think the big picture is being looked at.

Thank you,
Patrick Nuhfer

Patrick Nuhfer
5350 Hwy 101
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I DISAGREE WITH THE MINIMUM FLOW THE COST TO DO THIS IS UNJUST FOR THE OUT COME.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

YOUR NAME: ALLAN B. STORTEVANT

Organization:

Address:
27 CR 766
MOUNTAIN HOME AR
72653

additional space on the back →

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

The main reason I am against it is that it's not economically justified. The hydropower impacts were estimated at $14 million in 2006 but today have grown to $120 million. That is just one difference in the cost that Congress wasn't aware of when they authorized this project.

I think this is a perfect example of a "pork barrel" project and we should leave well enough alone.

Thank you,

Rachel Cox

712 Baxter Ave.
Mtn. Home, AR 72653

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

October 29, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think this is somebody's pet project and I believe it's wrong for the taxpayers in this country to have to pay for it. This minimum flow project must be what they call a pork barrel project. I am opposed to it.

Thank you,

[author block]

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

Comment Sheet

Public Review Period - **Ending November 3, 2008**

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study and SDEIS please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I think minimum flow is a waste of taxpayers money.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PE
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

YOUR NAME: Joshua Cox

Organization:

Address: 164 CR 40
Gamaliel, AR 72537

additional space on the back →

November 2, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think this is somebody's pet project and I believe it's wrong for the taxpayers in this country to have to pay for it. This minimum flow project must be what they call a pork barrel project. I am opposed to it.

Thank you,

Frank Winters
67 CR 804
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

November 2, 2008

US Army Corps of Engineers
White River Minimum Flow Project
C/O Mike Biggs
P.O. Box 867
Little Rock, AR 72203-0867

Mike,

I am opposed to the White River Minimum Flow (WRMF) Supplemental Draft Environmental Impact Statement (SDEIS).

I think Minimum Flow is an unfeasible project that costs too much for the small benefit it will possibly produce. I think it needs to remain unfunded and unimplemented.

The Supplemental Draft EIS Contingent Valuation Method (CVM) has many flaws in it. The estimates are based on information from sample sizes too small to convey any meaningful statistical inference (SDEIS pf 4-33); the CVM is seven years old and needs reassessment; and it's highly doubtful that trout fishermen in this state will increase 325% from 103,050 to 333,650 if minimum flow takes effect.

With all that's going on in this country I think this project is shameful.

Thank you,

Robert Sporlein
3 Nov 08

Robert Sporlein
311 County Road 804
Gamaliel, AR 72537

Cc: Colonel Jackson
Mr. Thomas Waters
Marion Berry

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Sincerely,
tom schmuecker
27 cr 458
mountain home, ar72653

Biggs, Mike L SWL

From: Yeske, Ronald [RYeske@NCASI.org]
Sent: Wednesday, August 06, 2008 10:53 AM
To: Biggs, Mike L SWL
Subject: Report availability

Hello, Mr. Biggs:

I am contacting you regarding the draft SDEIS for the White River, announced in today's Federal Register. Can you tell me whether the draft report is available for downloading from an Internet web site or, failing that, whether you can send it to me in electronic format as an e-mail attachment. Thanks for your attention to this matter.

Ron

Ronald A. Yeske, Ph.D.
President
National Council for Air and Stream Improvement
P.O. Box 13318
Research Triangle Park, NC 27709-3318
Tel (919) 941-6404
Fax (919) 941-6401

Biggs, Mike L SWL

From: William Sappenfield [bsappen1@bellsouth.net]
Sent: Tuesday, September 16, 2008 8:24 PM
To: bsappen1@bellsouth.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
William Sappenfield
2043 Hickory Crest Dr
Memphis

Biggs, Mike L SWL

From: William Matthews [billnorfork@gmail.com]
Sent: Tuesday, September 16, 2008 11:27 AM
To: billnorfork@gmail.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

Sincerely,
William Matthews
187 Otter Creek PL.
Norfork 72658

Biggs, Mike L SWL

From: William Fox Statler [foxstatler@willowford.net]
Sent: Wednesday, September 17, 2008 2:09 PM
To: foxstatler@willowford.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I do not support Minimum Flow because the source waters (Bull Shoals and Norfork Lakes) are of poor quality and can not meet or beat the quality of water in the rivers. Thus our rivers will be polluted quicker because of Minimum Flow.

Our river were an extraordinary resource before the organic pollution from the lakes destroyed the river bed and the aquatic environment of our aquatic insects. The legal precedent that was set in the first lawsuit against Minimum Flow of Oregon Water Department decided to stop Minimum Flow several years ago because of the poor quality of the SOURCE WATER. This legal precedent is still used today when ever Minimum Flow is challenged in a court of law.

The problems of our rivers is not the amount of water that flows down them but the quality of water that flows into them from the dams. The organic pollutant levels of our rivers can be tested and categorized as Grossly Organically Polluted by the Issac Walton Stream Survey which is permissible as legal evidence to stop Minimum Flow.

Because of Agricultural concerns (the chicken producers on the White River Drainage and the milk producers on the North Fork River Drainage) our rivers and lake are being destroyed.

Sincerely,
William Fox Statler
P.O.B.
Salem, AR,

Biggs, Mike L SWL

From: Whiteriverboa4u@aol.com
Sent: Wednesday, September 17, 2008 9:04 AM
To: Biggs, Mike L SWL
Subject: Minimum Flow on White & Norfork Rivers

Maintaining a minimum flow that continuously covers the bottom of these rivers is extremely important especially during hot weather in the summer. The drying of gravel bottoms kills aquatic vegetation and insect life. Then the flushing of these dry bottoms sends large quantities of loose vegetation downstream making it almost impossible to fish in the area of Calico Rock.I have seen the river so low at times that stocked trout would not leave the somewhat deeper hole at the end of a boat launch ramp at Chesmans landing.

I would like to go on record as favoring the minimum flow project. Thank You. Nicholas Fiorillo

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Biggs, Mike L SWL

From: White Hole Resort [whresort@flippinweb.com]
Sent: Friday, September 12, 2008 6:28 PM
To: Biggs, Mike L SWL
Subject: White River Minimum Flow

The benefits derived from improving the minimum flow of the White River are numerous and obvious. However, there are many questions still for the companies that oppose it. From my perspective here on the river, it will only bring good benefits to improving the tourism industry in Arkansas.

Steve Willetts

White Hole Resort

toll-free: 1-866-781-6056

web site: www.WhiteHoleResort.com

email: whresort@flippinweb.com

WHY IS THE MINIMUM FLOW PROJECT IMPORTANT?

These comments are derived from concerned citizens who have the economic condition of our country at heart and in no way want to unnecessarily and irresponsibly spend taxpayer dollars. These same citizens realize the long term importance of the Minimum Flow project to one of our great natural resources and know the project is imperative to the long-term health of the White River

System.

►Minimum Flow will positively impact the economy and natural resources for the United States and the state of Arkansas by expanding the already flourishing $160 million dollar tourism industry in Arkansas.

►Minimum Flow will improve dissolved oxygen in the river and water temperatures for downstream trout fisheries, increase wetted perimeters creating improved growth of aquatic plants, habitat, and food supply, and improve trout reproduction, while returning the river to a more natural state.

►The economic benefits according to the Corps of Engineers are a 77 to 1 cost to benefit ratio, irrefutably proving the benefits of the Minimum Flow project.

PROPOSED BUY OUT FOR EMPIRE DISTRICT ELECTRIC

= ALMOST $34 MILLION

A $34 million payout to Empire District Electric is highway robbery to the United States government and ultimately to the taxpayers. The following information has been derived from Empire District Electric's 2007 annual report and information collected from the Federal Energy Regulatory Commission (FERC).

►Headwater Benefits Assessments paid by Empire District Electric from 1956-2007 total $900,846.00 which equals on the average $16,087.00 per year. Would it not be fair to pay empire that amount for the remaining 14 years of their FERC license? That total would be $225,218.00, considerably less than the $34 million they want.

►Per the SWPA study, Empire's loss of hydropower and capacity calculations have been based on a 50 year time frame. Since Ozark Beach Dam's FERC license is only good for another 14 years – to 2022, why would the cost be calculated based on 50 years when their license (FERC license number 2221) expires in 14 years? There is no guarantee that Empire's FERC license will be reissued particularly in light of the potential for other energy options to materialize. Is it legal or ethical for Congress to appropriate taxpayer dollars to pay Empire District Electric for future power that they are not yet licensed to market?

►According to Empire's annual report (pages 5 & 7), the hydroelectric generation from Ozark Beach represents only 1% of the total capacity to Empire District Electric. Empire Electric's generating plants total 1255 megawatts as of 12-31-07. Per Empire's report, the system reached a record high of 1173 megawatts on 8-15-07. The previous record was 1159 on 7-19-06. The winter demand maximum was 1159 megawatts set on 2-16-07. The previous year winter high was 1034 megawatts set on 1-31-06. Empire District Electric is not utilizing full facility megawatt capacity even if Ozark Beach's generating capacity were completely removed. How can Empire District Electric Company state that they will be harmed financially when they can operate profitably without the Ozark Beach facility?

►The Ozark Beach Dam was originally constructed in 1911. Do the current hydroelectric generators operate safely and efficiently? Is a dam that is nearly 100 years old, safe? In 2022, would it be prudent for the federal government to relicense the Ozark Beach facility based on its age? Would this dam withstand an earthquake? Was the dam constructed under any federal guidelines to insure its safety? Are reports of safety inspections readily available to the public? If the dam were relicensed today, would Minimum Flow be routinely incorporated into the licensing procedure?

►According to letters from the Federal Energy Regulatory Commission (FERC) to Empire District

Electric Company, headwater benefit payments were waived for 2007 and 2003. Over the last 50 years, how often have headwater benefit payments from this privately owned company been waived by this federal agency and why? It appears from these same letters and attached head water benefits assessments that Empire is already receiving preferential treatment in the form of subsidies by avoiding the payment to FERC. Per Tom Snyder, Project Manager for Ozark Beach Dam, the facility can generate hydroelectric power when Bull Shoals Lake reaches 679' elevation. If Ozark Beach can generate power at a 679' elevation on Bull Shoals Lake, why can Empire District Electric claim a loss of head? While Empire may not operate maximally until they hit elevation 651', they have been operating under these same conditions since the opening of Bull Shoals Dam in 1953. If they have been accustomed to these operational conditions for the last 55 years how can Empire state they will experience a loss from the Minimum Flow project?

►Would it be prudent for Empire District Electric to provide proof of financial loss where they have had to buy power on the open market due to the inability to operate the Ozark Beach Dam? Is this proof that Empire has already been taking taxpayer dollars unnecessarily and proof again that the Minimum Flow buyout is yet another attempt to milk the taxpayers?

►Per Empire's 2007 annual report, by Empire's own admission, they have been hit hard by environmental conditions in recent months. According to their report there was $13 million cash on hand to meet the needs of these situations. Their report also states that they had well over $40 million in expenses from these events and by their own admission were hit hard. Does it not seem plausible that they are using the Minimum Flow project buyout as an opportunity to collect money from the United States taxpayers?

►Empire District Electric Company's stock is traded publicly on the New York Stock Exchange. According to page 27 of their 2007 Annual Report for Empire District Electric, common stock prices during 2006 and 2007 experienced a low and high of $20.25 to $26.13 respectively. Dividends paid per share during 2006 and 2007 were $0.32. As of December 31, 2006, Empire District Electric had $22.9 million of retained earnings to pay out for dividends followed by $17.2 million for 2007. The total dividends paid in 2007 were $39 million. During 2006 and 2007 the economy and environmental impacts in terms of droughts and ice storms had to affect Empire's bottom line, yet in spite of these conditions, they still were able to pay $39 million in dividends to their shareholders. If in poor economic and environmental conditions Empire District Electric was still able to make huge dividend payments how can they substantiate a financial loss from the Minimum Flow project?

►Per Empire's 2007 annual report, gross operating revenues from Ozark Beach Dam were: 2005 - $1.447 million, 2006 - $1.843 million, 2007 - $1.879 million. There was clearly a drought that occurred in 2006. If they are still generating gross revenues in these amounts from this small hydroelectric dam in drought environments, how can they say the Minimum Flow project is going to cause them any loss of revenue whatsoever?

PROPOSED $87 MILLION FEDERAL GOVERNMENT DEBT REDUCTION TO SOUTHWEST POWER ADMINISTRATION

It appears as though Southwest Power Administration has been charged with having to supply the "for profit" electric cooperatives with cheap power to resell.

►Although SWPA claims to be a federal agency, why are they concerned with selling cheap power when they technically work for the taxpayers of this country? Should it not be the responsibility of the "for profit" electric companies to acquire their own additional electricity from the free market without it being given to them at a reduced rate by the government? Based on SWPA's actions and their financial reports, is it not then fair to assume that SWPA is a nonfederal agency instead of a federal

agency? If they are truly a government agency charged with simply managing 24 U.S. owned hydroelectric dams, why does it appear that they are in the business of making money and why would a Minimum Flow project on a section of the White River in Arkansas afford them the luxury of collecting nearly $87 million from taxpayers?

►According to Southwest Power Administration (SWPA), Bull Shoals and Norfork Dams were brought on line in 1953 and 1944, respectively. If they were originally mortgaged for 50 years, shouldn't the mortgages be completely paid off by now? If both of the dams are assumed as "free and clear", shouldn't the Minimum Flow project only be charged a fair percentage of operation and maintenance expenses associated only with Minimum Flows, based on best business practices in the energy industry?

►SWPA made a profit in spite of a 17 month drought in 2005-2006. In a drought environment, if SWPA is operating profitably, how can Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation? It may not be generated at peak periods but some of that power can still be sold for profit.

GENERAL COMMENTS ON THE REPORT COMPLETED BY SOUTHWEST POWER ADMINISTRATION AS IT AFFECTS THEIR DEBT REDUCTION TO THE FEDERAL GOVERNMENT AND THE BUY OUT TO

EMPIRE DISTRICT ELECTRIC

According to the SWPA report, energy and capacity losses were calculated utilizing the Platts and FERC methods. This appears to be a little like the overweight woman who weighs herself on a variety of scales and chooses the weight that is most flattering. Is it prudent to assume that the methods used for calculating energy losses and capacity losses should be the same?

► When was the agreement made and who authorized this agreement between the Corps and SWPA to use the 50 year time frame and the Platts and FERC methods? Congress ordered SWPA in February 2006 to begin the study on the Empire District Electric buy out. Why were agreements between SWPA and the Corps made in October of 2005 before receiving Congressional orders in February 2006? Why would Mr. George Robbins with SWPA state that he was "forced to use both methods", referring to the Platts and FERC methods?

►The Federal Power Commission regulates electric power and energy generated at reservoir projects controlled by the Department of the Army. What method of calculation to determine energy and capacity loss do they utilize or recommend? Is it FERC, Platts, or something else? Would best business practice be to use what FPC recommends in determining losses for both SWPA and Empire's buy out calculations? As the Federal Power Commission requires the Department of the Army, the Secretary of the Army, and the Secretary of the Interior to transmit and dispose of power and energy in the most widespread use and at the lowest rate possible to the consumers consistent with sound business principles, the Minimum Flow project should be evaluated on the same basis. Because it's plausible that SWPA cannot be completely fair and unbiased in their economic calculations, would it be prudent to have the Federal Power Commission or some independent source, review the processes by which SWPA determined the losses to Empire District Electric and themselves?

►It appears as though worst case scenarios and drought environmental conditions were used to calculate all energy and capacity losses for both SWPA and Empire District Electric. When SWPA calculated energy losses what was the basis of these calculations? For example, page 12 of the SWPA annual report shows estimated average annual energy produced by Bull Shoals Dam of 785

million kWh. What period of years was this particular number averaged over? What percentage of this estimated average annual energy will Minimum Flow cause SWPA to lose? To look at SWPA's annual report on actual net energy production, one has to wonder how did they calculate an average estimation and thus how did they determine what they say will be lost from the Minimum Flow project? Did SWPA, in this reporting process, use to their benefit and Empire's benefit, figures and calculations that would profit them financially and drive up the cost of the Minimum Flow project, to the detriment of the taxpayers? Do we have the fox watching the hen houses?

►According to page 14 of SWPA's annual report, during 2003 through 2006 SWPA shows unused supplemental and excess energy. Therefore, since they had an abundance of energy even in the 17 month drought period during 2005 and 2006, this seems to indicate that they would not have been forced to buy power on the open market. Since Minimum Flow affords additional water usage this emphasizes the point that they would not incur any financial losses or experience the need to purchase additional power on the open market due to Minimum Flows.

►According to SWPA's annual report (pages 17,19, & 21), during fiscal years 2004, 2005, 2006 from the details of billings to customers (indicating they *are* issuing bills and collecting money, thus a "for profit" business), the kilowatt capacity sold was the same for all three years, in spite of the drought that occurred in 2005-2006. How will Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation, even in drought years?

►Per SWPA's statement of cash flows (page 26) in their annual report, they had $36 million on hand at the end of a drought year. What average American business wouldn't love to clear the year with an extra $36 million?

►Per George Robbins in the SWPA study, energy losses were calculated utilizing on peak energy replacement costs only. Since generation can occur at on and off peak times shouldn't on and off peak rates be utilized?

►The seasonal power pools on Bull Shoals and Norfork Lakes were implemented without Congressional orders. If an agreement of this magnitude was easily attained without Congressional orders, why have the Minimum Flow project proponents been required to jump through bureaucratic hoops? Based on this fact is it safe to consider that there must be a *special relationship* between Southwest Power Administration and some division of the Corps of Engineers?

►The established drought of record occurred in 1928 prior to the construction of any federal dam on the White River system. Southwest Power Administration utilized this 1928 drought of record to simulate energy and capacity losses for both lakes. Since the opening of the Bull Shoals and Norfork Dams when have droughts and floods occurred? Would it be more appropriate to use an average of these scenarios to calculate the energy and capacity losses rather than the use of *worst* case scenarios?

► Why does the natural resource (rainwater) that falls freely from the sky and would fulfill the water required for minimum flows, that belongs to the taxpayers, become a commodity that can be bought and sold by private companies on the open market? Why would one governmental agency pay another governmental agency for a resource or product that falls freely from the sky and doesn't cost anyone anything?

► The bottom line is the power companies don't want to give up control of these hydropower plants and the huge profits associated with them even though the Minimum Flow Project would benefit the American people. Is this not more government *pork spending* to pay off crying, profitable power companies because they are losing some control of how water is released from these hydroelectric

dams leaving the taxpayers to pay $87 million to a supposed federal power company, Southwest Power Administration, and $34 million to a privately owned "for profit" power company, Empire District Electric? It is ludicrous for the taxpayers to pay either of these greedy power companies anything.

Biggs, Mike L SWL

From: Wendy Luna [luna@gassville.net]
Sent: Friday, September 19, 2008 2:12 PM
To: luna@gassville.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Wendy Luna
128 Rocky Top Trail
Gassville, AR 72635

Biggs, Mike L SWL

From: Wayne Reed [wayner@lexicon-inc.com]
Sent: Tuesday, September 02, 2008 4:44 PM
To: Biggs, Mike L SWL
Subject: min flow norfork

as both a resident and guide on the norfork, i do not want to see any min flow on this river, the white, thats good, but the norfork is currently a gutter since the flood of spring 08, wade fishing will be non-existant---a disolved o2 resolution would be good, but i vote no on min flow on the norfork---

Biggs, Mike L SWL

From: Wallis, Frank [fwallis@mtnhome.gannett.com]
Sent: Tuesday, September 23, 2008 2:28 PM
To: Biggs, Mike L SWL
Subject: Mailing list

Hello again, Mike.
Can you place me on your mailing list?
fwallis@baxterbulletin.com
Thanks.

Frank Wallis
Reporter
The Baxter Bulletin
(870) 508-8059
(870) 421-3406 (cell)

Biggs, Mike L SWL

From: vwalters [vwalters@cyberback.com]
Sent: Monday, September 29, 2008 6:31 PM
To: Biggs, Mike L SWL
Subject: Minimum Flow Public Comment

Dear Mr Biggs:

I support the minimum water flow in trout waters below the dams. However, I am very concerned about the amounts of money the utility companies are wanting for it's implementation. I certainly hope this will be investigated further.

Vivian Walters

Biggs, Mike L SWL

From: United Country McIver Land And Realty [unitedcountry@aeneas.net]
Sent: Tuesday, September 30, 2008 11:20 AM
To: Biggs, Mike L SWL
Subject: WHITE RIVER FLOW

Attachments: image001.jpg

Dear Mr. Biggs,

I support the concept of minimum water flow in trout waters below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.

Thank you very much,

WARM REGARDS,

HAL MCIVER

image001.jpg (4 KB)

731-298-6731

Biggs, Mike L SWL

From: Tommy Holbrook [tbholbrook@suddenlink.net]
Sent: Tuesday, September 16, 2008 9:36 PM
To: tbholbrook@suddenlink.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Tommy Holbrook
181 Cherry Tree Lane
Mountain Home, AR 72653

Biggs, Mike L SWL

From: Tommy Cauley [fishfinder@alltel.net]
Sent: Wednesday, September 24, 2008 9:14 PM
To: Biggs, Mike L SWL
Subject: flow at greers ferry lake

Attachments: image001.jpg; image002.gif

Mike,

I do not feel that it would be a great thing if we have to keep the water up in the buck brush and it kills the buck brush , that is all the cover we have for spawning bass and young of the year bass to hide from predators , and I do guess that is my only concern and was wondering if anyone else has even considered this at all?

image001.jpg (19 KB)

'WE FIND EM YOU CATCH EM '

Tommy Cauley
Fishing Guide

Fish Finder Service
4710 hwy 92 east
Bee Branch,Ark. 72013

fishfinder@alltel.net
www.arfishfinder.net

tel:
tel2:
fax:
mobile:

image002.gif (552 B)

501-654-2008
501-803-7020
501-654-2008
501-940-1318

Biggs, Mike L SWL

From: Tom Snyder [TSnyder@empiredistrict.com]
Sent: Wednesday, October 01, 2008 10:30 AM
To: Biggs, Mike L SWL; George.robbins@SWPA.Gov
Cc: Brad Beecher; Harold Colgin; William Howell; tietjen@colorado.edu; Tom Snyder
Subject: Question on seasonal pool change

Empire District Electric Co. would be interested if in fact this was a mistake or if it was an intentional change? This would affect our head negatively.

Hi Mr. Biggs,

I have a question concerning the WR Minimum Flow SDEIS.

Table 4.3.1.1-1 Annual Pool Elevation-Duration for Elevations of Interest pg 4-6 and **Table 4.3.1.2-1 Annual Pool Elevation-Duration for Elevations of Interest** pg 4-10 both show in footnote 3 that the proposed seasonal pool duration would be one month longer then the current seasonal pool duration in footnote 2.

Is footnote 3 correct?

If correct, where did you account for this change in the impact modeling?

If not correct, how will you fix the error?

Shawn & Cindy Egan, Owners
Bayou Resort at Eagles Rest
2325 Fout Rd. Gamaliel AR 72537
www.norfork.com/bayou
870-467-5277

Tom Snyder

strictly prohibited.

Biggs, Mike L SWL

From: Tom Snyder [TSnyder@empiredistrict.com]
Sent: Tuesday, September 02, 2008 9:36 AM
To: Biggs, Mike L SWL
Cc: Brad Beecher; Harold Colgin; William Howell
Subject: Road to Empire's Ozark Beach

Mike,

After having time to think about the resent meetings Empire would disagree with the Corp decision of not raising the access road coming to the power-house of the Ozark Beach Plant. This road has been in place since the building of Ozark Beach back in 1913 and was improved as part of the building of Bull Shoals to be able to maintain the access to plant. You stated the reason that you were not considering the raising of the road was that the Corp had quit maintaining it in 1984, while this may true I assure you that it has had maintenance since that time, Empire has patched the potholes on the black-top part of the road a couple of times and the gravel part of the road many times. It was my understanding that the Dept of Conservation had agreed to maintain the black-top portion and had repaired it as late as last year to allow the fisherman access to fish below OB. Empire uses the road when the water level is where we can at least four times a day to allow our guards to make sure the plant is secure and many times a month our maintenance crew uses it for transportation and also to haul supplies to and from the power-house. There are times that this access is very necessary in moving materials to and from the dam.

You stated at the meeting Aug 26th because the Corp owned this property they didn't see that it needed to be worked on, it would make since to me that the Corp owns all the property that is being raised and we don't see that this is any different. As was discussed at the meeting on Aug 27th this is an access to a business and the Corp would raise the road if it fell between 654' MSL and 660' MSL. If the power pool level wasn't being changed we would not be having this discussion and because it is being changed and this road will become much less useful. It is Empire's feeling that this road should be raised.

Tom Snyder

Plant Manager Ozark Beach Hydro

Empire District Electric Co.

417-546-2111

417-339-7702 Cell

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Any other use, retention, dissemination, forwarding, printing or copying of this email is strictly prohibited.

Biggs, Mike L SWL

From: tom schmuecker [tom@wapsifly.com]
Sent: Tuesday, September 16, 2008 11:01 AM
To: tom@wapsifly.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Sincerely,
tom schmuecker
27 cr 458
mountain home, ar72653

Biggs, Mike L SWL

From: tom [bgtg@centurytel.net]
Sent: Saturday, September 06, 2008 1:18 PM
To: Biggs, Mike L SWL
Subject: Fw: minimum flow

----- Original Message -----
From: tom
To: mike.i.biggs@usace.army.mil
Sent: Saturday, September 06, 2008 1:02 PM
Subject: minimum flow

Mr Mike Biggs,
Concerning the minimum flow.I am all for raising the level 5 feet.I think it will have much more good than bad impact.I have lived for many years on the Haskins Ford road and keep track most of the time when the road floods.The level would have no effect on the flooding that always takes place after hard rains.Its a badly constructed low water crossing that has been beat lower than than the river because of overloaded trucks (80,000) lbs.Its at best a 35,000lb road..I live on the north side of the road so it does make it an inconvenience..
I have also corrected Maynard Wallace to the fact that both the school district and fire district stop at the river and they have never crossed.It is the same for the mail.They turn around at the last house before the river.North side is Thornfield and the south side is Theodosia.
The only person really making noise around here is Bill Cook.He thinks he owns the property from the water line up.Maybe the Corp should put a fence up and show him where the PUBLIC property is....

Tom Gogan
PO Box 343 Isabella MO 65676

Biggs, Mike L SWL

From: Toby Forte [gcilandservices@earthlink.net]
Sent: Monday, September 29, 2008 9:10 PM
To: Biggs, Mike L SWL
Cc: info@newlands.com
Subject: Dear Mr Biggs,

Dear Mr. Biggs,

I support the concept of minimum water flow in trout waters below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for its implementation, and it is my sincerest hope that this shall be investigated further. Minimum water flow should be initiated with all haste because of the positive economic impact the White and other rivers have on Arkansas. As a frequent visitor and constant proponent and promoter of these waters to people all over the U. S., I strongly urge your consideration.

Sincerely,

E. M. Forte'

Managing Partner

ENEXCO, LLC

Arkansas, Texas, Oklahoma and Ohio Operations

6006 Early Branch Road

Mulberry, Arkansas 72947

972-679-9899-cell

Biggs, Mike L SWL

From: THOMAS SCALI [ts1970442@yahoo.com]
Sent: Monday, September 29, 2008 9:38 PM
To: Biggs, Mike L SWL

Dear Mr Biggs,

I support the concept of minimum water flow in trout waters below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.

THANK YOU,
THOMAS SCALI

Biggs, Mike L SWL

From: Thomas Coleman [venuti2@AOL.COM]
Sent: Thursday, September 18, 2008 8:15 AM
To: venuti2@AOL.COM; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Thomas Coleman
1217 W. 71st Terrace
Kansas City, MO 64114

Biggs, Mike L SWL

From: TBF of Nebraska [TBF-Nebraska@cox.net]
Sent: Tuesday, September 16, 2008 9:21 AM
To: Biggs, Mike L SWL
Subject: FW: White River Minimum Flows

From: TBF of Nebraska [mailto:TBF-Nebraska@cox.net]
Sent: Tuesday, September 16, 2008 9:14 AM
To: 'george.robbins@swpa.gov'; 'mike.l.biggs@usace.arm.mil'
Subject: White River Minimum Flows

Gentlemen

Re: White River Minimum Flows

I strongly support minimum flows and ask that you assist in it's implementation

Ken Kizzier

President, TBF of Nebraska

Biggs, Mike L SWL

From: Tamira K. Williamson [tamira@astate.edu]
Sent: Thursday, October 16, 2008 10:58 AM
To: Jackson, Donald E COL SWL; Biggs, Mike L SWL; Hughes, Susan B HQ02
Subject: Minimum Flow EIS

I would respectfully like to state my opposition to the White River Minimum flow EIS. I believe the cumulative impacts on the lakes and recreational areas around the lakes will be negatively impacted by such a project.

Since I was a young boy I have fished the Arkansas Trout streams and have enjoyed many years of camping and recreation on the Arkansas Lakes. As I've gotten older, I now try to pass this appreciation on to my family. It seems to me we're trying to fix what isn't broke. We have a good thing going here in Arkansas, let's not mess it up.

Biggs, Mike L SWL

From: steve wilson [serenity.papa@gmail.com]
Sent: Tuesday, September 16, 2008 11:49 AM
To: Biggs, Mike L SWL
Subject: sdeis

Dear Mike:

Please accept my personal comments on the minimum flow eis. I became Director of the Arkansas Game and Fish Commission in December of 1979. One of the first briefings I can remember getting from fisheries was the need for a minimum flow on the White River system. We seem to be somewhat closer today.

You have done a very thorough and professional job of researching all aspects of this project and should be commended for that.

I think the SDEIS is very adequate, the cost/benefit ratio overwhelmingly supports the project and it seems that there is also strong public support. I hope you and others will continue to question the unreasonable costs of paying Empire and SWPA.

I look forward to seeing progress on design and implementation.
Cordially
Steve N. Wilson

Biggs, Mike L SWL

From: Steve Lydick [stevelydick@yahoo.com]
Sent: Wednesday, September 24, 2008 7:18 AM
To: Biggs, Mike L SWL
Subject: Comments in support

Dear sirs,

I wish to offer my brief comments in support of maintaining minimum flows in the river, and the higher conservation pool in Bull Shoals as a result. As a professional fishery biologist, I strongly value the benefits to the fisheries in both the river and the reservoir that will result from this operational change.

I realize some of the marina and resort operators have expressed concerns about this change. I think it is worth noting that while there may be some generally minor adverse impacts to the business owners themselves as a result of the need to adapt to a new conservation pool, those impacts would not be expected to actually have an adverse effect on tourism, the economic engine of the area. In fact, as fishing is a principal draw for tourists, the improvements in the fishies should benefit the local economies, and in the long run, those operators as well.

I would suggest that in the long term, you consider adopting an unbalanced reservoir operating regime. Varying reservoir levels from year to year has significant benefits to the fisheries, and this in turn will also help local economies. I do realize the timeliness of this suggestion could be better, given that we're going through a rather extreme and involuntary version of this concept right now. As a result, it might be a concept to consider for the longer term rather than try to bring it forward while local folks are still reeling from this past year.

Thank you very much for your consideration of these comments.

Sincerely,

--Steve Lydick, property owner abutting Corps land on Bull Shoals.

Biggs, Mike L SWL

From: Stephen_Spencer@ios.doi.gov
Sent: Thursday, October 30, 2008 2:06 PM
To: Biggs, Mike L SWL
Subject: Department of the Interior Comments - DSEIS White River Minimum Flow Reallocation Study

Attachments: ER08987 White River.pdf

ER08987 White River.pdf (62 KB...

Mr. Biggs: Please find attached the Department of the Interior's comments on the subject Draft Supplemental EIS. We are following this up with the original by regular mail. I would appreciate a reply to this e-mail indicating that you have received this. Feel free to contact me or those indicated in the letter if you have questions. Thanks.

Regards,

Steve Spencer

Stephen R. Spencer, Ph.D.
Regional Environmental Officer
U.S. Department of the Interior
Office of Environmental Policy and Compliance
Mailing Address:
P.O. Box 26567 (MC-9)
Albuquerque, New Mexico 87125-6567
Street Address:
1001 Indian School Road, NW, Suite 348
Albuquerque, New Mexico 87104
Phone: (505) 563-3572 Fax: (505) 563-3066 Cell: (505) 249-2462
E-mail: Stephen_Spencer@ios.doi.gov
http://www.doi.gov/oepc/albuquerque.html

Biggs, Mike L SWL

From: Shannon Walker [walkerfam01@cox.net]
Sent: Sunday, September 14, 2008 6:19 PM
To: Biggs, Mike L SWL
Subject: Minimum Flow Practices - White River

Mr Biggs,

May I give my voice of support for the minimum flows practices on the White. I am a native of the area (Harrison) and grew up wading and floating the White with my friends, son and grand children and would like to see the fishery enhanced by this practice.

Please look favorably on this practice.

Don Walker
4210 Tahoe Circle Drive
Springdale, Ar 72762

Biggs, Mike L SWL

From: Sara Thorne [troutbum@ozarkmountains.com]
Sent: Tuesday, September 16, 2008 9:35 PM
To: troutbum@ozarkmountains.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Sara Thorne
371 MC 6067
Flippin, AR 72634

Biggs, Mike L SWL

From: Roy Layes [rlayes@suddenlink.net]
Sent: Tuesday, September 30, 2008 7:53 AM
To: Biggs, Mike L SWL
Subject: MINIMUM WATER FLOW

Dear Mr. Biggs

I strongly support the minimum water flow in trout waters below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for its implementation. This should be investigated further.

Roy Layes

Operations Manager

B & L Heating And Air Conditioning, Inc.

Office # 405.372.8140

Cell # 405.747.5610

Fax # 405.372.8907

Biggs, Mike L SWL

From: Rose Maschek [maschk44@suddenlink.net]
Sent: Thursday, October 02, 2008 7:55 AM
To: Biggs, Mike L SWL
Subject: minimum flow

Dear Colleagues,

Only one of my three letters, written prior to the Norfork's development pollution and floods on the rivers, was sent to you. This was due to frustration over what was going to happen to the easy, unbelievable, wade fishery I enjoy so much below the dams and at other river accesses. It will require more care with less evacuation time, wading in six inches or more of moving water, especially near the dams, with minimum flows in place. The various flows of water lends tremendously to the versatility of our fishery. Without the present no flow fishery, the easy or safer wading experience is greatly decreased. It is also the classic type of trout fishery where caddis and other species of hatching flies are presented to fish at a worthwhile rate which they love. With minimum flows in place, brief periods between generations may not allow water a chance to recede to the minimum levels anyway. Fishing out of zooming boats and water is not classic trout fishing. The boat catches the fish. Many fishermen come here to experience the peaceful wade fishery and there are many living here who can afford to do the same.

The destruction of the corridor slopes and degradation of the fishery below the Norfork Dam is an unconservative force. If you have funds laid aside for improving situations of pollution and river degradation, use them to buy lands along the river in certain areas. We need more public access to catch and release areas. The popularity of both lakes is due to the establishment of the margin

you put in place. I pray these rivers do not become a Taneycomo fishery where a continuous parade of fussy boaters, 20 feet apart, is the norm. That's not fishing. That is where I see this heading. Only the resort owners and guides may benefit from minimum flows. Wade fishers will be blocked out.

I am part of the small percentage with another thought and I'm sorry but my heart drops when I see what's happening to the rivers corridors since moving here in'97. What precipitated the whole thing was severe drought. I'm certain this has happened before in the life of these Dams. Yet, the largest trout in the world have been raised and harvested here. There is nothing wrong with the system.

Massive spending and alterations are not necessary and are a reaction to temporary drought. We all know how fantastically everything in these rivers has recovered. There's plenty of water in the lakes now and the fishery is great, above and below. A great deal of money could be saved by making sure there is a program for water reserve before drought. A drought reserve, not a minimum flow reserve might require less loss of usable water when the demands for energy are increasing so. Weather science technology has advanced greatly and I'm sure you use it to calculate operations on future needs. A new policy of, never shutting off power generation for more than two or three days in succession, any time, might reduce drying out the river bed. You'll have to sell more power! I think the Corp does a fantastic job regulating the river system dams for the purposes which they were intended. Low oxygen levels, only at certain relatively brief periods of time, need to be relieved when it occurs, not all year. I would like to see funds spent on oxygenation systems and land acquisition along the shores and corridors of these rivers as its better conservation in the long run.

Mike Maschek

Lakeview, AR

Biggs, Mike L SWL

From: Ronny J. Bell [rbell@bell-boyd.com]
Sent: Wednesday, September 17, 2008 11:22 AM
To: rbell@bell-boyd.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,

Ronny J. Bell
P.O. Box 841
Magnolia, AR 71754-0841

Biggs, Mike L SWL

From: Rod & Rita Engle [rrengle@centurytel.net]
Sent: Thursday, August 28, 2008 3:25 PM
To: Biggs, Mike L SWL
Subject: Minimum flow

Would you please let me know the following:
1. How many trout die each year because of low oxygen content of the water? High years? Low years?, Average?
2. What will be the annual cost to the taxpayer for minimum flow?

Thank you,
Rodney Engle

Biggs, Mike L SWL

From: Robert Whistle [53cruzer@sbcglobal.net]
Sent: Tuesday, September 16, 2008 9:18 PM
To: Biggs, Mike L SWL; george.robbins@swpa.gov
Subject: Minimum Flow

This email is expressing my support for the Minimum Flow project for the White & North Fork Rivers. It would improve the fishery in both the White & North Fork Rivers. In doing so , it would greatly benefit the economy of the state of Arkansas. The costs of this project are greatly outweighed by it's financial returns. Your attention on this matter is greatly appreciated.

Respectfully,
Robert & Margie Whistle

Biggs, Mike L SWL

From: Robert Cartlidge [robert@bassfederation.com]
Sent: Monday, September 15, 2008 6:39 PM
To: Biggs, Mike L SWL
Subject: White River Minimum Flow Project

Importance: High

Dear Mr. Biggs,

I am writing you today not only as a concerned citizen who pays utility rates here in the southwest power pool coverage area, but as a concerned angler, father and President\CEO of the nations largest organized grassroots fishing organization, The Bass Federation, Inc (TBF).

The White River Minimum Flow project has caught our organizations attention. On behalf of our nearly 30,000 members and 1900 clubs in 46 different states, TBF strongly supports minimum flow. As a the CEO of a national company, I certain understand driving economic factors, the desire to hold down costs and increase profits. However, there is a balance to be had. We have to look no further than our TV sets to recognize the importance of "balance" in business.

Today as I work at my desk, and watch CNN, I see Lehman Brothers filing Chapter 11, Fannie Mae and Freddie Mac in bailout, the banking industry in shambles and the stock market dropping 500 points, all in the name of unchecked, do anything for profits, style of management and because a balance was not achieved before it was too late. I am sure that each of these CEO's is not fully to blame, their boards and stock holders pushed them to show profits, of that I am sure, but as leaders we have a responsibility to stand up and do the right thing. I am sure Lehman Brothers never thought it would happen to them...but it did.

The same is true of resource management, hydropower, recreation and aquatic life. I think you will agree with me that the US Army and the Corps of Engineers are in existence to serve America and her people. America's working families need their recreation time and a quality place to do it, they are loyal to it and dedicated about protecting it. For a while now the public has taken a very negative view of a corporate citizenship policy that does not support what is near and dear to them because of bottom line profits, after today they will be less tolerant than ever. "Green" is in.

For these and many other reasons we strongly support minimum flow because, from our standpoint, as rate paying citizens and customers, as parents and as corporate officers we see it as a good balance for all parties. It is very hard to place a price tag on families and their time spent together fishing in the great outdoors, but what I do know is they spend 60 billion dollars a year on fishing, which shows they are not afraid to spend their expendable income on quality leisure time or opposing anyone who wishes to take it away and once it is gone, it is gone, so we MUST err on the side of caution. We URGE you to do the "right thing" and join us in supporting minimum flow on the White River Project.

Yours in Service,

Robert Cartlidge
President\CEO
The Bass Federation, Inc.
2300 E. Coleman Rd
Ponca City, Oklahoma 74604
TBF Office 580.765.9031
TBF fax 580.765.2890
cell 580.761.7000
robert@bassfederation.com

Biggs, Mike L SWL

From: Robert Bowker [bowkerrg@yahoo.com]
Sent: Tuesday, September 23, 2008 12:41 PM
To: bowkerrg@yahoo.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Robert Bowker
1537 Dwelle Rd.
Norfork

Biggs, Mike L SWL

From: Rob Richardson [robr@thompsonculvert.com]
Sent: Wednesday, October 01, 2008 10:07 AM
To: Biggs, Mike L SWL
Subject: Min Water Flow

Dear Mr.. Biggs,

I support the concept of minimum water flow in trout waters below the dams. I would ask you to support all efforts to enhance the recreational fishing opportunities available in our tailwater fisheries. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.

Sincerely,

Rob Richardson
Area Manager
Thompson Culvert Co
417-831-2616

Biggs, Mike L SWL

From: Rick Henley [rhenley@jonesborocwl.org]
Sent: Wednesday, October 15, 2008 8:00 AM
To: Biggs, Mike L SWL
Cc: Ted Coombes
Subject: White River Minimun Flow

Attachments: White River Min Flows Letter To Mike Biggs.doc

White River Min Flows Letter T...

Mike

Attached are a couple of items concerning the White river Minimum Flow study that I would like for you to review and include with the other comments you have received.

Thanks

Rick Henley

--
PRIVACY WARNING: For auditing purposes, a copy of this message has been saved in a permanent database.

Biggs, Mike L SWL

From: Richard Heydinger [RHeydinger@aol.com]
Sent: Wednesday, September 17, 2008 9:59 PM
To: RHeydinger@aol.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I fish the White River watershed less each year because I find very little consideration given to proper fish management. I have traveled the 250 miles several tims only to find water conditions unfishable due to no water flow or high unwadeable waters. It appears to me that power production is the sole consideration of those controlling water flow and that my travel expenditures are underappreciated.

I would like to fish the area more frequently and will do so if water management improves.

Sincerely,
Richard Heydinger
3008 W. 121st Street
Leawood, KS 66209

Biggs, Mike L SWL

From: Reval [reval@cox.net]
Sent: Wednesday, September 17, 2008 11:31 PM
To: george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: White River Minimum Flow Project

I strongly support minimum flow, and ask that you assist in its implementation.

Jamon Reval

402 W. Aster Drive

Chandler, AZ 85248

(480) 786-8564

Biggs, Mike L SWL

From: Reuben Kyle [reubenkyle@comcast.net]
Sent: Tuesday, September 16, 2008 10:31 AM
To: reubenkyle@comcast.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

Even though I live in Middle Tennessee I fish the White and Norfolk Rivers every chance that I get. These are wonderful resources that we have and preserving and enhancing them is critical.

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Reuben Kyle

Sincerely,
Reuben Kyle
3074 Briarwood Drive
Murfreesboro, TN 37130

Biggs, Mike L SWL

From: Randy Waggoner [randal@everestkc.net]
Sent: Wednesday, October 01, 2008 12:28 AM
To: Biggs, Mike L SWL
Subject: minimum water flow

Dear Mr. Biggs,

I support the concept of minimum water flow in trout waters below the dams. I would ask you to support all efforts to enhance the recreational fishing opportunities available in our tailwater fisheries. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.

Sincerely,

Randy Waggoner
Broker Associate
913.636.5800 Mobile

Realty Executives
11401 Ash Street
Leawood, KS 66211

Serving your Real Estate needs for over 25 years

Biggs, Mike L SWL

From: Randy Rafnel [rafnel@yahoo.com]
Sent: Tuesday, September 16, 2008 2:49 PM
To: Biggs, Mike L SWL
Subject: White River water flow

I STRONGLY SUPPORT MINIMUM FLOW, AND ASK THAT YOU ASSIST IN ITS IMPLEMENTATION.

Raandy Rafnel

Biggs, Mike L SWL

From: Raleigh Eggers [eggers@flinthills.com]
Sent: Thursday, September 18, 2008 9:34 PM
To: eggers@flinthills.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Raleigh Eggers
2900 W 32nd Ave
Manhattan, Kansas

Biggs, Mike L SWL

From: R. H. McIntosh [singingreels@kc.rr.com]
Sent: Tuesday, September 16, 2008 1:57 PM
To: singingreels@kc.rr.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
R. H. McIntosh
6666 Woodson Drive
Mission, KS 662o2

Biggs, Mike L SWL

From: Quarry Marina [hanson@quarrymarina.com]
Sent: Thursday, August 28, 2008 3:09 PM
To: Biggs, Mike L SWL
Subject: please put us on your mailing list

Quarry Marina
Richard and Cheri Hanson
P O Box 431
Mountain Home, AR 72654
870-499-5388
www.quarrymarina.com
hanson@quarrymarina.com

Biggs, Mike L SWL

From: paul hendley [paulhendley456@earthlink.net]
Sent: Thursday, September 18, 2008 6:54 PM
To: paulhendley456@earthlink.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

Sincerely,
paul hendley
23400 w. 53 terr
shawnee ks 66226

Biggs, Mike L SWL

From: nedbeattie@cox.net
Sent: Wednesday, September 17, 2008 8:39 AM
To: Biggs, Mike L SWL; george.robbins@swpa.gov
Subject: Support for minimum flow in the White River Below Bull Shoals Dam

Dear Mr Biggs and Mr Robbins,

Please accept my support for your Alternative BS3 to increase the minimum flow in the White River Below Bull Shoals Dam with releases through the existing turbines to create steady hydropower. I also support the reallocation of a portion of the flood pool to provide for this minimum flow.

I don't support compensating existing hydropower users for this conversion because they are already receiving hydropower at well below market rates from the SWPA. Under the re-allocation scheme these users will continue to receive baseload power at below-market rates but will need to go to the open market for certain peak capacity.

Thank you for your undertaking of the studies.

Sincerely,

Edward T Beattie
Tulsa Oklahoma
September 17, 2008

Biggs, Mike L SWL

From: Nathan Blair [twinlakesangler@suddenlink.net]
Sent: Tuesday, September 16, 2008 9:11 PM
To: Biggs, Mike L SWL
Subject: minimum flow

I am for the minimum flow on the White River. However, I am opposed to it on the North Fork. The monies for the flow on the North Fork would be more useful installing and maintaining a four-bay oxygen diffuser. Low D.O. is a much bigger problem than water temperature.

Nathan Blair

Biggs, Mike L SWL

From: Monty McGuffin [montym@innova.net]
Sent: Wednesday, September 10, 2008 10:15 AM
To: Biggs, Mike L SWL
Subject: White River

Mr. Biggs,
I have visited the White River and experienced the fishing and because of past experience, I feel that the river will greatly benefit by the implementation of a minimum flow program.

A similar minimum flow program was implemented on a system here in South Carolina, and the result is a rebounding Walleye fishery.

I urge you to strongly consider this action for the betterment of the river and region.

Monty McGuffin
Host / Producer
The Carolina Outdoorsman Show

Biggs, Mike L SWL

From: Mistermagic50@aol.com
Sent: Tuesday, September 16, 2008 3:52 AM
To: Biggs, Mike L SWL
Subject: White River

I strongly support minimum flow, and ask that you assist in its implementation"

Thank You
Larry Elliott
Powhatan, Va

Biggs, Mike L SWL

From: Miller, Philip [Philip.Miller@HendrickAuto.com]
Sent: Thursday, September 04, 2008 9:26 AM
To: Biggs, Mike L SWL
Subject: Min Flow

I'm for it because I think it's good for the trout. Thanks, Flip Miller (a guy who drives 5 hours one way to fish.)

Biggs, Mike L SWL

From: Mike Steelman [mikes@scmarchitects.com]
Sent: Wednesday, September 17, 2008 8:41 AM
To: mikes@scmarchitects.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Mike Steelman
15823 Burlingame Road
Little Rock, AR 72223

Biggs, Mike L SWL

From: mike freeze [kkeo@centurytel.net]
Sent: Monday, September 15, 2008 3:42 PM
To: george.robbins@swpa.gov; Biggs, Mike L SWL
Cc: mike freeze
Subject: Fw: White River Minimum Flow Comments

Attachments: Minimum Flow.doc

Minimum Flow.doc
(24 KB)

Biggs, Mike L SWL

From: mike freeze [kkeo@centurytel.net]
Sent: Monday, September 15, 2008 3:40 PM
To: george.robbins@swpa.gov
Cc: Biggs, Mike L SWL
Subject: White River Minimum Flow Comments

Attachments: Minimum Flow.doc

Minimum Flow.doc
(24 KB)

Biggs, Mike L SWL

From: mike freeze [kkeo@centurytel.net]
Sent: Monday, September 15, 2008 3:38 PM
To: george.robbins@swpa.gov
Cc: Biggs, Mike L SWL
Subject: White River Minimum Flow

September 14, 2008

George Robbins, Director
Division of Resources and Rates
Southwestern Power Administration
U.S. Department of Energy
One West Third Street
Tulsa, OK 74103

Dear Mr. Robbins:

By way of introducing myself, I am the former Chairman of the Arkansas Game and Fish Commission (AGFC) as well as an American Fisheries Society Certified Fisheries Scientist. I truly appreciate this opportunity to comment on the draft "Determination of Offset to the Federal Hydropower Purpose and Impacts on Non-Federal Project" dated June 2008.

As one who attended the original meetings with SWPA officials, Arkansas Congressmen and AGFC representatives, I am disturbed by the calculations within the above report that have grossly over estimated the financial loss to Empire Electric. I have always held to the tenet that SWPA and Empire Electric should not suffer undue financial burdens when minimum flow is implemented as directed by Congress. However, I also believe that neither SWPA nor Empire Electric should unduly profit either. While not an engineer, I have always thought that implementation of minimum flows at Bull Shoals Dam and Norfork Dam would actually result in addition generation capacity and hence additional revenue to SWPA. Empire Electric may suffer minor generation capacity but certainly not anything near like what SWPA has calculated for Empire Electric.

The official comments submitted by the Arkansas Game and Fish Commission address the many technical errors in the report that have resulted in the grossly over estimated compensation that SWPA has determined is owed to Empire Electric. Not to restate all of these technical errors but just to highlight a few of the most obvious:

1. How can Empire Electric be compensated for a 50-year period when their Federal Energy Regulatory Commission License expires in fourteen years in 2022? In 2022, minimum flow adjustments without compensation might even be required as part of Empire Electric's re-licensing agreement.
2. As evidenced by Empire Electric's lack of payment for headwater benefits for the last eight years, Empire Electric has not fully utilized the Ozark Beach facility's generating capability, so why should they be compensated for generation capacity that is not being used?
3. The question should be answered as to why Empire Electric has not fully utilized the Ozark Beach generation capacity? I have to wonder if perhaps a dam originally constructed in 1911 may have safety issues or inefficient turbines that preclude full generation usage.
4. SWPA seems to have "cherry picked" whatever calculation methods for energy losses and capacity losses (the Platts method for one and the FERC method for the other), whatever electric rates (all power losses were considered peak power), and whatever environmental conditions (drought of 1928 before any dams were even built on the White River) to maximize the monetary losses for Empire Electric. To a layman, it seems as if the fox might be in charge of counting the chickens.
5. Why are flood pool storage and current seasonal pools (unauthorized storage) not available for minimum flow included in the energy compensation calculations at Bull Shoals and Norfork?

I could continue on and on but as previously stated, I think the AGFC's official comments will address the issues much more completely than I can.

I would close with the comment that if Bull Shoals and Norfork dams were built today, that minimum flow would have been required by Congress and if a justifiable and reasonable compensation for Empire Electric is not forth coming, then perhaps Congress should be asked to further intervene on the issue of minimum flow for the White River. With a 77 to 1 Corps of Engineers cost to benefit ratio and a multitude of sportsmen voicing their concerns, I am sure that Congress would be most willing to further address this issue.

Sincerely,

Mike Freeze
P.O. Box 166
Keo, AR 72083

Biggs, Mike L SWL

From: Mike Crook [mnmcrook@milwpc.com]
Sent: Thursday, September 04, 2008 5:25 PM
To: Biggs, Mike L SWL
Subject: INPUT ON THE MINIMUM FLOW DRAFT PLAN FOR THE WHITE AND NORFORK RIVERS

First let me state that I am an out of state fly fisher who uses the trout fishing resource on these two river systems.

1. I support the planned min flow of 800cfs for the White River. This flow must be maintained during the most critical periods of of the year (hot, summer weeks) and there must NOT be loopholes to "excuse" min flow regs during those critical time periods. Min flow is most needed by the trout during the most stressful seasonal time periods.

2. I do not support the planned min flow of 300cfs for the Norfork River. I could support a min flow of say 150cfs for the Norfork.
I particularly oppose the plan of a goofy siphon pipe, proposed to provide the 300cfs of min flow. Norfork tailwater flows largely thru a canyon for over 1/2 of its length, and does not provide the increased "wetted area" (for trout habitatl to justify the current 300cfs min flow proposal.

3. I would suggest that the total cost figures ($150mil) for the min flow project be thoroughly revisited again, to see if there could not be enough savings in order to realocate about 5% to needed, supplementary aspects.
a. forebay oxygen injection systems for both BSD, and ND. These are needed to allow trout to flourish in the increases habitat space that minimum flows would provide. Why improve the habitat for trout, only to have seasonal low DOx periodically damage the resource? Such injectors are estimated to cost about $1.5mil each.
b. increased land acquistion along the Norfork tailwater, to provide increased SAFE access to wade fishermen. Its inexcuseable to increase the flow and rise on the narrow, Norfork without providing increased walk-in access (and escape) for wade fishermen. Couldnt such access land be leased or bought for just a couple million?

Thanks for listening, and considering. There is opportunity to make a pretty good plan even better.

Mike Crook
Hortonville, WI

Biggs, Mike L SWL

From: Mike [mike@shivelbinemusic.com]
Sent: Tuesday, September 30, 2008 9:42 AM
To: Biggs, Mike L SWL
Subject: water flow

Hello Mr. Biggs

I love the White River trout fishing.
Me, my family & friends go there a couple times a year.

We all support the minimum water flow concept.
I understand the utility Co. is charging a rather large amount to implement this practice.
Does the minimum flow not generate electricity & there for generate money?

I would imagine with the increase in minimum water flow & better fishing people would be more incline to visit the White River more often.
I'm sure I will !!

I hope this passes!!!

Thanks much for your time reading this!

Greg Shivelbine
535 Broadway
Cape Girardeau Mo. 63701

Biggs, Mike L SWL

From: michael loskota [slo_poak@yahoo.com]
Sent: Wednesday, September 17, 2008 9:37 PM
To: Biggs, Mike L SWL
Cc: Chris Jackson
Subject: Minimum Flow for the White River !

Mr. Biggs,

I am a former resident of Norfork, AR; living on the White River was one of the most beautiful experience I have ever had. So much so, that I brought my California wife there to "honeymoon" last October.

In addition to my experiences there, my brother-in-law is one of the top-ranked Trout pathologists for California Fish and Game (Dr. William Cox). We have often had discussions about fisheries and fish health issues. His comments to me about fisheries, fly fishing, and water quality would support minimum flow as a necessity, with beneficial affects for both the fish and the finacial well being of Arkansas' tourist industry.

My wife and I join with many other lovers of Arkansas and the White River to ask you to please support minimum flow requirements.

Respectfully,

Michael and Cher Loskota

"If a man hasn't discovered something that he will die for, he isn't fit to live." Martin Luther King Jr.

Biggs, Mike L SWL

From: Michael Ames [aflycaster@sbcglobal.net]
Sent: Wednesday, September 17, 2008 9:13 AM
To: aflycaster@sbcglobal.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I understand that there are some Questions about how this might play on the economic side. But it would have to be a good thing for Ark.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration

for the work that was done to complete the SDEIS.

Sincerely,
Michael Ames
411 Normal
Harrisburg AR 72432

Biggs, Mike L SWL

From: mdavis14@kc.rr.com
Sent: Wednesday, September 10, 2008 1:11 PM
To: Biggs, Mike L SWL
Subject: White River

WHY IS THE MINIMUM FLOW PROJECT IMPORTANT?

These comments are derived from concerned citizens who have the economic condition of our country at heart and in no way want to unnecessarily and irresponsibly spend taxpayer dollars. These same citizens realize the long term importance of the Minimum Flow project to one of our great natural resources and know the project is imperative to the long-term health of the White River System.

►Minimum Flow will positively impact the economy and natural resources for the United States and the state of Arkansas by expanding the already flourishing $160 million dollar tourism industry in Arkansas.

►Minimum Flow will improve dissolved oxygen in the river and water temperatures for downstream trout fisheries, increase wetted perimeters creating improved growth of aquatic plants, habitat, and food supply, and improve trout reproduction, while returning the river to a more natural state.

►The economic benefits according to the Corps of Engineers are a 77 to 1 cost to benefit ratio, irrefutably proving the benefits of the Minimum Flow project.

PROPOSED BUY OUT FOR EMPIRE DISTRICT ELECTRIC

= ALMOST $34 MILLION

A $34 million payout to Empire District Electric is highway robbery to the United States government and ultimately to the taxpayers. The following information has been derived from Empire District Electric's 2007 annual report and information collected from the Federal Energy Regulatory Commission (FERC).

►Headwater Benefits Assessments paid by Empire District Electric from 1956-2007 total $900,846.00 which equals on the average $16,087.00 per year. Would it not be fair to pay empire that amount for the remaining 14 years of their FERC license? That total would be $225,218.00, considerably less than the $34 million they want.

►Per the SWPA study, Empire's loss of hydropower and capacity calculations have been based on a 50 year time frame. Since Ozark Beach Dam's FERC license is only good for another 14 years – to 2022, why would the cost be calculated based on 50 years when their license (FERC license number 2221) expires in 14 years? There is no guarantee that Empire's FERC license will be reissued particularly in light of the potential for other energy options to materialize. Is it legal or ethical for Congress to appropriate taxpayer dollars to pay Empire District Electric for future power that they are not yet licensed to market?

►According to Empire's annual report (pages 5 & 7), the hydroelectric generation from Ozark Beach represents only 1% of the total capacity to Empire District Electric. Empire Electric's generating plants total 1255 megawatts as of 12-31-07. Per Empire's report, the system reached a record high of 1173 megawatts on 8-15-07. The previous record was 1159 on 7-19-06. The winter demand maximum was 1159 megawatts set on 2-16-07. The previous year

winter high was 1034 megawatts set on 1-31-06. Empire District Electric is not utilizing full facility megawatt capacity even if Ozark Beach's generating capacity were completely removed. How can Empire District Electric Company state that they will be harmed financially when they can operate profitably without the Ozark Beach facility?

►The Ozark Beach Dam was originally constructed in 1911. Do the current hydroelectric generators operate safely and efficiently? Is a dam that is nearly 100 years old, safe? In 2022, would it be prudent for the federal government to relicense the Ozark Beach facility based on its age? Would this dam withstand an earthquake? Was the dam constructed under any federal guidelines to insure its safety? Are reports of safety inspections readily available to the public? If the dam were relicensed today, would Minimum Flow be routinely incorporated into the licensing procedure?

►According to letters from the Federal Energy Regulatory Commission (FERC) to Empire District Electric Company, headwater benefit payments were waived for 2007 and 2003. Over the last 50 years, how often have headwater benefit payments from this privately owned company been waived by this federal agency and why? It appears from these same letters and attached head water benefits assessments that Empire is already receiving preferential treatment in the form of subsidies by avoiding the payment to FERC. Per Tom Snyder, Project Manager for Ozark Beach Dam, the facility can generate hydroelectric power when Bull Shoals Lake reaches 679' elevation. If Ozark Beach can generate power at a 679' elevation on Bull Shoals Lake, why can Empire District Electric claim a loss of head? While Empire may not operate maximally until they hit elevation 651', they have been operating under these same conditions since the opening of Bull Shoals Dam in 1953. If they have been accustomed to these operational conditions for the last 55 years how can Empire state they will experience a loss from the Minimum Flow project?

►Would it be prudent for Empire District Electric to provide proof of financial loss where they have had to buy power on the open market due to the inability to operate the Ozark Beach Dam? Is this proof that Empire has already been taking taxpayer dollars unnecessarily and proof again that the Minimum Flow buyout is yet another attempt to milk the taxpayers?

►Per Empire's 2007 annual report, by Empire's own admission, they have been hit hard by environmental conditions in recent months. According to their report there was $13 million cash on hand to meet the needs of these situations. Their report also states that they had well over $40 million in expenses from these events and by their own admission were hit hard. Does it not seem plausible that they are using the Minimum Flow project buyout as an opportunity to collect money from the United States taxpayers?

►Empire District Electric Company's stock is traded publicly on the New York Stock Exchange. According to page 27 of their 2007 Annual Report for Empire District Electric, common stock prices during 2006 and 2007 experienced a low and high of $20.25 to $26.13 respectively. Dividends paid per share during 2006 and 2007 were $0.32. As of December 31, 2006, Empire District Electric had $22.9 million of retained earnings to pay out for dividends followed by $17.2 million for 2007. The total dividends paid in 2007 were $39 million. During 2006 and 2007 the economy and environmental impacts in terms of droughts and ice storms had to affect Empire's bottom line, yet in spite of these conditions, they still were able to pay $39 million in dividends to their shareholders. If in poor economic and environmental conditions Empire District Electric was still able to make huge dividend payments how can they substantiate a financial loss from the Minimum Flow project?

►Per Empire's 2007 annual report, gross operating revenues from Ozark Beach Dam were: 2005 - $1.447 million, 2006 - $1.843 million, 2007 - $1.879 million. There was clearly a drought that occurred in 2006. If they are still generating gross revenues in these amounts from this small hydroelectric dam in drought environments, how can they say the Minimum Flow project is going to cause them any loss of revenue whatsoever?

PROPOSED $87 MILLION FEDERAL GOVERNMENT DEBT REDUCTION TO SOUTHWEST POWER ADMINISTRATION

It appears as though Southwest Power Administration has been charged with having to supply the "for profit" electric cooperatives with cheap power to resell.

►Although SWPA claims to be a federal agency, why are they concerned with selling cheap power when they technically work for the taxpayers of this country? Should it not be the

responsibility of the "for profit" electric companies to acquire their own additional electricity from the free market without it being given to them at a reduced rate by the government? Based on SWPA's actions and their financial reports, is it not then fair to assume that SWPA is a nonfederal agency instead of a federal agency? If they are truly a government agency charged with simply managing 24 U.S. owned hydroelectric dams, why does it appear that they are in the business of making money and why would a Minimum Flow project on a section of the White River in Arkansas afford them the luxury of collecting nearly $87 million from taxpayers?

►According to Southwest Power Administration (SWPA), Bull Shoals and Norfork Dams were brought on line in 1953 and 1944, respectively. If they were originally mortgaged for 50 years, shouldn't the mortgages be completely paid off by now? If both of the dams are assumed as "free and clear", shouldn't the Minimum Flow project only be charged a fair percentage of operation and maintenance expenses associated only with Minimum Flows, based on best business practices in the energy industry?

►SWPA made a profit in spite of a 17 month drought in 2005-2006. In a drought environment, if SWPA is operating profitably, how can Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation? It may not be generated at peak periods but some of that power can still be sold for profit.

GENERAL COMMENTS ON THE REPORT COMPLETED BY SOUTHWEST POWER ADMINISTRATION AS IT AFFECTS THEIR DEBT REDUCTION TO THE FEDERAL GOVERNMENT AND THE BUY OUT TO

EMPIRE DISTRICT ELECTRIC

According to the SWPA report, energy and capacity losses were calculated utilizing the Platts and FERC methods. This appears to be a little like the overweight woman who weighs herself on a variety of scales and chooses the weight that is most flattering. Is it prudent to assume that the methods used for calculating energy losses and capacity losses should be the same?

► When was the agreement made and who authorized this agreement between the Corps and SWPA to use the 50 year time frame and the Platts and FERC methods? Congress ordered SWPA in February 2006 to begin the study on the Empire District Electric buy out. Why were agreements between SWPA and the Corps made in October of 2005 before receiving Congressional orders in February 2006? Why would Mr. George Robbins with SWPA state that he was "forced to use both methods", referring to the Platts and FERC methods?

►The Federal Power Commission regulates electric power and energy generated at reservoir projects controlled by the Department of the Army. What method of calculation to determine energy and capacity loss do they utilize or recommend? Is it FERC, Platts, or something else? Would best business practice be to use what FPC recommends in determining losses for both SWPA and Empire's buy out calculations? As the Federal Power Commission requires the Department of the Army, the Secretary of the Army, and the Secretary of the Interior to transmit and dispose of power and energy in the most widespread use and at the lowest rate possible to the consumers consistent with sound business principles, the Minimum Flow project should be evaluated on the same basis. Because it's plausible that SWPA cannot be completely fair and unbiased in their economic calculations, would it be prudent to have the Federal Power Commission or some independent source, review the processes by which SWPA determined the losses to Empire District Electric and themselves?

►It appears as though worst case scenarios and drought environmental conditions were used to calculate all energy and capacity losses for both SWPA and Empire District Electric. When SWPA calculated energy losses what was the basis of these calculations? For example, page 12 of the SWPA annual report shows estimated average annual energy produced by Bull Shoals Dam of 785 million kWh. What period of years was this particular number averaged over? What percentage of this estimated average annual energy will Minimum Flow cause SWPA to lose? To look at SWPA's annual report on actual net energy production, one has to wonder how did they calculate an average estimation and thus how did they determine what they say will be lost from the Minimum Flow project? Did SWPA, in this reporting process, use to their benefit and Empire's benefit, figures and calculations that would profit them financially and drive up the cost of the Minimum Flow project, to the detriment of the taxpayers? Do we have the fox watching the hen houses?

►According to page 14 of SWPA's annual report, during 2003 through 2006 SWPA shows unused supplemental and excess energy. Therefore, since they had an abundance of energy even in the 17 month drought period during 2005 and 2006, this seems to indicate that they would not have been forced to buy power on the open market. Since Minimum Flow affords additional water usage this emphasizes the point that they would not incur any financial losses or experience the need to purchase additional power on the open market due to Minimum Flows.

►According to SWPA's annual report (pages 17,19, & 21), during fiscal years 2004, 2005, 2006 from the details of billings to customers (indicating they are issuing bills and collecting money, thus a "for profit" business), the kilowatt capacity sold was the same for all three years, in spite of the drought that occurred in 2005-2006. How will Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation, even in drought years?

►Per SWPA's statement of cash flows (page 26) in their annual report, they had $36 million on hand at the end of a drought year. What average American business wouldn't love to clear the year with an extra $36 million?

►Per George Robbins in the SWPA study, energy losses were calculated utilizing on peak energy replacement costs only. Since generation can occur at on and off peak times shouldn't on and off peak rates be utilized?

►The seasonal power pools on Bull Shoals and Norfork Lakes were implemented without Congressional orders. If an agreement of this magnitude was easily attained without Congressional orders, why have the Minimum Flow project proponents been required to jump through bureaucratic hoops? Based on this fact is it safe to consider that there must be a special relationship between Southwest Power Administration and some division of the Corps of Engineers?

►The established drought of record occurred in 1928 prior to the construction of any federal dam on the White River system. Southwest Power Administration utilized this 1928 drought of record to simulate energy and capacity losses for both lakes. Since the opening of the Bull Shoals and Norfork Dams when have droughts and floods occurred? Would it be more appropriate to use an average of these scenarios to calculate the energy and capacity losses rather than the use of worst case scenarios?

► Why does the natural resource (rainwater) that falls freely from the sky and would fulfill the water required for minimum flows, that belongs to the taxpayers, become a commodity that can be bought and sold by private companies on the open market? Why would one governmental agency pay another governmental agency for a resource or product that falls freely from the sky and doesn't cost anyone anything?

► The bottom line is the power companies don't want to give up control of these hydropower plants and the huge profits associated with them even though the Minimum Flow Project would benefit the American people. Is this not more government pork spending to pay off crying, profitable power companies because they are losing some control of how water is released from these hydroelectric dams leaving the taxpayers to pay $87 million to a supposed federal power company, Southwest Power Administration, and $34 million to a privately owned "for profit" power company, Empire District Electric? It is ludicrous for the taxpayers to pay either of these greedy power companies anything.

Sincerely,

Michael S. Davis
Kansas City, MO

Biggs, Mike L SWL

From: Matt Tucker [matt@ozarkchronicles.com]
Sent: Tuesday, September 02, 2008 1:12 PM
To: Biggs, Mike L SWL
Subject: Minimum Flow on White River and Norfork River

Mr. Mike Biggs:

I am writing you out of my concern for the White River Tailwater System and the proposed Minimum Flow project to occur in the area. I am the very angler that the tourism industry and the AGFC are seeking to fish in its waters as I travel to your water from out-of-town and spend money on lodging, food, and necessities while in the area. In short, I generate positive tourism dollars for that state. However, being an out-of-town fisherman, I have been unable to make any of the Minimum Flow meetings and would like to voice my concern for the future of the system. To be rather blunt, I am unsure if the US Army Corp of Engineers, the AGFC, and the residents of Arkansas truly appreciate the trout waters of the White River and the Norfork River for what they are – two of the most diverse trout streams in the country with demonstrated world record fish potential.

I hope that the US Army Corp of Engineers takes this project seriously and works closely with the AGFC to help manage the productive waters of the White River and Norfork River. While I feel that the additional water provided by the Minimum Flow project will be beneficial for the trout; I am unsure if I support the proposed method to achieve minimum flow on each river. As I am sure you are aware, in addition to the higher water temps during the hot summer months (something that minimum flow will help to alleviate) these rivers also suffer from a dissolved oxygen problem. Would it not be prudent to seek funding to solve both issues at the same time, by installing baffles are O2 Injectors into the dam during the onset of this minimum flow project.

I think Arkansas has a great fishery now, but I constantly here stories of the way the fishery used to be. Please take this opportunity to make bold moves regarding the fishery and really change and shape the rivers' future. The rivers in Arkansas are truly an overlooked destination, but with the correct management, including minimum flow and dissolved oxygen management, they could be the trophy trout destination of the future.

Thanks,

Matt Tucker

6510 Stillwater Ct.

House Springs, MO 63051

www.OzarkChronicles.com

Biggs, Mike L SWL

From: Matt Grundy [mattgrundy@yahoo.com]
Sent: Thursday, September 18, 2008 9:59 AM
To: mattgrundy@yahoo.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Matt Grundy
30 Camelot Place
Liberty, MO 64068

Biggs, Mike L SWL

From: Massimiliano Castagnaro [maxcastagnaro@gmail.com]
Sent: Saturday, September 20, 2008 5:38 AM
To: Biggs, Mike L SWL
Subject: Minimum Flow Study

Dear Sir Mike Biggs,
my name is Massimiliano and I'm an italian student of University of Calabria. I'm going to graduate to Engineering for Environment and Territory with a dissertation on "Evaluation Methods for the Minimum River Flow". I'm browsing on internet to seek every method used by each european and american country. Next, I study to fit, each method of evaluation of minimum river flow, to the features of 31 river located on the south of Italy, in the Calabria Region.
I'd like to receive, if possible, more technical information on your White River Minimum Flow Study. Particularly, I'd like to know if you used a method based on hydrological variables (Q7,10) or used other approach.
Awaiting a reply, best regards,
Massimiliano Castagnaro

Biggs, Mike L SWL

From: Mason Pharr [pkpharr@centurytel.net]
Sent: Tuesday, October 07, 2008 3:02 PM
To: pkpharr@centurytel.net; jedarr@centurytel.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area. I am highly in favor of this proposal.

Sincerely,
Mason Pharr
417 Lake Heights Dr
Mountain Home, AR 72653

Biggs, Mike L SWL

From: Mary Arceneaux [marceneaux@lumacorp.com]
Sent: Sunday, September 14, 2008 5:01 PM
To: george.robbins@swpa.gov
Cc: Biggs, Mike L SWL
Subject: Minimum Flow on the White River

WHY IS THE MINIMUM FLOW PROJECT IMPORTANT?

These comments are derived from concerned citizens who have the economic condition of our country at heart and in no way want to unnecessarily and irresponsibly spend taxpayer dollars. These same citizens realize the long term importance of the Minimum Flow project to one of our great natural resources and know the project is imperative to the long-term health of the White River System.

►Minimum Flow will positively impact the economy and natural resources for the United States and the state of Arkansas by expanding the already flourishing $160 million dollar tourism industry in Arkansas.

►Minimum Flow will improve dissolved oxygen in the river and water temperatures for downstream trout fisheries, increase wetted perimeters creating improved growth of aquatic plants, habitat, and food supply, and improve trout reproduction, while returning the river to a more natural state.

►The economic benefits according to the Corps of Engineers are a 77 to 1 cost to benefit ratio, irrefutably proving the benefits of the Minimum Flow project.

PROPOSED BUY OUT FOR EMPIRE DISTRICT ELECTRIC

= ALMOST $34 MILLION

A $34 million payout to Empire District Electric is highway robbery to the United States government and ultimately to the taxpayers. The following information has been derived from Empire District Electric's 2007 annual report and information collected from the Federal Energy Regulatory Commission (FERC).

►Headwater Benefits Assessments paid by Empire District Electric from 1956-2007 total $900,846.00 which equals on

the average $16,087.00 per year. Would it not be fair to pay empire that amount for the remaining 14 years of their FERC license? That total would be $225,218.00, considerably less than the $34 million they want.

►Per the SWPA study, Empire's loss of hydropower and capacity calculations have been based on a 50 year time frame. Since Ozark Beach Dam's FERC license is only good for another 14 years – to 2022, why would the cost be calculated based on 50 years when their license (FERC license number 2221) expires in 14 years? There is no guarantee that Empire's FERC license will be reissued particularly in light of the potential for other energy options to materialize. Is it legal or ethical for Congress to appropriate taxpayer dollars to pay Empire District Electric for future power that they are not yet licensed to market?

►According to Empire's annual report (pages 5 & 7), the hydroelectric generation from Ozark Beach represents only 1% of the total capacity to Empire District Electric. Empire Electric's generating plants total 1255 megawatts as of 12-31-07. Per Empire's report, the system reached a record high of 1173 megawatts on 8-15-07. The previous record was 1159 on 7-19-06. The winter demand maximum was 1159 megawatts set on 2-16-07. The previous year winter high was 1034 megawatts set on 1-31-06. Empire District Electric is not utilizing full facility megawatt capacity even if Ozark Beach's generating capacity were completely removed. How can Empire District Electric Company state that they will be harmed financially when they can operate profitably without the Ozark Beach facility?

►The Ozark Beach Dam was originally constructed in 1911. Do the current hydroelectric generators operate safely and efficiently? Is a dam that is nearly 100 years old, safe? In 2022, would it be prudent for the federal government to relicense the Ozark Beach facility based on its age? Would this dam withstand an earthquake? Was the dam constructed under any federal guidelines to insure its safety? Are reports of safety inspections readily available to the public? If the dam were relicensed today, would Minimum Flow be routinely incorporated into the licensing procedure?

►According to letters from the Federal Energy Regulatory Commission (FERC) to Empire District Electric Company, headwater benefit payments were waived for 2007 and 2003. Over the last 50 years, how often have headwater benefit payments from this privately owned company been waived by this federal agency and why? It appears from these same letters and attached head water benefits assessments that Empire is already receiving preferential treatment in the form of subsidies by avoiding the payment to FERC. Per Tom Snyder, Project Manager for Ozark Beach Dam, the facility can generate hydroelectric power when Bull Shoals Lake reaches 679' elevation. If Ozark Beach can generate power at a 679' elevation on Bull Shoals Lake, why can Empire District Electric claim a loss of head? While Empire may not operate maximally until they hit elevation 651', they have been operating under these same conditions since the opening of Bull Shoals Dam in 1953. If they have been accustomed to these operational conditions for the last 55 years how can Empire state they will experience a loss from the Minimum Flow project?

►Would it be prudent for Empire District Electric to provide proof of financial loss where they have had to buy power on the open market due to the inability to operate the Ozark Beach Dam? Is this proof that Empire has already been taking taxpayer dollars unnecessarily and proof again that the Minimum Flow buyout is yet another attempt to milk the taxpayers?

►Per Empire's 2007 annual report, by Empire's own admission, they have been hit hard by environmental conditions in recent months. According to their report there was $13 million cash on hand to meet the needs of these situations. Their report also states that they had well over $40 million in expenses from these events and by their own admission were hit hard. Does it not seem plausible that they are using the Minimum Flow project buyout as an opportunity to collect money from the United States taxpayers?

►Empire District Electric Company's stock is traded publicly on the New York Stock Exchange. According to page 27 of their 2007 Annual Report for Empire District Electric, common stock prices during 2006 and 2007 experienced a low and high of $20.25 to $26.13 respectively. Dividends paid per share during 2006 and 2007 were $0.32. As of December 31, 2006, Empire District Electric had $22.9 million of retained earnings to pay out for dividends followed by $17.2 million for 2007. The total dividends paid in 2007 were $39 million. During 2006 and 2007 the economy and environmental impacts in terms of droughts and ice storms had to affect Empire's bottom line, yet in spite of these conditions, they still were able to pay $39 million in dividends to their shareholders. If in poor economic and environmental conditions Empire District Electric was still able to make huge dividend payments how can they substantiate a financial loss from the Minimum Flow project?

►Per Empire's 2007 annual report, gross operating revenues from Ozark Beach Dam were: 2005 - $1.447 million, 2006 -

$1.843 million, 2007 - $1.879 million. There was clearly a drought that occurred in 2006. If they are still generating gross revenues in these amounts from this small hydroelectric dam in drought environments, how can they say the Minimum Flow project is going to cause them any loss of revenue whatsoever?

PROPOSED $87 MILLION FEDERAL GOVERNMENT DEBT REDUCTION TO SOUTHWEST POWER ADMINISTRATION

It appears as though Southwest Power Administration has been charged with having to supply the "for profit" electric cooperatives with cheap power to resell.

►Although SWPA claims to be a federal agency, why are they concerned with selling cheap power when they technically work for the taxpayers of this country? Should it not be the responsibility of the "for profit" electric companies to acquire their own additional electricity from the free market without it being given to them at a reduced rate by the government? Based on SWPA's actions and their financial reports, is it not then fair to assume that SWPA is a nonfederal agency instead of a federal agency? If they are truly a government agency charged with simply managing 24 U.S. owned hydroelectric dams, why does it appear that they are in the business of making money and why would a Minimum Flow project on a section of the White River in Arkansas afford them the luxury of collecting nearly $87 million from taxpayers?

►According to Southwest Power Administration (SWPA), Bull Shoals and Norfork Dams were brought on line in 1953 and 1944, respectively. If they were originally mortgaged for 50 years, shouldn't the mortgages be completely paid off by now? If both of the dams are assumed as "free and clear", shouldn't the Minimum Flow project only be charged a fair percentage of operation and maintenance expenses associated only with Minimum Flows, based on best business practices in the energy industry?

►SWPA made a profit in spite of a 17 month drought in 2005-2006. In a drought environment, if SWPA is operating profitably, how can Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation? It may not be generated at peak periods but some of that power can still be sold for profit.

GENERAL COMMENTS ON THE REPORT COMPLETED BY SOUTHWEST POWER ADMINISTRATION AS IT AFFECTS THEIR DEBT REDUCTION TO THE FEDERAL GOVERNMENT AND THE BUY OUT TO

EMPIRE DISTRICT ELECTRIC

According to the SWPA report, energy and capacity losses were calculated utilizing the Platts and FERC methods. This appears to be a little like the overweight woman who weighs herself on a variety of scales and chooses the weight that is most flattering. Is it prudent to assume that the methods used for calculating energy losses and capacity losses should be the same?

► When was the agreement made and who authorized this agreement between the Corps and SWPA to use the 50 year time frame and the Platts and FERC methods? Congress ordered SWPA in February 2006 to begin the study on the Empire District Electric buy out. Why were agreements between SWPA and the Corps made in October of 2005 before receiving Congressional orders in February 2006? Why would Mr. George Robbins with SWPA state that he was "forced to use both methods", referring to the Platts and FERC methods?

►The Federal Power Commission regulates electric power and energy generated at reservoir projects controlled by the Department of the Army. What method of calculation to determine energy and capacity loss do they utilize or recommend? Is it FERC, Platts, or something else? Would best business practice be to use what FPC recommends in determining losses for both SWPA and Empire's buy out calculations? As the Federal Power Commission requires the Department of the Army, the Secretary of the Army, and the Secretary of the Interior to transmit and dispose of power and energy in the most widespread use and at the lowest rate possible to the consumers consistent with sound business principles, the Minimum Flow project should be evaluated on the same basis. Because it's plausible that SWPA cannot be completely fair and unbiased in their economic calculations, would it be prudent to have the Federal Power Commission or some independent source, review the processes by which SWPA determined the losses to Empire District Electric and themselves?

►It appears as though worst case scenarios and drought environmental conditions were used to calculate all energy and capacity losses for both SWPA and Empire District Electric. When SWPA calculated energy losses what was the basis of

these calculations? For example, page 12 of the SWPA annual report shows estimated average annual energy produced by Bull Shoals Dam of 785 million kWh. What period of years was this particular number averaged over? What percentage of this estimated average annual energy will Minimum Flow cause SWPA to lose? To look at SWPA's annual report on actual net energy production, one has to wonder how did they calculate an average estimation and thus how did they determine what they say will be lost from the Minimum Flow project? Did SWPA, in this reporting process, use to their benefit and Empire's benefit, figures and calculations that would profit them financially and drive up the cost of the Minimum Flow project, to the detriment of the taxpayers? Do we have the fox watching the hen houses?

►According to page 14 of SWPA's annual report, during 2003 through 2006 SWPA shows unused supplemental and excess energy. Therefore, since they had an abundance of energy even in the 17 month drought period during 2005 and 2006, this seems to indicate that they would not have been forced to buy power on the open market. Since Minimum Flow affords additional water usage this emphasizes the point that they would not incur any financial losses or experience the need to purchase additional power on the open market due to Minimum Flows.

►According to SWPA's annual report (pages 17,19, & 21), during fiscal years 2004, 2005, 2006 from the details of billings to customers (indicating they *are* issuing bills and collecting money, thus a "for profit" business), the kilowatt capacity sold was the same for all three years, in spite of the drought that occurred in 2005-2006. How will Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation, even in drought years?

►Per SWPA's statement of cash flows (page 26) in their annual report, they had $36 million on hand at the end of a drought year. What average American business wouldn't love to clear the year with an extra $36 million?

►Per George Robbins in the SWPA study, energy losses were calculated utilizing on peak energy replacement costs only. Since generation can occur at on and off peak times shouldn't on and off peak rates be utilized?

►The seasonal power pools on Bull Shoals and Norfork Lakes were implemented without Congressional orders. If an agreement of this magnitude was easily attained without Congressional orders, why have the Minimum Flow project proponents been required to jump through bureaucratic hoops? Based on this fact is it safe to consider that there must be a *special relationship* between Southwest Power Administration and some division of the Corps of Engineers?

►The established drought of record occurred in 1928 prior to the construction of any federal dam on the White River system. Southwest Power Administration utilized this 1928 drought of record to simulate energy and capacity losses for both lakes. Since the opening of the Bull Shoals and Norfork Dams when have droughts and floods occurred? Would it be more appropriate to use an average of these scenarios to calculate the energy and capacity losses rather than the use of *worst* case scenarios?

► Why does the natural resource (rainwater) that falls freely from the sky and would fulfill the water required for minimum flows, that belongs to the taxpayers, become a commodity that can be bought and sold by private companies on the open market? Why would one governmental agency pay another governmental agency for a resource or product that falls freely from the sky and doesn't cost anyone anything?

► The bottom line is the power companies don't want to give up control of these hydropower plants and the huge profits associated with them even though the Minimum Flow Project would benefit the American people. Is this not more government *pork spending* to pay off crying, profitable power companies because they are losing some control of how water is released from these hydroelectric dams leaving the taxpayers to pay $87 million to a supposed federal power company, Southwest Power Administration, and $34 million to a privately owned "for profit" power company, Empire District Electric? It is ludicrous for the taxpayers to pay either of these greedy power companies anything.

Mary Arceneaux

Senior Accountant
LumaCorp Inc.
8300 Douglas Ave., Suite 729

Dallas, Texas 75225
Phone (214) 361-6666 ext. 110
Fax (214) 890-7739
marceneaux@lumacorp.com

Biggs, Mike L SWL

From: Marvin Feagan [marv.feagan@cnh.com]
Sent: Thursday, September 18, 2008 8:44 AM
To: marv.feagan@cnh.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Marvin Feagan
2525 Somerset Dr
Leawood Kansas 66206

Biggs, Mike L SWL

From: marstons@cox.net
Sent: Friday, September 19, 2008 3:15 PM
To: Biggs, Mike L SWL
Subject: In favor of Minimum Flow

I believe that minimum flow in the White River tailwaters is important for the helath of this important trout fishery. I have spent many, many days on these waters observing the detrimental effect of low water on the fish habitat.

Respectfully,

Larry Marston
Springdale, AR

Biggs, Mike L SWL

From: Mark Wiklund [mark.wiklund@ipaper.com]
Sent: Tuesday, September 16, 2008 8:26 AM
To: mark.wiklund@ipaper.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Mark Wiklund
8233 Waverly Crossing
Memphis, TN 38138

Biggs, Mike L SWL

From: Mark Cooper [mcooper@pineridgefarmspork.com]
Sent: Monday, September 29, 2008 4:35 PM
To: Biggs, Mike L SWL

Dear Mr Biggs,

I support the concept of minimum water flow in trout waters below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.

Best Regards,

Mark Cooper

Biggs, Mike L SWL

From: Mark B. Borserine [MAJBORSER@aol.com]
Sent: Thursday, September 18, 2008 6:40 AM
To: MAJBORSER@aol.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as many benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Mark B. Borserine
4001 West 87th St.
Prairie Village, KS 66207

Biggs, Mike L SWL

From: Malcolm L Beck [mbeck2@kc.rr.com]
Sent: Wednesday, September 17, 2008 9:46 PM
To: mbeck2@kc.rr.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Malcolm L Beck
6515 Maple Drive
Mission KS 66202

Biggs, Mike L SWL

From: MAJBORSER@aol.com
Sent: Monday, September 22, 2008 2:15 PM
To: Biggs, Mike L SWL
Cc: davidgandrews@kc.rr.com; rcarruthers2@kc.rr.com; rrac3@sbcglobal.net; fclarks@att.net; MAJBORSER@aol.com; tom@blackdogsports.com; svnewton@gmail.com; cliffcain@hotmail.com; dwatson@lawingfinancial.com; jbebb@communitynationalbank.net; jjorgensen@ci.lenexa.ks.us; j.bell@kcc.state.ks.us; wlindleyjr@kc.rr.com; DONALD GRUNDY; singingreels@kc.rr.com; billandkathy@kc.rr.com; rzook@kc.rr.com; rlm@mllfpc.com; mcdoug5148@sbcglobal.net; ccnewton@gmail.com; Kenaisu@aol.com
Subject: Re: Comment: Min Flow

Dear Mr. Biggs,

Thanks for acknowledging my submission. Minimum flow was just on my mind because there was an article in the most recent issue of Fly Fisherman magazine, the December 2008 (magazines are getting way too far ahead), titled *"California's Unknown Tailwater"*. The article describes, in great detail, the Lower Stanislaus River. I am not a biologist nor engineer but if I understand the article, they have a minimum flow policy on the "Lower Stan" as well which is (according to the article) largely responsible for it being a very successful fishery.

I quote from the article: *"Stream awareness increased when anglers and biologists discovered steelhead in the 1996, prompting new flow regulations and consistent water temperatures, which increased insect activity. The abundance of aquatic life and good habitat has led to a thriving wild rainbow trout fishery. Today, river flows continue to be closely managed by the California Depart of Fish and Game (DFG)".*

I can't imagine that all stakeholders will not benefit from Minimum Flow!

Mark B. Borserine
Heart of America Fly Fishers
Past Club President, Auction Chair, Ass't Editor - Newsletter, Other Duties as Required

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Biggs, Mike L SWL

From: LISA SHRUM [lgshrum@msn.com]
Sent: Monday, October 27, 2008 1:16 PM
To: Biggs, Mike L SWL

Attachments: Min. flow reallocation study.jpg

Min. flow reallocation study.j...

Joe Schilling,
St. Louis, MO

Biggs, Mike L SWL

From: LISA SHRUM [lgshrum@msn.com]
Sent: Monday, October 27, 2008 1:09 PM
To: Biggs, Mike L SWL

Attachments: Min flow reallocation study.jpg

Min flow reallocation study.jp...

Joe Schilling,
St. Louis, MO

Biggs, Mike L SWL

From: Lewis Godby [lewis@godby.bz]
Sent: Wednesday, September 17, 2008 3:16 PM
To: lewis@godby.bz; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Lewis Godby
2303 CR 39
Mountain Home, AR 72653

Biggs, Mike L SWL

From: Lawrence Chapman [lchapman@mvtel.net]
Sent: Wednesday, September 17, 2008 10:33 AM
To: lchapman@mvtel.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Lawrence L. Chapman

Sincerely,
Lawrence Chapman
PO Box 2627
Mountain View, Ar. 72560

Biggs, Mike L SWL

From: kevin@lakeviewcovemarina.com
Sent: Tuesday, September 23, 2008 6:06 AM
To: Biggs, Mike L SWL
Subject: Minimum Flow Meeting

Good morning Mike.

I was one of the attendees at your public meeting in Mountain Home September 17, 2008, that left confused on the facts of the project's EIS study.

In the meeting, the question was raised about a new Plan B (No Action) in BS-3B and NF-7B. You stated in that meeting that Plan B should not have been and is not part of the newly revised EIS.

I am now hearing that this is not the case. Please confirm if in fact it is or is not valid. This is a very important piece of information that effects all using public facilites like our roads, bridges, swim areas, and marinas. How will this be discussed and communicated to all stakeholders?

Best regards,

Kevin Lorenz
President, Lakeview Cove Marina

President
Missouri/Arkansas Marina Owners Association

Biggs, Mike L SWL

From: Kevin Cracraft [cracraftk@netscape.net]
Sent: Monday, October 27, 2008 10:01 AM
To: Biggs, Mike L SWL
Subject: Min. water flow

I support the concept of minimum water flow, but not at taxpayer expense.

Kevin Cracraft

Biggs, Mike L SWL

From: Kevin Carril [rrac3@sbcglobal.net]
Sent: Tuesday, September 16, 2008 8:28 PM
To: rrac3@sbcglobal.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I am the Conservation Chairman of the Heart of America Flyfishers. I can tell you that our club members, myself included, value the fisheries on the White and Norfork rivers. We regularly take trips to the area and spend our dollars. The minimum flow issue is something that regulary is discussed at our meetings.

I support efforts to increase water quality in those rivers. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

As I understand it, the study predicts with cooler water temperatures there will be increases in Dissolved Oxygen and significant increases in trout food production. This is great for the fish that live in those rivers since they should grow faster and be healthier

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS. I hope some good will come from this work.

Sincerely,
Kevin Carril
7416 W 57th st
OVERLAND PARK KS 66202

Biggs, Mike L SWL

From: Kenny Crunkleton [kenny.crunkleton@actronixinc.com]
Sent: Wednesday, September 10, 2008 11:02 AM
To: Biggs, Mike L SWL

Dear Mr. Biggs,

I am sending this email in full support of Minimum Flow.

WHY IS THE MINIMUM FLOW PROJECT IMPORTANT?

These comments are derived from concerned citizens who have the economic condition of our country at heart and in no way want to unnecessarily and irresponsibly spend taxpayer dollars. These same citizens realize the long term importance of the Minimum Flow project to one of our great natural resources and know the project is imperative to the long-term health of the White River System.

►Minimum Flow will positively impact the economy and natural resources for the United States and the state of Arkansas

by expanding the already flourishing $160 million dollar tourism industry in Arkansas.

►Minimum Flow will improve dissolved oxygen in the river and water temperatures for downstream trout fisheries, increase wetted perimeters creating improved growth of aquatic plants, habitat, and food supply, and improve trout reproduction, while returning the river to a more natural state.

►The economic benefits according to the Corps of Engineers are a 77 to 1 cost to benefit ratio, irrefutably proving the benefits of the Minimum Flow project.

PROPOSED BUY OUT FOR EMPIRE DISTRICT ELECTRIC

= ALMOST $34 MILLION

A $34 million payout to Empire District Electric is highway robbery to the United States government and ultimately to the taxpayers. The following information has been derived from Empire District Electric's 2007 annual report and information collected from the Federal Energy Regulatory Commission (FERC).

►Headwater Benefits Assessments paid by Empire District Electric from 1956-2007 total $900,846.00 which equals on the average $16,087.00 per year. Would it not be fair to pay empire that amount for the remaining 14 years of their FERC license? That total would be $225,218.00, considerably less than the $34 million they want.

►Per the SWPA study, Empire's loss of hydropower and capacity calculations have been based on a 50 year time frame. Since Ozark Beach Dam's FERC license is only good for another 14 years – to 2022, why would the cost be calculated based on 50 years when their license (FERC license number 2221) expires in 14 years? There is no guarantee that Empire's FERC license will be reissued particularly in light of the potential for other energy options to materialize. Is it legal or ethical for Congress to appropriate taxpayer dollars to pay Empire District Electric for future power that they are not yet licensed to market?

►According to Empire's annual report (pages 5 & 7), the hydroelectric generation from Ozark Beach represents only 1% of the total capacity to Empire District Electric. Empire Electric's generating plants total 1255 megawatts as of 12-31-07. Per Empire's report, the system reached a record high of 1173 megawatts on 8-15-07. The previous record was 1159 on 7-19-06. The winter demand maximum was 1159 megawatts set on 2-16-07. The previous year winter high was 1034 megawatts set on 1-31-06. Empire District Electric is not utilizing full facility megawatt capacity even if Ozark Beach's generating capacity were completely removed. How can Empire District Electric Company state that they will be harmed financially when they can operate profitably without the Ozark Beach facility?

►The Ozark Beach Dam was originally constructed in 1911. Do the current hydroelectric generators operate safely and efficiently? Is a dam that is nearly 100 years old, safe? In 2022, would it be prudent for the federal government to relicense the Ozark Beach facility based on its age? Would this dam withstand an earthquake? Was the dam constructed under any federal guidelines to insure its safety? Are reports of safety inspections readily available to the public? If the dam were relicensed today, would Minimum Flow be routinely incorporated into the licensing procedure?

►According to letters from the Federal Energy Regulatory Commission (FERC) to Empire District Electric Company, headwater benefit payments were waived for 2007 and 2003. Over the last 50 years, how often have headwater benefit payments from this privately owned company been waived by this federal agency and why? It appears from these same letters and attached head water benefits assessments that Empire is already receiving preferential treatment in the form of subsidies by avoiding the payment to FERC. Per Tom Snyder, Project Manager for Ozark Beach Dam, the facility can generate hydroelectric power when Bull Shoals Lake reaches 679' elevation. If Ozark Beach can generate power at a 679' elevation on Bull Shoals Lake, why can Empire District Electric claim a loss of head? While Empire may not operate maximally until they hit elevation 651', they have been operating under these same conditions since the opening of Bull Shoals Dam in 1953. If they have been accustomed to these operational conditions for the last 55 years how can Empire state they will experience a loss from the Minimum Flow project?

►Would it be prudent for Empire District Electric to provide proof of financial loss where they have had to buy power on the open market due to the inability to operate the Ozark Beach Dam? Is this proof that Empire has already been taking taxpayer dollars unnecessarily and proof again that the Minimum Flow buyout is yet another attempt to milk the taxpayers?

►Per Empire's 2007 annual report, by Empire's own admission, they have been hit hard by environmental conditions in recent months. According to their report there was $13 million cash on hand to meet the needs of these situations. Their

report also states that they had well over $40 million in expenses from these events and by their own admission were hit hard. Does it not seem plausible that they are using the Minimum Flow project buyout as an opportunity to collect money from the United States taxpayers?

►Empire District Electric Company's stock is traded publicly on the New York Stock Exchange. According to page 27 of their 2007 Annual Report for Empire District Electric, common stock prices during 2006 and 2007 experienced a low and high of $20.25 to $26.13 respectively. Dividends paid per share during 2006 and 2007 were $0.32. As of December 31, 2006, Empire District Electric had $22.9 million of retained earnings to pay out for dividends followed by $17.2 million for 2007. The total dividends paid in 2007 were $39 million. During 2006 and 2007 the economy and environmental impacts in terms of droughts and ice storms had to affect Empire's bottom line, yet in spite of these conditions, they still were able to pay $39 million in dividends to their shareholders. If in poor economic and environmental conditions Empire District Electric was still able to make huge dividend payments how can they substantiate a financial loss from the Minimum Flow project?

►Per Empire's 2007 annual report, gross operating revenues from Ozark Beach Dam were: 2005 - $1.447 million, 2006 - $1.843 million, 2007 - $1.879 million. There was clearly a drought that occurred in 2006. If they are still generating gross revenues in these amounts from this small hydroelectric dam in drought environments, how can they say the Minimum Flow project is going to cause them any loss of revenue whatsoever?

PROPOSED $87 MILLION FEDERAL GOVERNMENT DEBT REDUCTION TO SOUTHWEST POWER ADMINISTRATION

It appears as though Southwest Power Administration has been charged with having to supply the "for profit" electric cooperatives with cheap power to resell.

►Although SWPA claims to be a federal agency, why are they concerned with selling cheap power when they technically work for the taxpayers of this country? Should it not be the responsibility of the "for profit" electric companies to acquire their own additional electricity from the free market without it being given to them at a reduced rate by the government? Based on SWPA's actions and their financial reports, is it not then fair to assume that SWPA is a nonfederal agency instead of a federal agency? If they are truly a government agency charged with simply managing 24 U.S. owned hydroelectric dams, why does it appear that they are in the business of making money and why would a Minimum Flow project on a section of the White River in Arkansas afford them the luxury of collecting nearly $87 million from taxpayers?

?According to Southwest Power Administration (SWPA), Bull Shoals and Norfork Dams were brought on line in 1953 and 1944, respectively. If they were originally mortgaged for 50 years, shouldn't the mortgages be completely paid off by now? If both of the dams are assumed as "free and clear", shouldn't the Minimum Flow project only be charged a fair percentage of operation and maintenance expenses associated only with Minimum Flows, based on best business practices in the energy industry?

►SWPA made a profit in spite of a 17 month drought in 2005-2006. In a drought environment, if SWPA is operating profitably, how can Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation? It may not be generated at peak periods but some of that power can still be sold for profit.

GENERAL COMMENTS ON THE REPORT COMPLETED BY SOUTHWEST POWER ADMINISTRATION AS IT AFFECTS THEIR DEBT REDUCTION TO THE FEDERAL GOVERNMENT AND THE BUY OUT TO

EMPIRE DISTRICT ELECTRIC

?According to the SWPA report, energy and capacity losses were calculated utilizing the Platts and FERC methods. This appears to be a little like the overweight woman who weighs herself on a variety of scales and chooses the weight that is most flattering. Is it prudent to assume that the methods used for calculating energy losses and capacity losses should be the same?

► When was the agreement made and who authorized this agreement between the Corps and SWPA to use the 50 year time frame and the Platts and FERC methods? Congress ordered SWPA in February 2006 to begin the study on the Empire District Electric buy out. Why were agreements between SWPA and the Corps made in October of 2005 before receiving Congressional orders in February 2006? Why would Mr. George Robbins with SWPA state that he was "forced to use both methods", referring to the Platts and FERC methods?

►The Federal Power Commission regulates electric power and energy generated at reservoir projects controlled by the

Department of the Army. What method of calculation to determine energy and capacity loss do they utilize or recommend? Is it FERC, Platts, or something else? Would best business practice be to use what FPC recommends in determining losses for both SWPA and Empire's buy out calculations? As the Federal Power Commission requires the Department of the Army, the Secretary of the Army, and the Secretary of the Interior to transmit and dispose of power and energy in the most widespread use and at the lowest rate possible to the consumers consistent with sound business principles, the Minimum Flow project should be evaluated on the same basis. Because it's plausible that SWPA cannot be completely fair and unbiased in their economic calculations, would it be prudent to have the Federal Power Commission or some independent source, review the processes by which SWPA determined the losses to Empire District Electric and themselves?

►It appears as though worst case scenarios and drought environmental conditions were used to calculate all energy and capacity losses for both SWPA and Empire District Electric. When SWPA calculated energy losses what was the basis of these calculations? For example, page 12 of the SWPA annual report shows estimated average annual energy produced by Bull Shoals Dam of 785 million kWh. What period of years was this particular number averaged over? What percentage of this estimated average annual energy will Minimum Flow cause SWPA to lose? To look at SWPA's annual report on actual net energy production, one has to wonder how did they calculate an average estimation and thus how did they determine what they say will be lost from the Minimum Flow project? Did SWPA, in this reporting process, use to their benefit and Empire's benefit, figures and calculations that would profit them financially and drive up the cost of the Minimum Flow project, to the detriment of the taxpayers? Do we have the fox watching the hen houses?

►According to page 14 of SWPA's annual report, during 2003 through 2006 SWPA shows unused supplemental and excess energy. Therefore, since they had an abundance of energy even in the 17 month drought period during 2005 and 2006, this seems to indicate that they would not have been forced to buy power on the open market. Since Minimum Flow affords additional water usage this emphasizes the point that they would not incur any financial losses or experience the need to purchase additional power on the open market due to Minimum Flows.

►According to SWPA's annual report (pages 17,19, & 21), during fiscal years 2004, 2005, 2006 from the details of billings to customers (indicating they *are* issuing bills and collecting money, thus a "for profit" business), the kilowatt capacity sold was the same for all three years, in spite of the drought that occurred in 2005-2006. How will Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation, even in drought years?

►Per SWPA's statement of cash flows (page 26) in their annual report, they had $36 million on hand at the end of a drought year. What average American business wouldn't love to clear the year with an extra $36 million?

►Per George Robbins in the SWPA study, energy losses were calculated utilizing on peak energy replacement costs only. Since generation can occur at on and off peak times shouldn't on and off peak rates be utilized?

►The seasonal power pools on Bull Shoals and Norfork Lakes were implemented without Congressional orders. If an agreement of this magnitude was easily attained without Congressional orders, why have the Minimum Flow project proponents been required to jump through bureaucratic hoops? Based on this fact is it safe to consider that there must be a *special relationship* between Southwest Power Administration and some division of the Corps of Engineers?

►The established drought of record occurred in 1928 prior to the construction of any federal dam on the White River system. Southwest Power Administration utilized this 1928 drought of record to simulate energy and capacity losses for both lakes. Since the opening of the Bull Shoals and Norfork Dams when have droughts and floods occurred? Would it be more appropriate to use an average of these scenarios to calculate the energy and capacity losses rather than the use of *worst* case scenarios?

► Why does the natural resource (rainwater) that falls freely from the sky and would fulfill the water required for minimum flows, that belongs to the taxpayers, become a commodity that can be bought and sold by private companies on the open market? Why would one governmental agency pay another governmental agency for a resource or product that falls freely from the sky and doesn't cost anyone anything?

► The bottom line is the power companies don't want to give up control of these hydropower plants and the huge profits associated with them even though the Minimum Flow Project would benefit the American people. Is this not more government *pork spending* to pay off crying, profitable power companies because they are losing some control of how water is released from these hydroelectric dams leaving the taxpayers to pay $87 million to a supposed federal power company, Southwest Power Administration, and $34 million to a privately owned "for profit" power company, Empire District Electric? It is ludicrous for the taxpayers to pay either of these greedy power companies anything.

Sincerely,

Kenny Crunkleton

Actronix Inc

V.P. - Controller

870-453-6750

Biggs, Mike L SWL

From: Ken Weber [fairtoall@gmail.com]
Sent: Monday, September 29, 2008 6:11 PM
To: Biggs, Mike L SWL
Subject: Minimum Water FLow

Dear Mr Biggs,

I support the concept of minimum water flow in trout waters below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.

Ken Weber

Biggs, Mike L SWL

From: Keith Wright [kpwright@windstream.net]
Sent: Tuesday, September 16, 2008 9:51 AM
To: kpwright@windstream.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, while positively impacting the economy of the area.
Economic studies have shown that a better environment for trout means a healthier economy for the area.

The SDEIS findings indicate that funds invested in the Bull Shoals project will return almost 12 times as much in benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

Thanks for your work on these studies.

Sincerely,
Keith Wright
35633 Ridge Road
Poteau, OK 74953-8255

Biggs, Mike L SWL

From: Keith Blakemore [kdblake@centurytel.net]
Sent: Monday, September 15, 2008 9:03 PM
To: kdblake@centurytel.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwests Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Keith Blakemore
497 CR 101
Norfork, Ark.2658

Biggs, Mike L SWL

From: Kathryn Grace [kathygracegrace@hotmail.com]
Sent: Thursday, October 23, 2008 10:44 AM
To: kathygracegrace@hotmail.com; Alice; abaker; 101 Boat; Bayou Resort at Eagles Rest Bayou; bullshoals boat dock; carolep; chuck thithoff; Jackson, Donald E COL SWL; Dennise Carranza; Doug Timmons; fout boat dock; gregsimonds; jessica leedham; lakeviewcovemarina; Larry Allard; Laura Pink; LORETTA KOVAK; Biggs, Mike L SWL; Montine McNulty; nancy cooper; patsy penry; Quarry Marina; ray & jennifer postelwait; Ted Coombes; THEODOSIA MARINA; tracy marina
Subject: MINIMUM FLOW STUDY LETTER

WHITE RIVER MINIMUM FLOW PRODJECT
C/O MIKE BIGGS
POB 867
LITTLE ROCK, AR 72203-0867

TO ALL CONCERNED.

I OPPOSE THE WRMF SUPPLEMENTAL DRAFT EIS!!!
I HAVE OPERATED CRANFIELD BOAT DOCK ON LAKE NORFORK ALMOST 40 YEARS. EVERY MEETING WITH THE CORP OF ENGINEERS THAT I HAVE ATTENDED INCLUDED THE FACT THAT ALL OF THE WHITE RIVER LAKES WERE BUILT FOR #1 FLOOD CONTROL, #2 WAS HYDRO POWER. THE RECORD FLOOD OF 2008 IS NOT ENCLUDED IN THE SUPPLEMENTAL DRAFT.

THE 2008 LAKE TOURISM SEASON IS STILL SUFFERING FROM HIGH WATER AND ANOTHER RAINY SEASON COULD PUT US OVER THE DAM AGAIN.

EARLY SPRING 2008 MARCH 1ST, LAKE NORFORK WAS AT 552.00. THE LAKE LEVEL AT THAT TIME OF YEAR IS USUALLY 5 FEET LOWER TO ALLOW FOR SPRING RAINS. THE LAKE WAS THEN RAISED THE THREE AND ONE HALF FEET THE LEVEL MINIMUM FLOW WOULD REQUIRE. THEN WE HAD A TWELVE INCH RAIN PLUS MANY OTHER THREE INCH TO SIX INCH RAINS ALL SUMMER LONG.

THE WHOLE WHITE RIVER BASIN WAS FULL AND RUNNING OVER!!!!!!! I DO NOT FEEL THAT TROUT FISHING SHOULD BE PLACED ABOVE FLOOD CONTROL OR POWER GENERATION!!!!! THE TROUT INDUSTRY ALLREADY HAS AN EMERGENCY WATER RELEASE AGREEMENT WITH THE CORP OF ENGINEERS, THE SOUTH WEST POWER COMPANY AND THE GAME AND FISH COMMISSION TO RELEASE WATER ANY TIME THE TROUT ARE IN NEED OF MORE WATER.

THANK YOU FOR ENCLUDING MY COMENTS IN YOUR STUDY.

SINCERELY,

KATHRYN GRACE, OWNER
CRANFIELD DOCK
2028 CRANFIELD ROAD
MOUNTAIN HOME, AR. 72653-6756
1-870-492-5191

Biggs, Mike L SWL

From: Kathryn Grace [kathygracegrace@hotmail.com]
Sent: Saturday, September 20, 2008 8:59 AM
To: Jackson, Donald E COL SWL; lakeviewcovemarina; Biggs, Mike L SWL; Montine McNulty
Subject: FW: September 17.2008 - Workshop Minimum Flow.doc

From: cranfield@centurytel.net
To: kathygracegrace@hotmail.com
Subject: September 17.2008 - Workshop Minimum Flow.doc
Date: Fri, 19 Sep 2008 14:06:50 -0500

September 17, 2008

U.S. Army Corps of Engineers

Little Rock District

P O Box 867

Little Rock, AR 72203-0867

Attn: Mike Biggs CESWL-PE

Re: Host public workshop updated Draft EIS for Minimum Flow

The Minimum Flow draft meeting at Arkansas State University Mountain Home on

August 27, 2008 was disappointing. We were not informed about the meeting until it

appeared in the Baxter Bulletin Newspaper a few days before the meeting took place.

As important as 3 ½ feet of flood storage is to all of the lake businesses, the marinas should have had adequate notice to prepare and attend this meeting. Scheduling the meeting the week of our last major holiday and such short notice gave us the impression we were not wanted at the meeting.

Lake Norfork being at minimum flow stage this March before the 12" rain fell shows us how important 3 ½ feet of storage can be. We had no parking lot and 79 campsites unusable all season long. The original legislation said the Game & Fish Commission was responsible for constructing the facilities inundated by the additional water. We understand that the new draft states that the marinas should be responsible for that expense. We are already responsible for the additional expenses of high and low water.

During the course of the meeting no microphones were used and it was difficult to hear. You did not know who asked the question or what the question was. When addressing the person who asked the question it was difficult to hear or understand their answer at the other end of the auditorium.

Holding a meeting just to fulfill a requirement is a waste of time and money. We all need to know the true facts so the best decision can be made for all. We feel more public meetings, properly conducted, are in order.

Cranfield Boat Dock

Robert Grace, President

Kathryn Grace, Secretary/Treasurer

Biggs, Mike L SWL

From: Kate Keene [keene@adeq.state.ar.us]
Sent: Wednesday, September 17, 2008 11:37 AM
To: keene@adeq.state.ar.us; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Kate Keene
5301 Northshore Dr.
North Little Rock, AR 72118

Biggs, Mike L SWL

From: Kankolenski, Bill [bkankolenski@cecinc.com]
Sent: Wednesday, October 01, 2008 12:19 PM
To: Biggs, Mike L SWL
Subject: White River and Minimum Water Flow

Attachments: image001.jpg

Dear Mr. Biggs,

I support the concept of minimum water flow in trout waters below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.

Thank you for your time.

Bill

William S. Kankolenski, P.L.S.

Senior Project Manager


image001.jpg (6 KB)

4848 Park 370 Blvd., Suite F

Hazelwood, MO 63042

Tel: 314-656-4566

Fax: 314-656-4595

Toll Free: 866-250-3679

Cell: 314-540-5099

Website: www.cecinc.com

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Biggs, Mike L SWL

From: Julie [julie@hisplaceresort.net]
Sent: Monday, September 22, 2008 3:06 PM
To: Biggs, Mike L SWL

Attachments: Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm; Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm; Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm; Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm; Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm


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Here are a few final comments, Mr. Biggs.

Sincerely,

Julie L. Raines

Julie L. Raines - Owner

His Place Resort

89 Chamberlain Lane

Cotter, AR 72626

870-435-6535 (local)

866-435-6535 (toll free)

870-435-6536 (fax)

julie@hisplaceresort.net (email)

http://www.hisplaceresort.net/

Biggs, Mike L SWL

From: Julie [julie@hisplaceresort.net]
Sent: Thursday, September 18, 2008 8:25 AM
To: Biggs, Mike L SWL
Subject: Minimum Flow, more public comments

Attachments: Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm; Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm; Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm; Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm; Data posted to form 1 of http://www.hisplaceresort.net/minflowpet.htm


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Dear Mr. Biggs,

Here are a few more public comments to add to the record. Once again, if this format is difficult for your email program to process, let me know and I can send individually.

Thanks!

Sincerely,

Julie L. Raines

Julie L. Raines - Owner

His Place Resort

89 Chamberlain Lane

Cotter, AR 72626

870-435-6535 (local)

866-435-6535 (toll free)

870-435-6536 (fax)

julie@hisplaceresort.net (email)

http://www.hisplaceresort.net/

Biggs, Mike L SWL

From: jtclfowler@comcast.net
Sent: Tuesday, September 16, 2008 10:04 AM
To: Biggs, Mike L SWL
Cc: dcharvin@bellsouth.net
Subject: minimum flow support

Mr. Biggs: I strongly support minimum flow, and ask that you assist in its implementation.

Jim Fowler
386-326-1147

Biggs, Mike L SWL

From: John Newland [jrnewland@gmail.com]
Sent: Tuesday, September 30, 2008 9:02 PM
To: Biggs, Mike L SWL
Subject: Minimum water flow

Dear Mr Biggs,

I support the concept of minimum water flow in trout waters below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.

Thank you,

John Newland
2222 E Isaacs Ave #D-201
Walla Walla, WA 99362

Biggs, Mike L SWL

From: Joe Williamson [joew@astate.edu]
Sent: Monday, October 13, 2008 9:39 AM
To: Jackson, Donald E COL SWL; Biggs, Mike L SWL; Thomas W. Waters
Subject: Minimum Flow EIS

I would respectfully like to state my opposition to the White River Minimum flow EIS. I believe the cumulative impacts on the lakes and recreational areas around the lakes will be negatively impacted by such a project.

Since I was a young boy I have fished the Arkansas Trout streams and have enjoyed many years of camping and recreation on the Arkansas Lakes. As I've gotten older, I now try to pass this appreciation on to my family. It seems to me we're trying to fix what isn't broke. We have a good thing going here in Arkansas, let's not mess it up.

Joe Williamson

Systems Analyst III

IT Services

Arkansas State University

870-680-4246

joew@astate.edu

Biggs, Mike L SWL

From: Joe Jewell [jjewellmusic@hotmail.com]
Sent: Tuesday, September 16, 2008 8:30 AM
To: jjewellmusic@hotmail.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Joe Jewell
147 Museum Lane
Mountain View, AR 72560

Biggs, Mike L SWL

From: Joe and Sharon Berfanger [joesha@suddenlink.net]
Sent: Wednesday, October 22, 2008 11:40 AM
To: Biggs, Mike L SWL
Cc: bayouresort@centurytel.net
Subject: White River Minimum Flow Reallocation Study

Concerning the Environmental Impact Study for Norfork Lake:
Are there contingency plans for extended drought periods?

Are there contingency plans for flooding conditions?

Will "Sand Island" remain a viable recreation area?

Concerning the river at Norfork Dam:

What constitutes "minimum flow" compared to the output when one generator is running?

Will the river below Norfork Dam be accessible to "wade fishermen" when "minimum flow" is implemented?

Thank you for your attention to these questions,

Joe Berfanger
37 Pheasant Run Ct.
Mountain Home, AR 72653

Biggs, Mike L SWL

From: Jim Bebb [jbebb@communitynationalbank.net]
Sent: Thursday, September 18, 2008 8:10 AM
To: jbebb@communitynationalbank.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS predicts cooler water temperatures, increases in Dissolved Oxygen and significant increases in trout food production. This is great for the fish that live in those rivers. They should grow faster and be healthier.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Jim Bebb

Sincerely,
Jim Bebb

12137 Clubhouse Dr.
Kansas City, KS 66109

Biggs, Mike L SWL

From: Jeffrey Junck [jjunck@suddenlink.net]
Sent: Wednesday, September 17, 2008 5:31 PM
To: jjunck@suddenlink.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Jeffrey Junck
31 Sandhill Lane
Mountian Home, AR 72653

Biggs, Mike L SWL

From: Jeff Roussel [jroussel@fele.com]
Sent: Wednesday, September 17, 2008 8:44 AM
To: jroussel@fele.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Jeff Roussel
14 Calais Ct.
Little Rock, AR, 72223

Biggs, Mike L SWL

From: Jeff perry [jperry1125@gmail.com]
Sent: Tuesday, September 16, 2008 1:08 PM
To: jperry1125@gmail.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Jeff perry
25 Bogart Drive
Terre Haute

Biggs, Mike L SWL

From: Jeff Johnson [jjohnson@vccusa.com]
Sent: Thursday, September 18, 2008 1:11 PM
To: Biggs, Mike L SWL
Subject: Implementation of Minimum Flow on the White River in Arkansas and Missouri

I own property in Arkansas and strongly support the following project referenced above. It is a win-win : Industry and the Environment.

W. Jeff Johnson
VCC
1000 Abernathy Rd., NE, Bldg 400, Ste 1130
Atlanta, GA 30328
ph 770-225-1901
fx 678-510-1901
http://www.vccusa.com

Biggs, Mike L SWL

From: Jeff Caudle [thecaudles@conwaycorp.net]
Sent: Wednesday, September 17, 2008 9:27 PM
To: thecaudles@conwaycorp.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Jeff Caudle
180 Pickwicket Dr
Conway, AR 72034

Biggs, Mike L SWL

From: Jason Parsons [jpsalesinc@gmail.com]
Sent: Monday, September 22, 2008 8:20 AM
To: george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: White River Minimum Flow

As a frequent visitor and fisherman on the Arkansas White River, I support the minimum flow project. The White River provides revenue for many businesses and individuals for much of North Arkansas.

Thanks

--
Jason L Parsons
JP Sales Inc.
Ranger Boats & Stratos Boats
5428 N Coulters Mill Road
PO Box 87
Oreana, IL 62554
jpsalesinc@gmail.com
Office: 217-468-2502
Fax: 217-468-2681

Biggs, Mike L SWL

From: Jane E. Darr [jedarr@centurytel.net]
Sent: Monday, September 15, 2008 8:31 PM
To: jedarr@centurytel.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwests Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Jane E. Darr
242 Wheatstone Place
Cotter, AR 72626

Biggs, Mike L SWL

From: Jan Camp [jcamplac@yahoo.com]
Sent: Wednesday, September 17, 2008 10:57 AM
To: jcamplac@yahoo.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Jan Camp
P.O. Box 1328
Flippin, AR 72634

Biggs, Mike L SWL

From: James M Thomason [thomasonjames@sbcglobal.net]
Sent: Friday, September 19, 2008 9:59 PM
To: thomasonjames@sbcglobal.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
James M Thomason
2424 S W Winterwood Ct
Lees Summit

Biggs, Mike L SWL

From: James H. Lillis [jlillis67@centurytel.net]
Sent: Sunday, September 28, 2008 8:01 PM
To: jlillis67@centurytel.net; jedarr@centurytel.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
James H. Lillis
2500 Hickory Circle
Mountain Home, AR 72653

Biggs, Mike L SWL

From: jack knowles [predsjack@aol.com]
Sent: Tuesday, September 16, 2008 5:55 PM
To: predsjack@aol.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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However, I read that minumum flow will not completely take care of the DO level all year. My comments may be late but none the less, has the Corp thought of installing hub baffles on the turbines to increase the minumum flow?

We have accomplished this on the Caney Fork river in Tennessee with no damage done to the turbines.
We had the TWRA, Corp, TVA, Trout Unlimited group and Middle Tn flyfishers involved on this project in the late 1990\'s. This would haep raise the level of oxygen greatly, Dr Phil Betoli of Tennessee Tech has done numerous studies on this project, before and after, Frank Fiss, TWRA was instrumental in the project being successful.

It will cut down the mortality rate even more.
One arguement was that it would cost the Corp monies, but at the time, monies were alloted for such a project. Is this still the case? I mean, the goverment pays for the dead fish by stocking more fish, it all comes out of the same till, just another drawer, so to speak.

Regards, Jack Knowles

Sincerely,
jack knowles
3736 raleigh elam rd
santa fe, tn. 38482

Biggs, Mike L SWL

From: J.C.CROUSE [ANITA.JIMCROUSE@MVTEL.NET]
Sent: Tuesday, September 16, 2008 12:21 PM
To: ANITA.JIMCROUSE@MVTEL.NET; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
J.C.CROUSE
605 DOUBLE BRIDGE LOOP
MOUNTAIN VIEW, AR.72560

Biggs, Mike L SWL

From: Hughes, Susan B HQ02
Sent: Tuesday, October 28, 2008 2:46 PM
To: Biggs, Mike L SWL
Subject: FW: ATTN: THOMAS WATERS

Attachments: Min flow reallocation study.jpg

Min flow
eallocation study.jp.

Susan B. Hughes
Deputy Chief for Civil Works
Southwestern Division Regional Integration Team
Phone: 202-761-4268

-----Original Message-----
From: LISA SHRUM [mailto:lgshrum@msn.com]
Sent: Tuesday, October 28, 2008 3:01 PM
To: Hughes, Susan B HQ02
Subject: ATTN: THOMAS WATERS

Lisa Schilling,
St. Louis, MO

Biggs, Mike L SWL

From: Hughes, Susan B HQ02
Sent: Tuesday, October 28, 2008 2:46 PM
To: Biggs, Mike L SWL
Subject: FW: ATTN: THOMAS WATERS

Attachments: Min. flow reallocation study.jpg


Min. flow
reallocation study.j..

Susan B. Hughes
Deputy Chief for Civil Works
Southwestern Division Regional Integration Team
Phone: 202-761-4268

-----Original Message-----
From: LISA SHRUM [mailto:lgshrum@msn.com]
Sent: Tuesday, October 28, 2008 3:02 PM
To: Hughes, Susan B HQ02
Subject: ATTN: THOMAS WATERS

Joe Schilling,
St. Louis, MO

Biggs, Mike L SWL

From: Harry Lisewski [hcl2841@aol.com]
Sent: Tuesday, September 16, 2008 12:41 PM
To: hcl2841@aol.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Harry Lisewski
89 Nora Ct.
Mountain Home, AR 72653

Biggs, Mike L SWL

From: Hamilton Bell [hamneedstofish@hotmail.com]
Sent: Wednesday, September 17, 2008 6:14 AM
To: hamneedstofish@hotmail.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

I think the issue has certainly been looked at long enough. It is time to act. There can be little doubt that recreation fishing is one of the key components to the local economy. This is a relatively easy way to ensure continued quality of the fishing on the White and Norfork rivers.

Thank You, Hamilton Bell

Sincerely,
Hamilton Bell
96 Whispering Forest Drive
Mountain Home, AR 72653

Biggs, Mike L SWL

From: Gwen Khayat [gwenkhayat@hotmail.com]
Sent: Thursday, September 18, 2008 7:27 PM
To: gwenkhayat@hotmail.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Gwen Khayat
128 Rainbow Heights
Cotter, AR 72626

Biggs, Mike L SWL

From: greg manry [gmanry3@gmail.com]
Sent: Monday, September 15, 2008 7:58 PM
To: Biggs, Mike L SWL
Subject: Minimum Flow Support

I support Min.Flow--let's get this implemented--it's long overdue.
Thanks,
Greg Manry
White & Norfork River Trout Management Advisory Committee

Biggs, Mike L SWL

From: Greg Allison [Greg@allison-ins.com]
Sent: Wednesday, September 10, 2008 11:34 AM
To: george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Minimum Water Flow - White River Arkansas

Please review the important information in this email. Thank-you for your attention.
Respectfully,

Greg Allison, CIC
greg@allison-ins.com
Phone: 731.554.8414

WHY IS THE MINIMUM FLOW PROJECT IMPORTANT?

These comments are derived from concerned citizens who have the economic condition of our country at heart and in no way want to unnecessarily and irresponsibly spend taxpayer dollars. These same citizens realize the long term importance of the Minimum Flow project to one of our great natural resources and know the project is imperative to the long-term health of the White River System.

►Minimum Flow will positively impact the economy and natural resources for the United States and the state of Arkansas by expanding the already flourishing $160 million dollar tourism industry in Arkansas.

►Minimum Flow will improve dissolved oxygen in the river and water temperatures for downstream trout fisheries, increase wetted perimeters creating improved growth of aquatic plants, habitat, and food supply, and improve trout reproduction, while returning the river to a more natural state.

►The economic benefits according to the Corps of Engineers are a 77 to 1 cost to benefit ratio, irrefutably proving the benefits of the Minimum Flow project.

PROPOSED BUY OUT FOR EMPIRE DISTRICT ELECTRIC
= ALMOST $34 MILLION

A $34 million payout to Empire District Electric is highway robbery to the United States government and ultimately to the taxpayers. The following information has been derived from Empire District Electric's 2007 annual report and information collected from the Federal Energy Regulatory Commission (FERC).

►Headwater Benefits Assessments paid by Empire District Electric from 1956-2007 total $900,846.00 which equals on the average $16,087.00 per year. Would it not be fair to pay empire that amount for the remaining 14 years of their FERC license? That total would be $225,218.00, considerably less than the $34 million they want.

►Per the SWPA study, Empire's loss of hydropower and capacity calculations have been based on a 50 year time frame. Since Ozark Beach Dam's FERC license is only good for another 14 years – to 2022, why would the cost be calculated based on 50 years when their license (FERC license number 2221) expires in 14 years? There is no guarantee that Empire's FERC license will be reissued particularly in light of the potential for other energy options to materialize. Is it legal or ethical for Congress to appropriate taxpayer dollars to pay Empire District Electric for future power that they are not yet licensed to market?

►According to Empire's annual report (pages 5 & 7), the hydroelectric generation from Ozark Beach represents only 1% of the total capacity to Empire District Electric. Empire Electric's generating plants total 1255 megawatts as of 12-31-07. Per Empire's report, the system reached a record high of 1173 megawatts on 8-15-07. The previous record was 1159 on 7-19-06. The winter demand maximum was

1159 megawatts set on 2-16-07. The previous year winter high was 1034 megawatts set on 1-31-06. Empire District Electric is not utilizing full facility megawatt capacity even if Ozark Beach's generating capacity were completely removed. How can Empire District Electric Company state that they will be harmed financially when they can operate profitably without the Ozark Beach facility?

►The Ozark Beach Dam was originally constructed in 1911. Do the current hydroelectric generators operate safely and efficiently? Is a dam that is nearly 100 years old, safe? In 2022, would it be prudent for the federal government to relicense the Ozark Beach facility based on its age? Would this dam withstand an earthquake? Was the dam constructed under any federal guidelines to insure its safety? Are reports of safety inspections readily available to the public? If the dam were relicensed today, would Minimum Flow be routinely incorporated into the licensing procedure?

►According to letters from the Federal Energy Regulatory Commission (FERC) to Empire District Electric Company, headwater benefit payments were waived for 2007 and 2003. Over the last 50 years, how often have headwater benefit payments from this privately owned company been waived by this federal agency and why? It appears from these same letters and attached head water benefits assessments that Empire is already receiving preferential treatment in the form of subsidies by avoiding the payment to FERC. Per Tom Snyder, Project Manager for Ozark Beach Dam, the facility can generate hydroelectric power when Bull Shoals Lake reaches 679' elevation. If Ozark Beach can generate power at a 679' elevation on Bull Shoals Lake, why can Empire District Electric claim a loss of head? While Empire may not operate maximally until they hit elevation 651', they have been operating under these same conditions since the opening of Bull Shoals Dam in 1953. If they have been accustomed to these operational conditions for the last 55 years how can Empire state they will experience a loss from the Minimum Flow project?

►Would it be prudent for Empire District Electric to provide proof of financial loss where they have had to buy power on the open market due to the inability to operate the Ozark Beach Dam? Is this proof that Empire has already been taking taxpayer dollars unnecessarily and proof again that the Minimum Flow buyout is yet another attempt to milk the taxpayers?

►Per Empire's 2007 annual report, by Empire's own admission, they have been hit hard by environmental conditions in recent months. According to their report there was $13 million cash on hand to meet the needs of these situations. Their report also states that they had well over $40 million in expenses from these events and by their own admission were hit hard. Does it not seem plausible that they are using the Minimum Flow project buyout as an opportunity to collect money from the United States taxpayers?

►Empire District Electric Company's stock is traded publicly on the New York Stock Exchange. According to page 27 of their 2007 Annual Report for Empire District Electric, common stock prices during 2006 and 2007 experienced a low and high of $20.25 to $26.13 respectively. Dividends paid per share during 2006 and 2007 were $0.32. As of December 31, 2006, Empire District Electric had $22.9 million of retained earnings to pay out for dividends followed by $17.2 million for 2007. The total dividends paid in 2007 were $39 million. During 2006 and 2007 the economy and environmental impacts in terms of droughts and ice storms had to affect Empire's bottom line, yet in spite of these conditions, they still were able to pay $39 million in dividends to their shareholders. If in poor economic and environmental conditions Empire District Electric was still able to make huge dividend payments how can they substantiate a financial loss from the Minimum Flow project?

►Per Empire's 2007 annual report, gross operating revenues from Ozark Beach Dam were: 2005 - $1.447 million, 2006 - $1.843 million, 2007 - $1.879 million. There was clearly a drought that occurred in 2006. If they are still generating gross revenues in these amounts from this small hydroelectric dam in drought environments, how can they say the Minimum Flow project is going to cause them any loss of revenue whatsoever?

PROPOSED $87 MILLION FEDERAL GOVERNMENT DEBT REDUCTION TO SOUTHWEST POWER ADMINISTRATION

It appears as though Southwest Power Administration has been charged with having to supply the "for profit" electric cooperatives with cheap power to resell.

►Although SWPA claims to be a federal agency, why are they concerned with selling cheap power

when they technically work for the taxpayers of this country? Should it not be the responsibility of the "for profit" electric companies to acquire their own additional electricity from the free market without it being given to them at a reduced rate by the government? Based on SWPA's actions and their financial reports, is it not then fair to assume that SWPA is a nonfederal agency instead of a federal agency? If they are truly a government agency charged with simply managing 24 U.S. owned hydroelectric dams, why does it appear that they are in the business of making money and why would a Minimum Flow project on a section of the White River in Arkansas afford them the luxury of collecting nearly $87 million from taxpayers?

► According to Southwest Power Administration (SWPA), Bull Shoals and Norfork Dams were brought on line in 1953 and 1944, respectively. If they were originally mortgaged for 50 years, shouldn't the mortgages be completely paid off by now? If both of the dams are assumed as "free and clear", shouldn't the Minimum Flow project only be charged a fair percentage of operation and maintenance expenses associated only with Minimum Flows, based on best business practices in the energy industry?

► SWPA made a profit in spite of a 17 month drought in 2005-2006. In a drought environment, if SWPA is operating profitably, how can Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation? It may not be generated at peak periods but some of that power can still be sold for profit.

GENERAL COMMENTS ON THE REPORT COMPLETED BY SOUTHWEST POWER ADMINISTRATION AS IT AFFECTS THEIR DEBT REDUCTION TO THE FEDERAL GOVERNMENT AND THE BUY OUT TO EMPIRE DISTRICT ELECTRIC

According to the SWPA report, energy and capacity losses were calculated utilizing the Platts and FERC methods. This appears to be a little like the overweight woman who weighs herself on a variety of scales and chooses the weight that is most flattering. Is it prudent to assume that the methods used for calculating energy losses and capacity losses should be the same?

► When was the agreement made and who authorized this agreement between the Corps and SWPA to use the 50 year time frame and the Platts and FERC methods? Congress ordered SWPA in February 2006 to begin the study on the Empire District Electric buy out. Why were agreements between SWPA and the Corps made in October of 2005 before receiving Congressional orders in February 2006? Why would Mr. George Robbins with SWPA state that he was "forced to use both methods", referring to the Platts and FERC methods?

► The Federal Power Commission regulates electric power and energy generated at reservoir projects controlled by the Department of the Army. What method of calculation to determine energy and capacity loss do they utilize or recommend? Is it FERC, Platts, or something else? Would best business practice be to use what FPC recommends in determining losses for both SWPA and Empire's buy out calculations? As the Federal Power Commission requires the Department of the Army, the Secretary of the Army, and the Secretary of the Interior to transmit and dispose of power and energy in the most widespread use and at the lowest rate possible to the consumers consistent with sound business principles, the Minimum Flow project should be evaluated on the same basis. Because it's plausible that SWPA cannot be completely fair and unbiased in their economic calculations, would it be prudent to have the Federal Power Commission or some independent source, review the processes by which SWPA determined the losses to Empire District Electric and themselves?

► It appears as though worst case scenarios and drought environmental conditions were used to calculate all energy and capacity losses for both SWPA and Empire District Electric. When SWPA calculated energy losses what was the basis of these calculations? For example, page 12 of the SWPA annual report shows estimated average annual energy produced by Bull Shoals Dam of 785 million kWh. What period of years was this particular number averaged over? What percentage of this estimated average annual energy will Minimum Flow cause SWPA to lose? To look at SWPA's annual report on actual net energy production, one has to wonder how did they calculate an average estimation and thus how did they determine what they say will be lost from the Minimum Flow

project? Did SWPA, in this reporting process, use to their benefit and Empire's benefit, figures and calculations that would profit them financially and drive up the cost of the Minimum Flow project, to the detriment of the taxpayers? Do we have the fox watching the hen houses?

► According to page 14 of SWPA's annual report, during 2003 through 2006 SWPA shows unused supplemental and excess energy. Therefore, since they had an abundance of energy even in the 17 month drought period during 2005 and 2006, this seems to indicate that they would not have been forced to buy power on the open market. Since Minimum Flow affords additional water usage this emphasizes the point that they would not incur any financial losses or experience the need to purchase additional power on the open market due to Minimum Flows.

► According to SWPA's annual report (pages 17,19, & 21), during fiscal years 2004, 2005, 2006 from the details of billings to customers (indicating they *are* issuing bills and collecting money, thus a "for profit" business), the kilowatt capacity sold was the same for all three years, in spite of the drought that occurred in 2005-2006. How will Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation, even in drought years?

► Per SWPA's statement of cash flows (page 26) in their annual report, they had $36 million on hand at the end of a drought year. What average American business wouldn't love to clear the year with an extra $36 million?

► Per George Robbins in the SWPA study, energy losses were calculated utilizing on peak energy replacement costs only. Since generation can occur at on and off peak times shouldn't on and off peak rates be utilized?

► The seasonal power pools on Bull Shoals and Norfork Lakes were implemented without Congressional orders. If an agreement of this magnitude was easily attained without Congressional orders, why have the Minimum Flow project proponents been required to jump through bureaucratic hoops? Based on this fact is it safe to consider that there must be a *special relationship* between Southwest Power Administration and some division of the Corps of Engineers?

► The established drought of record occurred in 1928 prior to the construction of any federal dam on the White River system. Southwest Power Administration utilized this 1928 drought of record to simulate energy and capacity losses for both lakes. Since the opening of the Bull Shoals and Norfork Dams when have droughts and floods occurred? Would it be more appropriate to use an average of these scenarios to calculate the energy and capacity losses rather than the use of *worst* case scenarios?

► Why does the natural resource (rainwater) that falls freely from the sky and would fulfill the water required for minimum flows, that belongs to the taxpayers, become a commodity that can be bought and sold by private companies on the open market? Why would one governmental agency pay another governmental agency for a resource or product that falls freely from the sky and doesn't cost anyone anything?

► The bottom line is the power companies don't want to give up control of these hydropower plants and the huge profits associated with them even though the Minimum Flow Project would benefit the American people. Is this not more government *pork spending* to pay off crying, profitable power companies because they are losing some control of how water is released from these hydroelectric dams leaving the taxpayers to pay $87 million to a supposed federal power company, Southwest Power Administration, and $34 million to a privately owned "for profit" power company, Empire District Electric? It is ludicrous for the taxpayers to pay either of these greedy power companies anything.

Biggs, Mike L SWL

From: Glenn Bush [ncffs@yahoo.com]
Sent: Thursday, September 18, 2008 7:36 AM
To: Biggs, Mike L SWL
Subject: Minimum flow project

I strongly support minimum flow, and ask that you assist in its implementation.

Glenn R Bush

Biggs, Mike L SWL

From: Georgiana Baer [georgianabaer@aol.com]
Sent: Thursday, September 18, 2008 9:11 AM
To: georgianabaer@aol.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area. The word \"our\" is weel used. Even though I do not reside near those Riovers, the quality of all our lives is always effected by actions of such projects.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Georgiana Baer
27095 W. 143 St
Olathe, KS 66061

Biggs, Mike L SWL

From: George Robbins [george.robbins@swpa.gov]
Sent: Wednesday, October 01, 2008 12:00 PM
To: Tom Snyder; Biggs, Mike L SWL
Cc: Brad Beecher; Harold Colgin; William Howell; tietjen@colorado.edu; Michael Denny
Subject: RE: Question on seasonal pool change

Tom -
I had Mike Denny check to see if there was a problem. His reply is:

"LRD provided the input files for the SUPER runs cited in the LRD report (base=W01X01, minflow=W06X03). In those runs, there is NO change in the seasonal pool dates. I believe they just goofed up their footnote for one table and then copied and pasted the goofed up footnote for the second table."

There was no change in the seasonal pool plans for the model runs that we made and it does not appear that there were any in the Corps' runs as well.

Unless Mike Biggs finds out differently, we believe that the computer runs were correct and the footnotes in the report were incorrect.

Thanks,
George

-----Original Message-----
From: Tom Snyder [mailto:TSnyder@empiredistrict.com]
Sent: Wednesday, October 01, 2008 10:30 AM
To: mike.l.biggs@usace.army.mil; George Robbins
Cc: Brad Beecher; Harold Colgin; William Howell; tietjen@colorado.edu; Tom Snyder
Subject: Question on seasonal pool change

Empire District Electric Co. would be interested if in fact this was a mistake or if it was an intentional change? This would affect our head negatively.

Hi Mr. Biggs,

I have a question concerning the WR Minimum Flow SDEIS.

Table 4.3.1.1-1 Annual Pool Elevation-Duration for Elevations of Interest pg 4-6 and Table 4.3.1.2-1 Annual Pool Elevation-Duration for Elevations of Interest pg 4-10 both show in footnote 3 that the proposed seasonal pool duration would be one month longer then the current seasonal pool duration in footnote 2.

Is footnote 3 correct?

If correct, where did you account for this change in the impact modeling?

If not correct, how will you fix the error?

Shawn & Cindy Egan, Owners
Bayou Resort at Eagles Rest
2325 Fout Rd. Gamaliel AR 72537
www.norfork.com/bayou <http://www.norfork.com/bayou>
870-467-5277

Tom Snyder

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Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

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Biggs, Mike L SWL

From: George Acord Jr [georgejr@sfttackle.com]
Sent: Tuesday, September 16, 2008 9:01 AM
To: Biggs, Mike L SWL
Subject: White River Minimum Flow

I strongly support minimum flow, and ask that you assist in its implementation. This fishery will be harmed or lost without it.

Thank You, George Acord

Biggs, Mike L SWL

From: Gene Dunaway [gene.dunaway@gmail.com]
Sent: Wednesday, September 17, 2008 10:14 PM
To: gene.dunaway@gmail.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mike,

I think this is a good idea and I\'m upset that the power companies are holding this up for years. These are government agencies that are ignoring the needs of our local economies.

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Gene Dunaway
POB 539 209 S. Peabody
Mountain View

Biggs, Mike L SWL

From: Garold Lessig [gnlessig@yahoo.com]
Sent: Wednesday, September 17, 2008 4:57 PM
To: gnlessig@yahoo.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Garold Lessig
40 Cumberland Park Dr.
Conway, AR 72034

Biggs, Mike L SWL

From: Gabe Rubio [lonecedar@hotmail.com]
Sent: Tuesday, September 16, 2008 9:58 PM
To: lonecedar@hotmail.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

Biggs, Mike L SWL

From: Fitzgerald, Leiza A. [LAFITZGE@Gilchristclub.com]
Sent: Wednesday, September 10, 2008 9:02 AM
To: Biggs, Mike L SWL
Subject: Minimum Flow on the White River System

Mike,

I been a visitor to the White River once a year for the past five years and have experienced the good and bad times as it relates to the fishing. It is important to preserve and improve the native habitat with whatever means the state and federal authorities have available to them. Private business should also be willing to take the high road and do what is right for the environment. I do hope that you consider how much revenue tourism brings to your state and the jobs that it provides for your residents.

PLEASE implement the minimum flow on the White River System.

Leiza Fitzgerald
V.P. Membership Development
The Gilchrist Club
Corporate Offices
11101 Roosevelt Blvd N
St. Petersburg, Florida 33716
Direct: 727-803-4030
Fax: 727-823-6518
Lafitzge@gilchristclub.com
www.gilchristclub.com

Biggs, Mike L SWL

From: Edward Cochran [bcochran@kc.rr.com]
Sent: Wednesday, September 17, 2008 9:09 PM
To: Biggs, Mike L SWL
Subject: Minimum flow

Dear Mr. Biggs:
As one who has fished the White and Norfork rivers in Arkansas for many years I heartily recommend that minimum flow be initiated as soon as possible. I feel it will be an enormous benefit to the trout fishery .
Sincerely,
Edward B. Cochran

Biggs, Mike L SWL

From: Editorial Station #1 [mhoney@bransondailynews.com]
Sent: Tuesday, October 21, 2008 12:26 PM
To: Biggs, Mike L SWL
Subject: (no subject)

Please add me to your mailing list pertaining to the minimum flow study.
Also, if you have any other mailing lists, I would like to be added to those as well.
Thank You,
Mindy Honey
Branson Daily News Staff Writer

Biggs, Mike L SWL

From: ectree [ectree@comcast.net]
Sent: Tuesday, September 16, 2008 9:21 AM
To: Biggs, Mike L SWL
Subject: Minimum Flow White River

Dear Mr.Biggs: I strongly support minimum flow,and ask that you assist in its implementation.I live in Indiana but I vacation at least once a year on the White River from below Table Rock Dam to Branson MO.I have taken my sons there and also my grandsons,lets keep the river alive.

Thank you for any support,

Eldon Crabtree - Indiana Bass Federation Conservation Director

Biggs, Mike L SWL

From: Donna Alexander [dmalex@ozarkmountains.com]
Sent: Thursday, September 18, 2008 5:08 PM
To: Biggs, Mike L SWL
Subject: minimum flow project

Please help. Last week we had trout die after the water was completely shut off, after weeks of high water. We need minimum flow.

Thank you for your time,

Donna Alexander

WHY IS THE MINIMUM FLOW PROJECT IMPORTANT?

These comments are derived from concerned citizens who have the economic condition of our country at heart and in no way want to unnecessarily and irresponsibly spend taxpayer dollars. These same citizens realize the long term importance of the Minimum Flow project to one of our great natural resources and know the project is imperative to the long-term health of the White River System.

►Minimum Flow will positively impact the economy and natural resources for the United States and the state of Arkansas by expanding the already flourishing $160 million dollar tourism industry in Arkansas.

►Minimum Flow will improve dissolved oxygen in the river and water temperatures for downstream trout fisheries, increase wetted perimeters creating improved growth of aquatic plants, habitat, and food supply, and improve trout reproduction, while returning the river to a more natural state.

►The economic benefits according to the Corps of Engineers are a 77 to 1 cost to benefit ratio, irrefutably proving the benefits of the Minimum Flow project.

Biggs, Mike L SWL

From: Don Adams [onstream2@msn.com]
Sent: Monday, September 22, 2008 6:09 PM
To: onstream2@msn.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

The White and North Fork rivers have a large impact on my living both as a realtor and as a fishing guide. These rivers, besides having a major economic impact on our area, also provide much of my free time recreation and are a major reason that I live in the Mountain Home area. Naturally, I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS, now let\'s get minimum flow implemented. Trout fishing is no longer just a recreational convienence, it is big business, with huge economic impact. Let\'s make it all it can be by improving dissolved oxygen levels, along with minimum flow.

Sincerely,
Don Adams
P.O. Box 358
Bull Shoals, AR 72619

Biggs, Mike L SWL

From: djohnson [djohnson@pyatt.net]
Sent: Saturday, September 20, 2008 10:13 PM
To: Biggs, Mike L SWL
Cc: george.robbins@swpa.gov
Subject: White River

Attachments: Clear Day Bkgrd.JPG


Clear Day Bkgrd.JPG (6 KB)

Dear Sirs;
We would like to make our desires known concerning the White River and the minimum flow decision. We think it would be to the best advantages of the environment, terrain, tourism and to the general well being of the people of Arkansas to maintain a minimum flow in the White River.

It is truly a beautiful body of pure running water. We appreciate all you are doing to keep it like it has been enjoyed.
Sincerely,
Don Johnson
Dorothy Johnson
David Johnson

Biggs, Mike L SWL

From: Dennis Kidd [dennis@dkidds.com]
Sent: Saturday, September 20, 2008 6:50 PM
To: dennis@dkidds.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Dennis Kidd
1591 US Hwy 166
Caney, KS 67333

Biggs, Mike L SWL

From: Dennis Harvin [dcharvin@bellsouth.net]
Sent: Tuesday, September 16, 2008 7:23 AM
To: Biggs, Mike L SWL
Subject: White River minimum flow project

Dear Sir:

I strongly support the White River Minimum Flow project and ask that you assist in it's implementation...

Best regards,
Dennis Harvin

Dennis & Patti Harvin
dcharvin@bellsouth.net
(386)467-8969

Biggs, Mike L SWL

From: Dennis Galyardt [flyfishers@centurytel.net]
Sent: Wednesday, September 24, 2008 10:27 PM
To: flyfishers@centurytel.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Dennis Galyardt
HC 1 Box 1035
Tecumseh MO 65760

Biggs, Mike L SWL

From: Dearing, Timothy Col USAF ANG 134 ARW/CC [Timothy.Dearing@ang.af.mil]
Sent: Thursday, October 30, 2008 11:00 AM
To: Biggs, Mike L SWL
Subject: Minimum Flow Project

Mr Biggs,

I understand you have extend the comment period until Nov 3 reference the minimum flow on the White River. I would like you to know I applaud your efforts to increase water quality in Arkansas rivers and streams. I travel to Arkansas normally twice a year if not more with my twin boys to trout fish on the White River and the Little Red River. I understand that your SDEIS study finds that the Minimum Flow Projects on the North Fork and the White Rivers would improve water Quality, without negatively affecting the environment or the culture of the area.

What I find interesting in the SDEIS economic analysis that it suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I believe that the minimum flow on North Fork and White Rivers is imperative to maintain a quality habitat for our future generations of children. They deserve the opportunities to enjoy the rich rewards of fishing and the outdoors that I have treasured for so long. I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Col Tim Dearing
134 ARW
DSN 266-4080

"No arsenal, no weapon in the arsenals of the world, is so formidable as the will and moral courage of free men and women."
-- Ronald Reagan

Biggs, Mike L SWL

From: Davy Wotton [davyfly@ozarkmountains.com]
Sent: Friday, September 12, 2008 7:18 PM
To: george.robbins@swpa.gov
Cc: Biggs, Mike L SWL
Subject: Min Flow

Dear Sirs.

With concern regarding the welfare of our river systems.
Min flow as we well know is a very positive move forward, aside from the other issues we face related to water quality discharged into our rivers.

The content further of this email I fully support in its content. It is a ridiculous situation to say the least that there needs to be a pay off.

Sincerely

Davy Wotton

President Friends of the Norfork National Fish Hatchery
National Fishery Friends Partnership. DC
TU-FFF
American International Schools of Fly Fishing
Guide and Outfitter

www.davywotton.com

WHY IS THE MINIMUM FLOW PROJECT IMPORTANT?

These comments are derived from concerned citizens who have the economic condition of our country at heart and in no way want to unnecessarily and irresponsibly spend taxpayer dollars. These same citizens realize the long term importance of the Minimum Flow project to one of our great natural resources and know the project is imperative to the long-term health of the White River System.

►Minimum Flow will positively impact the economy and natural resources for the United States and the state of Arkansas by expanding the already flourishing $160 million dollar tourism industry in Arkansas.

►Minimum Flow will improve dissolved oxygen in the river and water temperatures for downstream trout fisheries, increase wetted perimeters creating improved growth of aquatic plants, habitat, and food supply, and improve trout reproduction, while returning the river to a more natural state.

►The economic benefits according to the Corps of Engineers are a 77 to 1 cost to benefit ratio, irrefutably proving the benefits of the Minimum Flow project.

PROPOSED BUY OUT FOR EMPIRE DISTRICT ELECTRIC

= ALMOST $34 MILLION

A $34 million payout to Empire District Electric is highway robbery to the United States government and ultimately to the taxpayers. The following information has been derived from Empire District Electric's 2007 annual report and information collected from the Federal Energy Regulatory Commission (FERC).

►Headwater Benefits Assessments paid by Empire District Electric from 1956-2007 total $900,846.00 which equals on the average $16,087.00 per year. Would it not be fair to pay empire that amount for the remaining 14 years of their FERC license? That total would be $225,218.00, considerably less than the $34 million they want.

►Per the SWPA study, Empire's loss of hydropower and capacity calculations have been based on a 50 year time frame. Since Ozark Beach Dam's FERC license is only good for another 14 years – to 2022, why would the cost be calculated based on 50 years when their license (FERC license number 2221) expires in 14 years? There is no guarantee that Empire's FERC license will be reissued particularly in light of the potential for other energy options to materialize. Is it legal or ethical for Congress to appropriate taxpayer dollars to pay Empire District Electric for future power that they are not yet licensed to market?

►According to Empire's annual report (pages 5 & 7), the hydroelectric generation from Ozark Beach represents only 1% of the total capacity to Empire District Electric. Empire Electric's generating plants total 1255 megawatts as of 12-31-07. Per Empire's report, the system reached a record high of 1173 megawatts on 8-15-07. The previous record was 1159 on 7-19-06. The winter demand maximum was 1159 megawatts set on 2-16-07. The previous year winter high was 1034 megawatts set on 1-31-06. Empire District Electric is not utilizing full facility megawatt capacity even if Ozark Beach's generating capacity were completely removed. How can Empire District Electric Company state that they will be harmed financially when they can operate profitably without the Ozark Beach facility?

►The Ozark Beach Dam was originally constructed in 1911. Do the current hydroelectric generators operate safely and efficiently? Is a dam that is nearly 100 years old, safe? In 2022, would it be prudent for the federal government to relicense the Ozark Beach facility based on its age? Would this dam withstand an earthquake? Was the dam constructed under any federal guidelines to insure its safety? Are reports of safety inspections readily available to the public? If the dam were relicensed today, would Minimum Flow be routinely incorporated into the licensing procedure?

►According to letters from the Federal Energy Regulatory Commission (FERC) to Empire District Electric Company, headwater benefit payments were waived for 2007 and 2003. Over the last 50 years, how often have headwater benefit payments from this privately owned company been waived by this federal agency and why? It appears from these same letters and attached head water benefits assessments that Empire is already receiving preferential treatment in the form of subsidies by avoiding the payment to FERC. Per Tom Snyder, Project Manager for Ozark Beach Dam, the facility can generate hydroelectric power when Bull Shoals Lake reaches 679' elevation. If Ozark Beach can generate power at a 679' elevation on Bull Shoals Lake, why can Empire District Electric claim a loss of head? While Empire may not operate maximally until they hit elevation 651', they have been operating under these same conditions since the opening of Bull Shoals Dam in 1953. If they have been accustomed to these operational conditions for the last 55 years how can Empire state they will experience a loss from the Minimum Flow project?

►Would it be prudent for Empire District Electric to provide proof of financial loss where they have had to buy power on the open market due to the inability to operate the Ozark Beach Dam? Is this proof that Empire has already been taking taxpayer dollars unnecessarily and proof again that the Minimum Flow buyout is yet another attempt to milk the taxpayers?

►Per Empire's 2007 annual report, by Empire's own admission, they have been hit hard by environmental conditions in recent months. According to their report there was $13 million cash on hand to meet the needs of these situations. Their report also states that they had well over $40 million in expenses from these events and by their own admission were hit hard. Does it not seem plausible that they are using the Minimum Flow project buyout as an opportunity to collect money from the United States taxpayers?

►Empire District Electric Company's stock is traded publicly on the New York Stock Exchange. According to page 27 of their 2007 Annual Report for Empire District Electric, common stock prices during 2006 and 2007 experienced a low and high of $20.25 to $26.13 respectively. Dividends paid per share during 2006 and 2007 were $0.32. As of December 31, 2006, Empire District Electric had $22.9 million of retained earnings to pay out for dividends followed by $17.2 million for 2007. The total dividends paid in 2007 were $39 million. During 2006 and 2007 the economy and environmental impacts in terms of droughts and ice storms had to affect Empire's bottom line, yet in spite of these conditions, they still were able to pay $39 million in dividends to their shareholders. If in poor economic and environmental conditions Empire District Electric was still able to make huge dividend payments how can they substantiate a financial loss from the Minimum Flow project?

►Per Empire's 2007 annual report, gross operating revenues from Ozark Beach Dam were: 2005 - $1.447 million, 2006 - $1.843 million, 2007 - $1.879 million. There was clearly a drought that occurred in 2006. If they are still generating gross revenues in these amounts from this small hydroelectric dam in drought environments, how can they say the Minimum Flow project is going to cause them any loss of revenue whatsoever?

PROPOSED $87 MILLION FEDERAL GOVERNMENT DEBT REDUCTION TO SOUTHWEST POWER ADMINISTRATION

It appears as though Southwest Power Administration has been charged with having to supply the "for profit" electric cooperatives with cheap power to resell.

►Although SWPA claims to be a federal agency, why are they concerned with selling cheap power when they technically work for the taxpayers of this country? Should it not be the responsibility of the "for profit" electric companies to acquire their own additional electricity from the free market without it being given to them at a reduced rate by the government? Based on SWPA's actions and their financial reports, is it not then fair to assume that SWPA is a nonfederal agency instead of a federal agency? If they are truly a government agency charged with simply managing 24 U.S. owned hydroelectric dams, why does it appear that they are in the business of making money and why would a Minimum Flow project on a section of the White River in Arkansas afford them the luxury of collecting nearly $87 million from taxpayers?

►According to Southwest Power Administration (SWPA), Bull Shoals and Norfork Dams were brought on line in 1953 and 1944, respectively. If they were originally mortgaged for 50 years, shouldn't the mortgages be completely paid off by now? If both of the dams are assumed as "free and clear", shouldn't the Minimum Flow project only be charged a fair percentage of operation and maintenance expenses associated only with Minimum Flows, based on best business practices in the energy industry?

►SWPA made a profit in spite of a 17 month drought in 2005-2006. In a drought environment, if SWPA is operating profitably, how can Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation? It may not be generated at peak periods but some of that power can still be sold for profit.

GENERAL COMMENTS ON THE REPORT COMPLETED BY SOUTHWEST POWER ADMINISTRATION AS IT AFFECTS THEIR DEBT REDUCTION TO THE FEDERAL GOVERNMENT AND THE BUY OUT TO

EMPIRE DISTRICT ELECTRIC

According to the SWPA report, energy and capacity losses were calculated utilizing the Platts and FERC methods. This appears to be a little like the overweight woman who weighs herself on a variety of scales and chooses the weight that is most flattering. Is it prudent to assume that the methods used for calculating energy losses and capacity losses should be the same?

► When was the agreement made and who authorized this agreement between the Corps and SWPA to use the 50 year time frame and the Platts and FERC methods? Congress ordered SWPA in February 2006 to begin the study on the Empire District Electric buy out. Why were agreements between SWPA and the Corps made in October of 2005 before receiving Congressional orders in February 2006? Why would Mr. George Robbins with SWPA state that he was "forced to use both methods", referring to the Platts and FERC methods?

►The Federal Power Commission regulates electric power and energy generated at reservoir projects controlled by the Department of the Army. What method of calculation to determine energy and capacity loss do they utilize or recommend? Is it FERC, Platts, or something else? Would best business practice be to use what FPC recommends in determining losses for both SWPA and Empire's buy out calculations? As the Federal Power Commission requires the Department of the Army, the Secretary of the Army, and the Secretary of the Interior to transmit and dispose of power and energy in the most widespread use and at the lowest rate possible to the consumers consistent with sound business principles, the Minimum Flow project should be evaluated on the same basis. Because it's plausible that SWPA cannot be completely fair and unbiased in their economic calculations, would it be prudent to have the Federal Power Commission or some independent source, review the processes by which SWPA determined the losses to Empire District Electric and themselves?

►It appears as though worst case scenarios and drought environmental conditions were used to calculate all energy and capacity losses for both SWPA and Empire District Electric. When SWPA calculated energy losses what was the basis of these calculations? For example, page 12 of the SWPA annual report shows estimated average annual energy produced by Bull Shoals Dam of 785 million kWh. What period of years was this particular number averaged over? What percentage of this estimated average annual energy will Minimum Flow cause SWPA to lose? To look at SWPA's annual report on actual net energy production, one has to wonder how did they calculate an average estimation and thus how did they determine what they say will be lost from the Minimum Flow project? Did SWPA, in this reporting process, use to their benefit and Empire's benefit, figures and calculations that would profit them financially and drive up the cost of the Minimum Flow project, to the detriment of the taxpayers? Do we have the fox watching the hen houses?

►According to page 14 of SWPA's annual report, during 2003 through 2006 SWPA shows unused supplemental and excess energy. Therefore, since they had an abundance of energy even in the 17 month drought period during 2005 and 2006, this seems to indicate that they would not have been forced to buy power on the open market. Since Minimum Flow affords additional water usage this emphasizes the point that they would not incur any financial losses or experience the need to purchase additional power on the open market due to Minimum Flows.

►According to SWPA's annual report (pages 17,19, & 21), during fiscal years 2004, 2005, 2006 from the details of billings to customers (indicating they *are* issuing bills and collecting money, thus a "for profit" business), the kilowatt capacity sold was the same for all three years, in spite of the drought that occurred in 2005-2006. How will Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation, even in drought years?

►Per SWPA's statement of cash flows (page 26) in their annual report, they had $36 million on hand at the end of a drought year. What average American business wouldn't love to clear the year with an extra $36 million?

►Per George Robbins in the SWPA study, energy losses were calculated utilizing on peak energy replacement costs only. Since generation can occur at on and off peak times shouldn't on and off peak rates be utilized?

►The seasonal power pools on Bull Shoals and Norfork Lakes were implemented without Congressional orders. If an agreement of this magnitude was easily attained without Congressional orders, why have the Minimum Flow project proponents been required to jump through bureaucratic hoops? Based on this fact is it safe to consider that there must be a *special relationship* between Southwest Power Administration and some division of the Corps of Engineers?

►The established drought of record occurred in 1928 prior to the construction of any federal dam on the White River system. Southwest Power Administration utilized this 1928 drought of record to simulate energy and capacity losses for both lakes. Since the opening of the Bull Shoals and Norfork Dams when have droughts and floods occurred? Would it be more appropriate to use an average of these scenarios to calculate the energy and capacity losses rather than the use of *worst* case scenarios?

► Why does the natural resource (rainwater) that falls freely from the sky and would fulfill the water required for minimum flows, that belongs to the taxpayers, become a commodity that can be bought and sold by private companies on the open market? Why would one governmental agency pay another governmental agency for a resource or product that falls freely from the sky and doesn't cost anyone anything?

► The bottom line is the power companies don't want to give up control of these hydropower plants and the huge profits associated with them even though the Minimum Flow Project would benefit the American people. Is this not more government *pork spending* to pay off crying, profitable power companies because they are losing some control of how water is released from these hydroelectric dams leaving the taxpayers to pay $87 million to a supposed federal power company, Southwest Power Administration, and $34 million to a privately owned "for profit" power company, Empire District Electric? It is ludicrous for the taxpayers to pay either of these greedy power companies anything.

Biggs, Mike L SWL

From: David Simmons [dsimmons@flwoutdoors.com]
Sent: Wednesday, September 10, 2008 11:06 AM
To: Biggs, Mike L SWL
Subject: Minimum Flow Project

I am voicing my opinion as a tourist, outdoorsman, and conservationist that I am IN FAVOR of the Minimum Flow restoration project that will return the White River more nearly to its original state!

David Simmons

FLW Outdoors

30 Gamble Lane

Benton, KY 42025

O] 270.252.1565

C] 270.205.6915

F] 270.252.1001

www.fantasyfishing.com

Biggs, Mike L SWL

From: David Games [dgames18@cox.net]
Sent: Thursday, September 18, 2008 8:58 AM
To: dgames18@cox.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
David Games
10241 South Quebec Ave
Tulsa, OK 74137

Biggs, Mike L SWL

From: David Freeman [gdfree@cebridge.net]
Sent: Wednesday, September 17, 2008 11:17 AM
To: gdfree@cebridge.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

Please proceed (the sooner the better) with the minimum flow project.

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
David Freeman
416 N Main
Rector, Arkansas 72461

Biggs, Mike L SWL

From: dave swartz [swartz-y@hotmail.com]
Sent: Thursday, September 18, 2008 8:18 AM
To: Biggs, Mike L SWL
Subject: white river

i strongly support minimum flow,and ask that you assist in its implementation. dave swartz co.tbf

---

Biggs, Mike L SWL

From: Danny Lynch [xs8444@ipa.net]
Sent: Thursday, September 18, 2008 9:38 AM
To: xs8444@ipa.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Danny Lynch
12 Brentwood Ct.
Fort Smith, AR 72908

Biggs, Mike L SWL

From: Danny Burleson [dburleson@educatorsbook.com]
Sent: Wednesday, September 17, 2008 9:33 AM
To: dburleson@educatorsbook.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Sincerely,
Danny Burleson
6700 Sloane Dr.
Little Rock, Ar. 72206

Biggs, Mike L SWL

From: Dan Dieter [danldieter@yahoo.com]
Sent: Wednesday, September 17, 2008 9:38 PM
To: danldieter@yahoo.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Dan Dieter
6600 West 77th St
Overland Park, KS 66204

Biggs, Mike L SWL

From: D Cooke [debicooke@hotmail.com]
Sent: Wednesday, September 17, 2008 10:09 AM
To: debicooke@hotmail.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
D Cooke
1918 Fuller
Mtn Home,AR 72653

Biggs, Mike L SWL

From: Cliff Cain [cliffcain@hotmail.com]
Sent: Wednesday, September 17, 2008 4:52 PM
To: cliffcain@hotmail.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I am in support of all projects to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, and improve the quality of the environment for fish, and fishermen, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. I for one will be more likely to increase the number of trips I make to the area with more opportunities for quality fishing. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as many benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

My thanks to both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you have done to complete this invaluable study.

Sincerely,
Cliff Cain
4922 W 155th Ter
Overland Park, KS, 66224

Biggs, Mike L SWL

From: claypart@host208.hostmonster.com
Sent: Saturday, September 20, 2008 7:41 AM
To: Mikermarshall @comcaast.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Mike Marshall
7232 Neshoba Cir
Gertmantown Tenn

Biggs, Mike L SWL

From: Clay Parton [cparton01@yahoo.com]
Sent: Monday, September 15, 2008 4:28 PM
To: cparton01@yahoo.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwests Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

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keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Clay Parton
573 MC 3029
Yellville, AR 72687

Biggs, Mike L SWL

From: Chris Kopp [ckopp@winrock.org]
Sent: Wednesday, September 17, 2008 12:01 PM
To: ckopp@winrock.org; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Sincerely,
Chris Kopp
2331 Hwy 60 East
Bigelow, AR 72016

Biggs, Mike L SWL

From: Chris Jackson [riversideretreat@centurytel.net]
Sent: Tuesday, September 16, 2008 7:41 PM
To: riversideretreat@centurytel.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Chris Jackson
205 River Valley Trail
Norfork, AR 72658

Biggs, Mike L SWL

From: charles@newlands.com
Sent: Thursday, September 18, 2008 9:58 AM
To: Biggs, Mike L SWL
Subject: White River Minimum Flow

Hello Mr Biggs,

Just a few minutes ago, I send an email before I had edited it to my satisfaction. I think what I really wish to say is the following:

I am writing to urge your support to ensure the White River Minimum Flow Project will soon become reality.

This nagging problem (not having a minimum water flow) has been a "thorn in our side" for many, many years.

Basically for me, it boils down to this: All the efforts for years at placing and maintaining trout (that require cold water) in the White River (due to mitigation of placing dams on the White River) can be (and often is) wiped out in just a few days of what we call "dead-low" water (and I mean this literally). There is just not enough water coming out of Bull Shoals Dam to remain cold. And it soon warms up, and kills the trout.

I understand there has sprung up some big “buy out” involving utility companies. This sure does seem strange to me, and highly unwarranted, as the amount of water involved is minimal.

Your support of this project is deeply appreciated.

Sincerely,

Charles Newland - Owner, Alvin Ross - Manager
Newlands Lodge, Float Trips & Conference Center
295 River Road Lakeview Arkansas 72642
(800) 334-5604 (870) 431-5678/5604/8626(fax)
www.newlands.com charles@newlands.com

Biggs, Mike L SWL

From: charles h. anderson [canderson@engineeringservices.com]
Sent: Wednesday, September 17, 2008 8:24 AM
To: canderson@engineeringservices.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Sincerely,
charles h. anderson
13987 hickory trace
fayetteville, ar. 72704

Biggs, Mike L SWL

From: Charles C. Orvis [corvis@centurytel.net]
Sent: Monday, September 15, 2008 9:03 PM
To: corvis@centurytel.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Charles C. Orvis

242 Wheatstone Place
Cotter, AR 72626

Biggs, Mike L SWL

From: Carla Reus [creus@tampabay.rr.com]
Sent: Tuesday, September 16, 2008 11:15 AM
To: mike.l.biggs@usace.army,mil
Subject: White Flow

I stringly support the minimum flow and ask that you assist in its implementation

Bill Reus

Biggs, Mike L SWL

From: Capt.. James Smith (USCG) Retired [jamsmith46@hotmail.com]
Sent: Tuesday, September 16, 2008 10:56 AM
To: jamsmith46@hotmail.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I OPPOSE efforts to increase water levels on the NORTH FORK RIVER. Your SDEIS is not accurate as it is related to the CURRENT staus of the Norfork River. Since the April floods, the bank stability of the NORFORK has deteriorated to the point that any changes in the stream flow will effect the stability of the fragile banks.. Minimum flow would creat addition water for additional boat traffic, which will create additional wave action that will cause undercutting to the sandy loamy soil. This will cause additional and more pronounced collapsing of the high banks resulting in siltation, loss of landowner property and deteriorate the aquadic habitat.

No one has considered the safety of boaters on the Norfork River after min flow is implimented. I observe many boats trying to navigate the shoals at the first island going up the Norfork. They try it now with only 3 inches of water, give them 6-9 more inches and more obats will try to negotiate the shoals. Destruction of the shoals and an increased danger to the boaters will be a result. We currently lose an average of 29 boats per year on the Norfork due to capsizing. Your increase of flow will increase the traffic of power boats and non power boats to the extent that navigating or wading the Norfork will put lives at risk. This is a VERY SMALL and fragile river. It is fine the way it is. Minimum flow will only bring harm to the river and the environment.

Finally, it will NOT bring colder water to the Norfork. A few degrees will NOT help to incrrease the fishery. Face it, the purpose of the min flow on the Norfork is to decrease the water on the White River from Norfork to Calico Rock. This is a high price to pay. Who pays? The people and business along the Norfork and very possibly the North Fork River itself.

Put min flow on the White, but leave it off the Norfork!!!!!!!!!!

Sincerely,
Capt.. James Smith (USCG) Retired

57 River Ridge Rd
Norfork, AR 72658

Biggs, Mike L SWL

From: Bryce Harrison [bharrison@theretailzone.com]
Sent: Wednesday, September 10, 2008 2:25 PM
To: Biggs, Mike L SWL
Subject: Please don't mess with our Trout Waters!

WHY IS THE MINIMUM FLOW PROJECT IMPORTANT?
>
> These comments are derived from concerned citizens who have the economic condition of our country at heart and in no way want to unnecessarily and irresponsibly spend taxpayer dollars. These same citizens realize the long term importance of the Minimum Flow project to one of our great natural resources and know the project is imperative to the long-term health of the White River System.
>
> ?Minimum Flow will positively impact the economy and natural resources for the United States and the state of Arkansas by expanding the already flourishing $160 million dollar tourism industry in Arkansas.
>
> ?Minimum Flow will improve dissolved oxygen in the river and water temperatures for downstream trout fisheries, increase wetted perimeters creating improved growth of aquatic plants, habitat, and food supply, and improve trout reproduction, while returning the river to a more natural state.
>
> ?The economic benefits according to the Corps of Engineers are a 77 to 1 cost to benefit ratio, irrefutably proving the benefits of the Minimum Flow project.
>
> PROPOSED BUY OUT FOR EMPIRE DISTRICT ELECTRIC
>
> = ALMOST $34 MILLION
>
> A $34 million payout to Empire District Electric is highway robbery to the United States government and ultimately to the taxpayers. The following information has been derived from Empire District Electric's 2007 annual report and information collected from the Federal Energy Regulatory Commission (FERC).
>
> ?Headwater Benefits Assessments paid by Empire District Electric from 1956-2007 total $900,846.00 which equals on the average $16,087.00 per year. Would it not be fair to pay empire that amount for the remaining 14 years of their FERC license? That total would be $225,218.00, considerably less than the $34 million they want.
>
> ?Per the SWPA study, Empire's loss of hydropower and capacity calculations have been based on a 50 year time frame. Since Ozark Beach Dam's FERC license is only good for another 14 years - to 2022, why would the cost be calculated based on 50 years when their license (FERC license number 2221) expires in 14 years? There is no guarantee that Empire's FERC license will be reissued particularly in light of the potential for other energy options to materialize. Is it legal or ethical for Congress to appropriate taxpayer dollars to pay Empire District Electric for future power that they are not yet licensed to market?
>
> ?According to Empire's annual report (pages 5 & 7), the hydroelectric generation from Ozark Beach represents only 1% of the total capacity to Empire District Electric. Empire Electric's generating plants total 1255 megawatts as of 12-31-07. Per Empire's report, the system reached a record high of 1173 megawatts on 8-15-07. The previous record was 1159 on 7-19-06. The winter demand maximum was 1159 megawatts set on 2-16-07. The previous year winter high was 1034 megawatts set on 1-31-06. Empire District Electric is not utilizing full facility megawatt capacity even if Ozark Beach's generating capacity were completely removed. How can Empire District Electric Company state that they will be harmed financially when they can operate profitably without the Ozark Beach facility?
>
> ?The Ozark Beach Dam was originally constructed in 1911. Do the current hydroelectric generators operate safely and efficiently? Is a dam that is nearly 100 years old, safe? In 2022, would it be prudent for the federal government to re-license the Ozark Beach facility based on its age? Would this dam withstand an earthquake? Was the dam constructed under any federal guidelines to insure its safety? Are reports of safety inspections readily available to the public? If the dam were relicensed today, would Minimum Flow be routinely incorporated into the licensing procedure?
>
> ?According to letters from the Federal Energy Regulatory Commission (FERC) to Empire District Electric Company, headwater benefit payments were waived for 2007 and 2003. Over the last 50 years, how often have headwater benefit payments from this privately owned company been waived by this federal agency and why? It appears from these same letters and attached head water benefits assessments that Empire is already receiving preferential treatment in the form of subsidies by avoiding the payment to FERC. Per Tom Snyder, Project Manager for Ozark Beach Dam, the facility can generate hydroelectric power when Bull Shoals Lake reaches 679' elevation. If Ozark Beach can generate power at a 679' elevation on Bull Shoals Lake, why can Empire District Electric claim a loss of head? While Empire may not operate maximally until they hit elevation 651', they have been operating under these same conditions since the opening of Bull Shoals Dam in 1953. If they have been accustomed to these operational conditions for the last 55 years how can Empire state they will experience a loss from the Minimum Flow project?
>
> ?Would it be prudent for Empire District Electric to provide proof of financial loss where they have had to buy power on the open market due to the inability to operate the Ozark Beach Dam? Is this proof that Empire has already been taking taxpayer dollars unnecessarily and proof again that the Minimum Flow buyout is yet another attempt to milk the taxpayers?
>
> ?Per Empire's 2007 annual report, by Empire's own admission, they have been hit hard by environmental conditions in recent months. According to their report there was $13 million cash on hand to meet the needs of these situations. Their report also states that they had well over $40 million in expenses from these events and by their own admission were hit hard. Does it not seem plausible that they are using the Minimum Flow project buyout as an opportunity to collect money from the United States taxpayers?

>
> ?Empire District Electric Company's stock is traded publicly on the New York Stock Exchange. According to page 27 of their 2007 Annual Report for Empire District Electric, common stock prices during 2006 and 2007 experienced a low and high of $20.25 to $26.13 respectively. Dividends paid per share during 2006 and 2007 were $0.32. As of December 31, 2006, Empire District Electric had $22.9 million of retained earnings to pay out for dividends followed by $17.2 million for 2007. The total dividends paid in 2007 were $39 million. During 2006 and 2007 the economy and environmental impacts in terms of droughts and ice storms had to affect Empire's bottom line, yet in spite of these conditions, they still were able to pay $39 million in dividends to their shareholders. If in poor economic and environmental conditions Empire District Electric was still able to make huge dividend payments how can they substantiate a financial loss from the Minimum Flow project?
>
> ?Per Empire's 2007 annual report, gross operating revenues from Ozark Beach Dam were: 2005 - $1.447 million, 2006 - $1.843 million, 2007 - $1.879 million. There was clearly a drought that occurred in 2006. If they are still generating gross revenues in these amounts from this small hydroelectric dam in drought environments, how can they say the Minimum Flow project is going to cause them any loss of revenue whatsoever?
>
> PROPOSED $87 MILLION FEDERAL GOVERNMENT DEBT REDUCTION TO SOUTHWEST POWER ADMINISTRATION
>
> It appears as though Southwest Power Administration has been charged with having to supply the "for profit" electric cooperatives with cheap power to resell.
>
> ?Although SWPA claims to be a federal agency, why are they concerned with selling cheap power when they technically work for the taxpayers of this country? Should it not be the responsibility of the "for profit" electric companies to acquire their own additional electricity from the free market without it being given to them at a reduced rate by the government? Based on SWPA's actions and their financial reports, is it not then fair to assume that SWPA is a nonfederal agency instead of a federal agency? If they are truly a government agency charged with simply managing 24 U.S. owned hydroelectric dams, why does it appear that they are in the business of making money and why would a Minimum Flow project on a section of the White River in Arkansas afford them the luxury of collecting nearly $87 million from taxpayers?
>
> ?According to Southwest Power Administration (SWPA), Bull Shoals and Norfork Dams were brought on line in 1953 and 1944, respectively. If they were originally mortgaged for 50 years, shouldn't the mortgages be completely paid off by now? If both of the dams are assumed as "free and clear", shouldn't the Minimum Flow project only be charged a fair percentage of operation and maintenance expenses associated only with Minimum Flows, based on best business practices in the energy industry?
>
> ?SWPA made a profit in spite of a 17 month drought in 2005-2006. In a drought environment, if SWPA is operating profitably, how can Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation? It may not be generated at peak periods but some of that power can still be sold for profit.
>
> GENERAL COMMENTS ON THE REPORT COMPLETED BY SOUTHWEST POWER ADMINISTRATION AS IT AFFECTS THEIR DEBT REDUCTION TO THE FEDERAL GOVERNMENT AND THE BUY OUT TO
>
> EMPIRE DISTRICT ELECTRIC
>
> According to the SWPA report, energy and capacity losses were calculated utilizing the Platts and FERC methods. This appears to be a little like the overweight woman who weighs herself on a variety of scales and chooses the weight that is most flattering. Is it prudent to assume that the methods used for calculating energy losses and capacity losses should be the same?
>
> ? When was the agreement made and who authorized this agreement between the Corps and SWPA to use the 50 year time frame and the Platts and FERC methods? Congress ordered SWPA in February 2006 to begin the study on the Empire District Electric buy out. Why were agreements between SWPA and the Corps made in October of 2005 before receiving Congressional orders in February 2006? Why would Mr. George Robbins with SWPA state that he was "forced to use both methods", referring to the Platts and FERC methods?
>
> ?The Federal Power Commission regulates electric power and energy generated at reservoir projects controlled by the Department of the Army. What method of calculation to determine energy and capacity loss do they utilize or recommend? Is it FERC, Platts, or something else? Would best business practice be to use what FPC recommends in determining losses for both SWPA and Empire's buy out calculations? As the Federal Power Commission requires the Department of the Army, the Secretary of the Army, and the Secretary of the Interior to transmit and dispose of power and energy in the most widespread use and at the lowest rate possible to the consumers consistent with sound business principles, the Minimum Flow project should be evaluated on the same basis. Because it's plausible that SWPA cannot be completely fair and unbiased in their economic calculations, would it be prudent to have the Federal Power Commission or some independent source, review the processes by which SWPA determined the losses to Empire District Electric and themselves?
>
> ?It appears as though worst case scenarios and drought environmental conditions were used to calculate all energy and capacity losses for both SWPA and Empire District Electric. When SWPA calculated energy losses what was the basis of these calculations? For example, page 12 of the SWPA annual report shows estimated average annual energy produced by Bull Shoals Dam of 785 million kWh. What period of years was this particular number averaged over? What percentage of this estimated average annual energy will Minimum Flow cause SWPA to lose? To look at SWPA's annual report on actual net energy production, one has to wonder how did they calculate an average estimation and thus how did they determine what they say will be lost from the Minimum Flow project? Did SWPA, in this reporting process, use to their benefit and Empire's benefit, figures and calculations that would profit them financially and drive up the cost of the Minimum Flow project, to the detriment of the taxpayers? Do we have the fox watching the hen houses?
>
> ?According to page 14 of SWPA's annual report, during 2003 through 2006 SWPA shows unused supplemental and excess energy. Therefore, since they had an abundance of energy even in the 17 month drought period during 2005 and 2006, this seems to indicate that they would not have been forced to buy power on the open market. Since Minimum Flow affords additional water usage this emphasizes the point that they would not incur any financial losses or experience the need to purchase additional power on the open market due to Minimum Flows.
>
> ?According to SWPA's annual report (pages 17,19, & 21), during fiscal years 2004, 2005, 2006 from the details of billings to customers (indicating they are issuing bills and collecting money, thus a "for profit" business), the kilowatt capacity sold was the same for all three years, in spite of the drought that occurred in 2005-2006. How will Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation, even in drought years?
>
> ?Per SWPA's statement of cash flows (page 26) in their annual report, they had $36 million on hand at the end of a drought year. What average American business wouldn't love to clear the year with an extra $36 million?
>

> ?Per George Robbins in the SWPA study, energy losses were calculated utilizing on peak energy replacement costs only. Since generation can occur at on and off peak times shouldn't on and off peak rates be utilized?
>
> ?The seasonal power pools on Bull Shoals and Norfork Lakes were implemented without Congressional orders. If an agreement of this magnitude was easily attained without Congressional orders, why have the Minimum Flow project proponents been required to jump through bureaucratic hoops? Based on this fact is it safe to consider that there must be a special relationship between Southwest Power Administration and some division of the Corps of Engineers?
>
> ?The established drought of record occurred in 1928 prior to the construction of any federal dam on the White River system. Southwest Power Administration utilized this 1928 drought of record to simulate energy and capacity losses for both lakes. Since the opening of the Bull Shoals and Norfork Dams when have droughts and floods occurred? Would it be more appropriate to use an average of these scenarios to calculate the energy and capacity losses rather than the use of worst case scenarios?
>
> ? Why does the natural resource (rainwater) that falls freely from the sky and would fulfill the water required for minimum flows, that belongs to the taxpayers, become a commodity that can be bought and sold by private companies on the open market? Why would one governmental agency pay another governmental agency for a resource or product that falls freely from the sky and doesn't cost anyone anything?
>
> ? The bottom line is the power companies don't want to give up control of these hydropower plants and the huge profits associated with them even though the Minimum Flow Project would benefit the American people. Is this not more government pork spending to pay off crying, profitable power companies because they are losing some control of how water is released from these hydroelectric dams leaving the taxpayers to pay $87 million to a supposed federal power company, Southwest Power Administration, and $34 million to a privately owned "for profit" power company, Empire District Electric? It is ludicrous for the taxpayers to pay either of these greedy power companies anything.

------ End of Forwarded Message

Biggs, Mike L SWL

From: Bryant, Tommy [Tommy.Bryant@kellogg.com]
Sent: Tuesday, September 30, 2008 3:23 PM
To: Biggs, Mike L SWL
Subject: Minimum Water Flow

Attachments: Blank Bkgrd.gif

Blank Bkgrd.gif (368 B)

Mr.. Biggs,

I support the concept of the minimum water flow in trout water below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.
I sounds like to me they are taking advantage of the American people!

Thank you!

Tommy Bryant
Kellogg's FAFH
107 Stoney Brook Lane
Beebe, AR 72012

web site www.kelloggsfoodawayfromhome.com
Phone 501-882-2534
Cell 501-831-2432
Fax 501-882-7481

Biggs, Mike L SWL

From: Bruce Keen [bkeen101@aol.com]
Sent: Friday, September 19, 2008 9:56 AM
To: bkeen101@aol.com; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Bruce Keen
1333 S. Cottonwood Lane
Bartlesville, OK 74003

Biggs, Mike L SWL

From: Brant Hamilton [brhamilton@centurytel.net]
Sent: Tuesday, September 16, 2008 6:02 AM
To: Biggs, Mike L SWL
Subject: Minimum flow support

Dear Mr. Biggs,

I have been a resident of Baxter county for 15 years. I moved to the area primarily for the excellent water resources and low population density. I have followed the evolution of the minimum flow proposal since its inception. I actually thought the issue had been decided upon two years ago.

Over the past five or six years I have seen the quality and quantity of trout in the White and North Fork river systems deteriorate. I don't know if the minimum flow will restore the fishery as a stand alone measure. I do believe that having a minimum flow in place will help the rivers achieve a more natural stream environment. I strongly recommend proceeding with the project.

Sincerely,

Brant Hamilton

7774 Push Mtn. Road

Norfork, AR

72658

870-499-5505

Biggs, Mike L SWL

From: Brad Colvard [lexusbradley@cox.net]
Sent: Tuesday, September 16, 2008 8:56 AM
To: lexusbradley@cox.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,
Brad Colvard
3437 E. 75th Street
Tulsa, OK 74136

Biggs, Mike L SWL

From: Bob Bohnsack [bobbohn54@hotmail.com]
Sent: Wednesday, October 08, 2008 5:10 AM
To: Biggs, Mike L SWL
Subject: Minimum Water Flow

Dear Mr. Biggs:

I support the concept of minimum water flows in trout waters below the dams. But the utiity companies involved with the dams have attached what I consider to be outrageous sums of money for implementation.

Please investigate the utility companies purported costs.

Sincerely,
Bob Bohnsack
2669 Hopper Road
Cape Girardeau, MO 63701

Biggs, Mike L SWL

From: Bill Pettit [troutman@centurytel.net]
Sent: Thursday, September 18, 2008 10:44 AM
To: troutman@centurytel.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Bill Pettit
P.O. Box 15
Cotter, AR 72626

Biggs, Mike L SWL

From: Biggs, Mike L SWL
Sent: Wednesday, October 22, 2008 12:25 PM
To: 'Joe and Sharon Berfanger'
Subject: RE: White River Minimum Flow Reallocation Study

Good morning Mr. Berfanger,
Thank you for your interest in the White River Minimum Flows Study. I have saved your questions, we are compiling all public comments, we officially respond to all significant public comments following the close of the public comment period. The public comment period ends 3 November 2008.

With regards to your questions below:
Q1: Are there contingency plans for flooding conditions?
A1: Yes, we have Feasibility Level commitment for a drought contingency plan. After the Record of Decision is signed the Feasibility phase will conclude and we will enter the Preconstruction Engineering & Design phase (PED). During PED, the Memorandum of Agreement (MOA) between the Corps of Engineers and the Arkansas Game and Fish will be developed and signed. Part of the development of the MOA includes specific operation plans, including the drought contingency plan. The White River Minimum Flows drought contingency plan will follow and comply with the existing Corps of Engineers drought contingency plan. Our White River Master Manual and the Bull Shoals and Norfork Dam operation manuals will be edited to include the White River Minimum Flows drought contingency plan.

Q2: Will "Sand Island" remain a viable recreation area?
A2: The proposed White River Minimum Flows operation plan will not impact the sediment load entering Nofork Lake. The hydrologic and hydraulic mechanisms that cause sand to be deposited in the upper reaches of Nofork Lake will still occur with the White River Minimum Flows operation. Without further information concerning exact location of "Sand Island", it's elevation, who maintains visitation & maintenance records, and who owns the "Sand Island" I can't speculate on current or future recreation at the area. However, it is logical to speculate that the island will still form as a normal function of sediment deposition resulting form running water with a sediment load entering a reservoir.

Q3: What constitutes "minimum flow" compared to the output when one generator is running?
A3: The target "minimum flow" for Norfork is 300 cfs. A single generator's release at Norfork depends on the difference between the head water elevation and tailwater elevation (known as head). So a main generator releases between 2,000 cfs and 4,000 cfs depending on available head and electrical demand. The minimum flow target release of 300 cfs is not large enough to spin the main turbines and will be release through the existing Station Service Unit and a new Siphon System.

Q4: Will the river below Norfork Dam be accessible to "wade fishermen" when "minimum flow" is implemented?
A4: Yes. During the White River Minimum Flows test releases it was determined that the tailwater would be about 6-inches higher with the minimum flows release. Also, input from the general public (mostly fishermen of all types) that participated in the test releases were enthusiastic and supportive of the minimum flows operation. There were a few anti minimum flows comments, but the vast majority of comments were positive.

Regards
Michael L. Biggs, P.E.
Water Resource Manager
Planning & Environmental Office
Little Rock District Corps of Engineers
phone: (501) 324-7342
fax: (501) 324-5605

From: Joe and Sharon Berfanger [mailto:joesha@suddenlink.net]
Sent: Wednesday, October 22, 2008 11:40 AM

To: Biggs, Mike L SWL
Cc: bayouresort@centurytel.net
Subject: White River Minimum Flow Reallocation Study

Concerning the Environmental Impact Study for Norfork Lake:
Are there contingency plans for extended drought periods?

Are there contingency plans for flooding conditions?

Will "Sand Island" remain a viable recreation area?

Concerning the river at Norfork Dam:

What constitutes "minimum flow" compared to the output when one generator is running?

Will the river below Norfork Dam be accessible to "wade fishermen" when "minimum flow" is implemented?

Thank you for your attention to these questions,

Joe Berfanger
37 Pheasant Run Ct.
Mountain Home, AR 72653

Biggs, Mike L SWL

From: Biggs, Mike L SWL
Sent: Thursday, October 16, 2008 3:37 PM
To: 'bayouresort@centurytel.net'
Cc: Carman, Ron R SWL; 'George Robbins'
Subject: FW: Minimum Flow Question

Good afternoon Mr. Egan,

In response to your question below,

"I have a question concerning the WR Minimum Flow SDEIS.
Table 4.3.1.1-1 Annual Pool Elevation-Duration for Elevations of Interest *pg 4-6 and* ***Table 4.3.1.2-1 Annual Pool Elevation-Duration for Elevations of Interest*** *pg 4-10 both show in footnote 3 that the proposed seasonal pool duration would be one month longer then the current seasonal pool duration in footnote 2.*

Is footnote 3 correct?
If correct, where did you account for this change in the impact modeling?
If not correct, how will you fix the error?

The answer is **NO**, the seasonal pool duration for the proposed White River Minimum Flows operation is no longer or shorter than the current seasonal pool operation.

The data used to populate Tables 4.3.1.1-1 and 4.3.1.2-1 were developed using the SUPER model. SUPER model runs W01X01 for the current operation plan and W06X03 for the proposed White River Minimum Flows operation plan included seasonal pool guide curves. In both runs, there are NO changes to the seasonal pool transition dates. The footnote is a

type-o and will be corrected in the Final Supplemental Environmental Impact Statement. The only changes to the seasonal pool curves are the elevations, for Bull Shoals there is a 5-foot incremental increase to the seasonal pool and for Norfork there is a 1.75-foot increase to the seasonal pool. There are no changes in the timing for seasonal pool transitions for the White River Minimum Flows operation plan.

As stated in all of our prior correspondences, thank you for your continued interest in the White River Minimum Flows Project. I have saved your questions for inclusion in the public record as well as the Corps response to your questions.

Michael L. Biggs, P.E.
Water Resource Manager
Planning & Environmental Office
Little Rock District Corps of Engineers
phone: (501) 324-7342
fax: (501) 324-5605

From: Bayou Resort [mailto:bayouresort@centurytel.net]
Sent: Tuesday, October 07, 2008 12:44 PM
To: Lewis, Andrea L SWL
Subject: Fw: Minimum Flow Question

Hi Andrea,

Any news on the answer to the below question about the seasonal pool duration footnote in the SDEIS?

Shawn Egan

----- Original Message -----
From: Bayou Resort
To: mike.l.biggs@usace.army.mil
Cc: Andrea Lewis ; Lee Bass ; Col Jackson
Sent: Sunday, September 28, 2008 3:32 PM
Subject: Minimum Flow Question

Hi Mr. Biggs,

I have a question concerning the WR Minimum Flow SDEIS.
Table 4.3.1.1-1 Annual Pool Elevation-Duration for Elevations of Interest pg 4-6 and **Table 4.3.1.2-1 Annual Pool Elevation-Duration for Elevations of Interest** pg 4-10 both show in footnote 3 that the proposed seasonal pool duration would be one month longer then the current seasonal pool duration in footnote 2.

Is footnote 3 correct?
If correct, where did you account for this change in the impact modeling?
If not correct, how will you fix the error?

Shawn & Cindy Egan, Owners
Bayou Resort at Eagles Rest
2325 Fout Rd. Gamaliel AR 72537

www.norfork.com/bayou
870-467-5277

Biggs, Mike L SWL

From: Beadchicknicole@wmconnect.com
Sent: Thursday, October 02, 2008 9:41 AM
To: Biggs, Mike L SWL
Subject: minimum water flow

Dear Mr Biggs,

I support the concept of minimum water flow in trout waters below the dams. However, as a taxpayer, I have strong concerns with the amounts of money the utility companies are wanting for it's implementation. And hope it will be investigated further.

Thank you very much,
Nicole Young

Biggs, Mike L SWL

From: bassman68@comcast.net
Sent: Tuesday, September 16, 2008 8:13 AM
To: Biggs, Mike L SWL
Subject: White River minimum flow project

Mr. Biggs,

Good morning.

I strongly support minimum flow, and ask that you assist in its implementation.

Thank you for your time and consideration with this very important issue.

--
Heath Annin - Secretary
Florida Bass Federation, Inc.
20-3 Ram Blvd.
Midway, FL 32343
850-671-7267
850-671-2773
bassman68@comcast.net

Biggs, Mike L SWL

From: b.d. turnbaugh [bernard027@centurytel.net]
Sent: Wednesday, September 17, 2008 9:29 AM
To: bernard027@centurytel.net; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area. It will be a great deal for our fish and for the people that fish our rivers.
B.D. turnbaugh

Sincerely,
b.d. turnbaugh
1724 surrey
mountain home,ar.72653

Biggs, Mike L SWL

From: Arkansas Wildlife Federation [arkwf@sbcglobal.net]
Sent: Thursday, September 18, 2008 9:42 PM
To: george.robbins@swpa.gov; Biggs, Mike L SWL
Cc: Bob Apple; Jim Wood; David Carruth; Jeff Ellis; Lucien Gillham; Steven Bender
Subject: Comments regarding "MINIMUM FLOW ON THE WHITE RIVER"

The comments contained in the following materials are fully endorsed and supported by a unanimously decision of the Board of Directors for the Arkansas Wildlife Federation approved on September 16, 2008. AWF respectfully urges your strongest consideration of this information and comments:

These comments are derived from concerned citizens who have the economic condition of our country at heart and in no way want to unnecessarily and irresponsibly spend taxpayer dollars. These same citizens realize the long term importance of the Minimum Flow project to one of our great natural resources and know the project is imperative to the long-term health of the White River System.

► Minimum Flow will positively impact the economy and natural resources for the United States and the state of Arkansas by expanding the already flourishing $160 million dollar tourism industry in Arkansas .

► Minimum Flow will improve dissolved oxygen in the river and water temperatures for downstream

trout fisheries, increase wetted perimeters creating improved growth of aquatic plants, habitat, and food supply, and improve trout reproduction, while returning the river to a more natural state.

► The economic benefits according to the Corps of Engineers are a 77 to 1 cost to benefit ratio, irrefutably proving the benefits of the Minimum Flow project.

The Arkansas Wildlife Federation strongly opposes the

"PROPOSED BUY OUT FOR EMPIRE DISTRICT ELECTRIC

= ALMOST $34 MILLION IN WASTED TAXPAYERS DOLLARS"

A $34 million payout to Empire District Electric is highway robbery to the United States government and ultimately to the taxpayers. The following information has been derived from Empire District Electric's 2007 annual report and information collected from the Federal Energy Regulatory Commission (FERC).

► Headwater Benefits Assessments paid by Empire District Electric from 1956-2007 total $900,846.00 which equals on the average $16,087.00 per year. Would it not be fair to pay empire that amount for the remaining 14 years of their FERC license? That total would be $225,218.00, considerably less than the $34 million they want.

► Per the SWPA study, Empire's loss of hydropower and capacity calculations have been based on a 50 year time frame. Since Ozark Beach Dam's FERC license is only good for another 14 years – to 2022, why would the cost be calculated based on 50 years when their license (FERC license number 2221) expires in 14 years? There is no guarantee that Empire's FERC license will be reissued particularly in light of the potential for other energy options to materialize. Is it legal or ethical for Congress to appropriate taxpayer dollars to pay Empire District Electric for future power that they are not yet licensed to market?

► According to Empire's annual report (pages 5 & 7); the hydroelectric generation from Ozark Beach represents only 1% of the total capacity to Empire District Electric. Empire Electric's generating plants total 1255 megawatts as of 12-31-07. Per Empire's report, the system reached a record high of 1173 megawatts on 8-15-07. The previous record was 1159 on 7-19-06. The winter demand maximum was 1159 megawatts set on 2-16-07. The previous year winter high was 1034 megawatts set on 1-31-07. Empire District Electric is not utilizing full facility megawatt capacity even if Ozark Beach 's generating capacity were completely removed.

How can Empire District Electric Company state that they will be harmed financially when they can operate profitably without the Ozark Beach facility?

► The Ozark Beach Dam was originally constructed in 1911. Do the current hydroelectric generators operate safely and efficiently? Is a dam that is nearly 100 years old, safe? In 2022, would it be prudent for the federal government to relicense the Ozark Beach facility based on its age? Would this dam withstand an earthquake? Was the dam constructed under any federal guidelines to insure its safety? Are reports of safety inspections readily available to the public? If the dam were relicensed today, would Minimum Flow be routinely incorporated into the licensing procedure?

► According to letters from the Federal Energy Regulatory Commission (FERC) to Empire District Electric Company, headwater benefit payments were waived for 2007 and 2003. Over the last 50

years, how often have headwater benefit payments from this privately owned company been waived by this federal agency and why? It appears from these same letters and attached head water benefits assessments that Empire is already receiving preferential treatment in the form of subsidies by avoiding the payment to FERC. Per Tom Snyder, Project Manager for Ozark Beach Dam, the facility can generate hydroelectric power when Bull Shoals Lake reaches 679' elevation. If Ozark Beach can generate power at a 679' elevation on Bull Shoals Lake , why can Empire District Electric claim a loss of head? While Empire may not operate maximally until they hit elevation 651', they have been operating under these same conditions since the opening of Bull Shoals Dam in 1953. If they have been accustomed to these operational conditions for the last 55 years how can Empire state they will experience a loss from the Minimum Flow project?

►Would it be prudent for Empire District Electric to provide proof of financial loss where they have had to buy power on the open market due to the inability to operate the Ozark Beach Dam? Is this proof that Empire has already been taking taxpayer dollars unnecessarily and proof again that the Minimum Flow buyout is yet another attempt to milk the taxpayers?

►Per Empire's 2007 annual report, by Empire's own admission, they have been hit hard by environmental conditions in recent months. According to their report there was $13 million cash on hand to meet the needs of these situations. Their report also states that they had well over $40 million in expenses from these events and by their own admission were hit hard. Does it not seem plausible that they are using the Minimum Flow project buyout as an opportunity to collect money from the United States taxpayers?

►Empire District Electric Company's stock is traded publicly on the New York Stock Exchange. According to page 27 of their 2007 Annual Report for Empire District Electric, common stock prices during 2006 and 2007 experienced a low and high of $20.25 to $26.13 respectively. Dividends paid per share during 2006 and 2007 were $0.32. As of December 31, 2006, Empire District Electric had $22.9 million of retained earnings to pay out for dividends followed by $17.2 million for 2007. The total dividends paid in 2007 were $39 million. During 2006 and 2007 the economy and environmental impacts in terms of droughts and ice storms had to affect Empire's bottom line, yet in spite of these conditions, they still were able to pay $39 million in dividends to their shareholders. If in poor economic and environmental conditions Empire District Electric was still able to make huge dividend payments how can they substantiate a financial loss from the Minimum Flow project?

►Per Empire's 2007 annual report, gross operating revenues from Ozark Beach Dam were: 2005 - $1.447 million, 2006 - $1.843 million, 2007 - $1.879 million. There was clearly a drought that occurred in 2006. If they are still generating gross revenues in these amounts from this small hydroelectric dam in drought environments, how can they say the Minimum Flow project is going to cause them any loss of revenue whatsoever?

The Arkansas Wildlife Federation strongly opposes the

"ROPOSED $87 MILLION FEDERAL GOVERNMENT DEBT REDUCTION TO SOUTHWEST POWER ADMINISTRATION"

MORE WASTED TAXPAYERS DOLLARS

It appears as though Southwest Power Administration has been charged with having to supply the "for profit" electric cooperatives with cheap power to resell.

► Although SWPA claims to be a federal agency, why are they concerned with selling cheap power when they technically work for the taxpayers of this country? Should it not be the responsibility of the "for profit" electric companies to acquire their own additional electricity from the free market without it being given to them at a reduced rate by the government? Based on SWPA's actions and their financial reports, is it not then fair to assume that SWPA is a nonfederal agency instead of a federal agency? If they are truly a government agency charged with simply managing 24 U.S. owned hydroelectric dams, why does it appear that they are in the business of making money and why would a Minimum Flow project on a section of the White River in Arkansas afford them the luxury of collecting nearly $87 million from taxpayers?

► According to Southwest Power Administration (SWPA), Bull Shoals and Norfork Dams were brought on line in 1953 and 1944, respectively. If they were originally mortgaged for 50 years, shouldn't the mortgages be completely paid off by now? If both of the dams are assumed as "free and clear", shouldn't the Minimum Flow project only be charged a fair percentage of operation and maintenance expenses associated only with Minimum Flows, based on best business practices in the energy industry?

► SWPA made a profit in spite of a 17 month drought in 2005-2006. In a drought environment, if SWPA is operating profitably, how can Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation? It may not be generated at peak periods but some of that power can still be sold for profit.

GENERAL COMMENTS ON THE REPORT COMPLETED BY SOUTHWEST POWER ADMINISTRATION AS IT AFFECTS THEIR DEBT REDUCTION TO THE FEDERAL GOVERNMENT AND THE BUY

OUT TO

EMPIRE DISTRICT ELECTRIC

►According to the SWPA report, energy and capacity losses were calculated utilizing the Platts and FERC methods. This appears to be a little like the overweight woman who weighs herself on a variety of scales and chooses the weight that is most flattering. Is it prudent to assume that the methods used for calculating energy losses and capacity losses should be the same?

► When was the agreement made and who authorized this agreement between the Corps and SWPA to use the 50 year time frame and the Platts and FERC methods? Congress ordered SWPA in February 2006 to begin the study on the Empire District Electric buy out. Why were agreements between SWPA and the Corps made in October of 2005 before receiving Congressional orders in February 2006? Why would Mr. George Robbins with SWPA state that he was "forced to use both methods", referring to the Platts and FERC methods?

► The Federal Power Commission regulates electric power and energy generated at reservoir projects controlled by the Department of the Army. What method of calculation to determine energy and capacity loss do they utilize or recommend? Is it FERC, Platts, or something else? Would best business practice be to use what FPC recommends in determining losses for both SWPA and Empire's buy out calculations? As the Federal Power Commission requires the Department of the Army, the Secretary of the Army, and the Secretary of the Interior to transmit and dispose of power and energy in the most widespread use and at the lowest rate possible to the consumers consistent with sound business principles, the Minimum Flow project should be evaluated on the same basis. Because it's plausible that SWPA cannot be completely fair and unbiased in their economic calculations, would it be prudent to have the Federal Power Commission or some independent source, review the processes by which SWPA determined the losses to Empire District Electric and themselves?

► It appears as though worst case scenarios and drought environmental conditions were used to calculate all energy and capacity losses for both SWPA and Empire District Electric. When SWPA calculated energy losses what was the basis of these calculations? For example, page 12 of the SWPA annual report shows estimated average annual energy produced by Bull Shoals Dam of 785 million kWh. What period of years was this particular number averaged over? What percentage of this estimated average annual energy will Minimum Flow cause SWPA to lose? To look at SWPA's annual report on actual net energy production, one has to wonder how did they calculate an average estimation and thus how did they determine what they say will be lost from the Minimum Flow project? Did SWPA, in this reporting process, use to their benefit and Empire's benefit, figures and calculations that would profit them financially and drive up the cost of the Minimum Flow project, to the detriment of the taxpayers? Do we have the fox watching the hen houses?

► According to page 14 of SWPA's annual report, during 2003 through 2006 SWPA shows unused supplemental and excess energy. Therefore, since they had an abundance of energy even in the 17 month drought period during 2005 and 2006, this seems to indicate that they would not have been forced to buy power on the open market. Since Minimum Flow affords additional water usage this emphasizes the point that they would not incur any financial losses or experience the need to purchase additional power on the open market due to Minimum Flows.

► According to SWPA's annual report (pages 17,19, & 21), during fiscal years 2004, 2005, 2006 from the details of billings to customers (indicating they *are* issuing bills and collecting money, thus a "for profit" business), the kilowatt capacity sold was the same for all three years, in spite of the drought that occurred in 2005-2006. How will Minimum Flow cause them to incur any type of loss when there is more water in the lake for them to benefit from generation, even in drought years?

► Per SWPA's statement of cash flows (page 26) in their annual report, they had $36 million on hand at the end of a drought year. What average American business wouldn't love to clear the year with an extra $36 million?

► Per George Robbins in the SWPA study, energy losses were calculated utilizing on peak energy replacement costs only. Since generation can occur at on and off peak times shouldn't on and off peak rates be utilized?

► The seasonal power pools on Bull Shoals and Norfork Lakes were implemented without Congressional orders. If an agreement of this magnitude was easily attained without Congressional orders, why have the Minimum Flow project proponents been required to jump through bureaucratic hoops? Based on this fact is it safe to consider that there must be a *special relationship* between Southwest Power Administration and some division of the Corps of Engineers?

► The established drought of record occurred in 1928 prior to the construction of any federal dam on the White River system. Southwest Power Administration utilized this 1928 drought of record to simulate energy and capacity losses for both lakes. Since the opening of the Bull Shoals and Norfork Dams when have droughts and floods occurred? Would it be more appropriate to use an average of these scenarios to calculate the energy and capacity losses rather than the use of *worst* case scenarios?

► Why does the natural resource (rainwater) that falls freely from the sky and would fulfill the water required for minimum flows, that belongs to the taxpayers, become a commodity that can be bought and sold by private companies on the open market? Why would one governmental agency pay another governmental agency for a resource or product that falls freely from the sky and doesn't cost anyone anything?

The bottom line is that AWF recognizes that these power companies don't want to give up control of these hydropower plants and the huge profits associated with them even though the Minimum Flow Project would benefit the American people. AWF strongly believes this is more government *pork spending* to pay off crying, profitable power companies because they are losing some control of how water is released from these hydroelectric dams leaving the taxpayers to pay $87 million to a supposed federal power company, Southwest Power Administration, and $34 million to a privately owned "for profit" power company, Empire District Electric? It is ridiculous that the U.S. Army Corps of Engineers would even entertain the idea of making these payments to Southwest Power or the Empire Electric District. Will the U.S. Army Corps of Engineers continue it legacy of letting corporate greed dictate its decision against the best interest of the American people? Will just one time will the U.S. Army Corps of Engineers make a critical decision that will benefit the average local citizens and say "No" to more pork barrel greed? The Arkansas Wildlife Federation awaits your decision!

Biggs, Mike L SWL

From: Annette Pettit [oldcotterbridge@suddenlink.net]
Sent: Thursday, September 18, 2008 10:26 PM
To: oldcotterbridge@suddenlink.net; haynesde@suddenlink.net; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicate that funds invested in the Bull Shoals project will reap almost 12 times as much benefits, and that the Norfork project will return almost 40% over what is invested. This makes good economic sense.

The SDEIS economic analysis suggests a substantial funding requirement for buy-out of Empire Electric. The underlying economic assumptions for that analysis appear questionable. I believe that the economic analysis within the SDEIS should be re-examined, keeping in mind that only a small portion of both lakes power pools will be affected by these projects. Also, open-market electricity for replacement of BSD and NFD generation is now available on the national grid, for Empire purchase.

I want to thank the US Army Corps of Engineers for the extensive work you did to complete the SDEIS.

Sincerely,
Annette Pettit
P.O. Box 15
Cotter, AR 72626

Biggs, Mike L SWL

From: Alena Ostergrant [alenainar@yahoo.com]
Sent: Tuesday, September 16, 2008 9:21 AM
To: alenainar@yahoo.com; haynesde@suddenlink.net; george.robbins@swpa.gov; Biggs, Mike L SWL
Subject: Comment: Min Flow

Mr. Mike Biggs, Water Resource Manager
US Army Corps of Engineers, Little Rock District

Mr. George Robbins
Southwest Power Administration

I support efforts to increase water quality in our rivers and streams. Your SDEIS finds that the Minimum Flow Projects on the North Fork and the White Rivers would accomplish that, without negatively affecting the environment or the culture of the area.

Economic studies have shown that a better environment for trout means a healthier economy for the area. The SDEIS findings indicates the Norfork project will return almost 40% over what is invested. This makes good economic sense.

I want to thank both the US Army Corps of Engineers and the Southwest Power Administration for the extensive work you did to complete the SDEIS.

Sincerely,

Alena Ostergrant
P.O. Box 408
Calico Rock, AR 72519

From: Gerald Weber [mailto:jerryweber@mvtel.net]
Sent: Sunday, November 02, 2008 12:15 PM
To: Biggs, Mike L SWL
Subject: Minimum Flow

Mike,

I've waited until the last minute to give Friends of the North Fork and White Rivers comment on minimum flow to give all our members a chance to let me know their feelings on this proposal.

Overwhelmingly the response has been very positive from all our members, except for the amount of money which the power companies say they should be paid. As I understand it they are claiming that minimum flow will cause a loss in their revenue, but I can't see how they can arrive at that conclusion. The only possible effect I see on theier ability to generate power would be a slight reduction in efficiency of the turbine generators due to a slight decrease in head pressure when the lake levels are down a couple of feet from the old levels. However, I suspect that these generators normally operate over a fairly wide range of head pressures and flows, therefore I suspect this is a false claim of loss of revenue. Given that there is only 1/2 psi drop per foot of head, I can't imagine those turbine generators output could be affected enough to even tell on their generation power gages. Also, as I understand it, if push comes to shove and the power companies have to have the water for power generation, the river minimum flow will take the hit, not the power companies.

So, from *Friends* standpoint, we fully support the minimum flow proposal except for the amount which is supposed to be paid to the power companies. I think any affect on power generation should be studied by an independent engineering firm, and no payments should be made until they can prove a loss after minimum flow is in place and functioning for at least a year. I'm not a power engineer, but I've learned that you never front someone money before you see results.

Jerry Weber, President
Friends of the North Fork and White Rivers
jerryweber@mvtel.net

From: Melissa Blair Hanson [mailto:mbhanson84@yahoo.com]
Sent: Sunday, November 02, 2008 10:40 AM
To: Biggs, Mike L SWL
Subject: Opposition to the White River Minimum Flow Reallocation

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY

SDEIS COMMENT PERIOD – Ending November 3, 2008

I oppose the White River Minimum Water Flow Supplemental Draft EIS.

I feel the studies that were done for the purpose of pushing forth this project are inadequate, flawed and in error. This led to errors in the decision making process and under estimated the negative impact on the economy of the lake area.

Melissa Blair Hanson
1712 Van Buren Ave
Moutnain Home, AR 72653

From: Becky Walters [mailto:beckykwalters@hotmail.com]
Sent: Sunday, November 02, 2008 6:36 AM
To: Biggs, Mike L SWL
Subject: White River Minimum Flow Project

Dear Mr. Biggs,

I am writing you in regards to the WRMF Supplemental Draft EIS project. I strongly oppose this project. I have known no other vacation than going to Lake Norfork every summer for family vacation. I first went there when I was 6 months old and now my husband and I go each year (sometimes more than one trip) for a two week family vacation with our two kids. They were lost without the beaches this past summer. All they wanted to do was play in the sand and be able to pull the boat up somewhere to get out and play, explore, feed the fish, build sand castles, etc. It was so hard to either keep them cooped up in the boat or make them float in the water the entire time. There are countless numbers of families that enjoy recreational waterskiing and all of the resources, beaches, access to marinas and business in Mountain Home that Arkansas can offer. By going through with this project and making beaches unavailable and water levels so high on the lakes that the skiing is not good anymore, this will greatly reduce the number of people that will travel to Norfork and the surrounding lakes to enjoy the great outdoors and

spend their money. I would hate it if my children and future grandchildren were not able to enjoy the wonderful natural resources that Lake Norfork has to offer as I have done for my entire life. Please consider this when making your decisions.

Yours truly,

Becky Walters
4296 E. Sunset Point
Memphis, TN 38135

From: sandr30841@aol.com [mailto:sandr30841@aol.com]
Sent: Saturday, November 01, 2008 2:11 PM
To: Biggs, Mike L SWL
Subject: HELP need for Lake Norfolk businesses!!!!!!

Lake Norfork businesses are currently trying to stop the Minimum Water Flow project on our lake and Bull Shoals Lake from being funded by the United States taxpayers to the tune of over 100 million dollars. This project calls for a steady release of water from the dams so the trout that live in the river below the dams will have cooler, deeper, more oxygenated water. The cost of implementing these changes to Norfork Dam and Bull Shoals Dam will be paid for by all US taxpayers, not just Arkansans. Lake businesses oppose this project because it means that our facilities will be flooded by water 20% more than what they already are each year. And the Corps of Engineers has no provision in this project to relocate, rebuild, etc. lakeside amenities (eg. boat ramps, swim beaches, parking lots, etc).

Please help us by copying and pasting the following message and sending it to **Mike L. Biggs** US Army Corps of Engineers mike.l.biggs@usace.army.mil by Monday, November 3, 2008.
Please type your name and address at the end of the message before you hit the send button.

Thanks!

Richard & Cheri

Quarry Marina
Richard and Cheri Hanson
P O Box 431
Mountain Home, AR 72654

870-499-5388
www.quarrymarina.com

From: Tommy Strickland [mailto:jtstrick@usit.net]
Sent: Sunday, November 02, 2008 3:15 PM
To: Biggs, Mike L SWL
Subject: Minimum Flow

Mr. Biggs,

I live on the upper White River between Newland's Resort and Gaston's Resort and I want to register my opposition to the project. I have been coming to that area of the river for 27 years and I am satisfied with things just the way they are. I am also concerned that with minimum flow I will not be able to wade to the areas that I have enjoyed fishing for many years.

I have read the report and I see no real advantages. They are hypothetical as best.

Please Mr. Biggs, Keep things as they are.

Sincerely,

Joe T. Strickland
Lakeview Arkansas

From: george.hanson@Kraft.com [mailto:george.hanson@Kraft.com]
Sent: Monday, November 03, 2008 5:51 AM
To: Biggs, Mike L SWL
Subject: Free the water

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY

SDEIS COMMENT PERIOD – Ending November 3, 2008

I oppose the White River Minimum Water Flow Supplemental Draft EIS.

I feel the studies that were done for the purpose of pushing forth this project are inadequate, flawed and in error. This led to errors in the decision making process and under estimated the negative impact on the economy of the lake area.

From: Karen Hanson [mailto:way2busy76@yahoo.com]
Sent: Monday, November 03, 2008 7:47 AM
To: Biggs, Mike L SWL
Subject: I oppose

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY

SDEIS COMMENT PERIOD – Ending November 3, 2008

I oppose the White River Minimum Water Flow Supplemental Draft EIS.
I feel the studies that were done for the purpose of pushing forth this project are inadequate, flawed and in error. This led to errors in the decision making process and under estimated the negative impact on the economy of the lake area.

Karen Treadway
204 Ellen Drive
Batesville, AR 72501
e-mail: way2busy76@yahoo.com

From: Keri Hall [mailto:khall@lrho.org]
Sent: Monday, November 03, 2008 8:31 AM
To: Biggs, Mike L SWL
Cc: 'Carrie Henderson'; 'Jennifer Hampton'; jodywats@gmail.com
Subject:

Lake Norfork businesses are currently trying to stop the Minimum Water Flow project on our lake and Bull Shoals Lake from being funded by the United States taxpayers to the tune of over 100 million dollars. This project calls for a steady release of water from the dams so the trout that live in the river below the dams will have cooler, deeper, more oxygenated water. The cost of implementing these changes to Norfork Dam and Bull Shoals Dam will be paid for by all US taxpayers, not just Arkansans. Lake businesses oppose this project because it means that our facilities will be flooded by water 20% more than what they already are each year. And the Corps of Engineers has no provision in this project to relocate, rebuild, etc. lakeside amenities (eg. boat ramps, swim beaches, parking lots, etc).

Keri Hall
Clinic Coordinator
LR Hematology-Oncology
Office 501-219-8555 ext.1301
E-mail khall@lrho.org

From: Millican, Catherine [mailto:catherine.millican@spcorp.com]
Sent: Monday, November 03, 2008 8:43 AM
To: Biggs, Mike L SWL
Subject: White River Minimum Flow Reallocation Study

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
SDEIS COMMENT PERIOD – Ending November 3, 2008
I oppose the White River Minimum Water Flow Supplemental Draft EIS.
I feel the studies that were done for the purpose of pushing forth this project are inadequate, flawed and in error. This led to errors in the decision making process and under estimated the negative impact on the economy of the lake area.

Cathy Millican
Schering-Plough HealthCare
Customer Support
catherine.millican@spcorp.com

From: White, Bonnie (CBC) [mailto:BWhite@carlton-bates.com]
Sent: Monday, November 03, 2008 8:43 AM
To: Biggs, Mike L SWL
Subject:

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY

SDEIS COMMENT PERIOD – Ending November 3, 2008

I oppose the White River Minimum Water Flow Supplemental Draft EIS.

I feel the studies that were done for the purpose of pushing forth this project are inadequate, flawed and in error. This led to errors in the decision making process and under estimated the negative impact on the economy of the lake area.

Bonnie White | Inside Sales Leader National Accts.
501.235.4106 | fx: 877.580.3849
| bwhite@carlton-bates.com | Little Rock, AR

From: Peggy [mailto:peggy@perimeter.cc]
Sent: Monday, November 03, 2008 9:10 AM
To: Biggs, Mike L SWL
Subject: White River Minimum Flow

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY

SDEIS COMMENT PERIOD – Ending November 3, 2008

I oppose the White River Minimum Water Flow Supplemental Draft EIS.

I feel the studies that were done for the purpose of pushing forth this project are inadequate, flawed and in error. This led to errors in the decision making process and under estimated the negative impact on the economy of the lake area.

Peggy Lenzini
384 CR 703
Cotter, AR 72626

From: Dennis North [mailto:bigdnorth@hotmail.com]
Sent: Monday, November 03, 2008 9:26 AM
To: Biggs, Mike L SWL
Subject: WRMF

I Dennis North oppose WRMS supplemental Draft EIS.
Dennis North
830 Edgewood Bay Dr.
Lakeview, AR. 72642

From: Joe Williamson [mailto:joew@astate.edu]
Sent: Monday, November 03, 2008 11:12 AM
To: Jackson, Donald E COL SWL; Biggs, Mike L SWL; Hughes, Susan B HQ02
Subject: FW: Norfork Lake Needs Your Help!!!

From: Jan [mailto:jgpick@suddenlink.net]
Sent: Sunday, November 02, 2008 10:51 AM
To: Joe Williamson; greg@handcoveresort.com
Subject: Norfork Lake Needs Your Help!!!

My comment sheet didn't email correctly out of Word.

Please vote against the White River Minimum Flow for me.
It is not a good idea for us home owners on Norfork Lake, due to the loss of campground usage, Sand Island Usage, & launching ramp usage.
I am against it.
Janis Pickle
3606 Hudson Drive
Jonesboro AR 72401

Home owner at The Bluffs, Lake Norfork.

From: Joe Williamson [mailto:joew@astate.edu]
Sent: Monday, November 03, 2008 11:13 AM
To: Jackson, Donald E COL SWL; Biggs, Mike L SWL; Hughes, Susan B HQ02
Subject: FW: comment sheet

From: phil [mailto:pick@suddenlink.net]
Sent: Sunday, November 02, 2008 10:50 AM
To: Joe Williamson; greg@handcoveresort.com
Subject: comment sheet

I don't think my comment sheet emailed corrrectly.
Please vote against the White River Minimum Flow idea for me.
It is not advantageous to Norfork Lake home owners, & or recreation boat owners on the lake.
Phil Pickle
3606 Hudson Drive.
Jonesboro, Arkansas 72401

-----Original Message-----
From: Beth C Wilcox [mailto:Beth.Wilcox1@ipaper.com]
Sent: Monday, November 03, 2008 5:59 PM
To: Biggs, Mike L SWL
Subject: White River Minimum Flow Reallocation Study

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY SDEIS COMMENT PERIOD - Ending November 3, 2008

I oppose the White River Minimum Water Flow Supplemental Draft EIS.

I feel the studies that were done for the purpose of pushing forth this project are inadequate, flawed and in error. This led to errors in the decision making process and under estimated the negative impact on the economy of the lake area.

Beth Wilcox
752 Gable Lane
Collierville, TN 38017

2006 DEIS Agency Comments and Corresponding Responses

Written Comments regarding the 2006 DEIS were received by the following agencies. Comments and responses are grouped by Agency Name. The actual comments are listed following these response pages for the reviewer's information.

Arkansas Department of Environmental Quality
Arkansas Game and Fish Commission
Arkansas Natural Heritage Commission
Missouri Department of Conservation
Missouri Department of Natural Resources
State of Missouri, Office of Administration
State of Missouri, Maynard Wallace, State Representative
U.S. Department of Energy, Southwestern Power Administration
U.S. Department of Interior, Office of Environmental Policy and Compliance
U.S Environmental Protection Agency

Arkansas Department of Environmental Quality

Comment: **The Department staff has reviewed the White River Minimum Flow EIS. The document covers most of our concerns for the White River system. However, in Section 3.6 the State's waters classification should reference the current approved version of Regulation # 2. The White River System tailwaters are classified as trout streams, with applicable water quality standards of 6 mg/l dissolved oxygen and stream temperature of 20 degrees C, which are often violated. In Section 3.5.5.3 Bull Shoals Reservoir is designated as an ERW and trout waters, and has a dissolved oxygen standard of 6 mg/l.**

Response: **Comment noted.**

Comment: **The staff has noted a lack of discussion of the impacts of minimum flow on the 303(d) listings. In order to remove the White at Bull Shoals and the Norfork from the Arkansas list of impaired waters, the EIS should show progress toward that goal instead of the general discussion currently included (Section 4.5.1). If the proposed generators with siphons or other aeration will add oxygen, reducing the deficit, the EIS should state those outcomes. If there is an alternative that further improves the oxygen situation, the EIS should also offer that alternative.**

Response: **Comment noted.**

Comment: **The staff is also concerned about the effect of minimum flow on the infestation by "didymo". Will minimum flow add to the problem or improve it? We believe that the greater depth and current would limit didymo's growth somewhat, but this is speculation. A discussion of the various outcomes would be helpful.**

Response: **Concur, more investigation is warranted but is not within the scope of this study.**

Arkansas Game and Fish Commission

Comment: **There are factual or typographical errors throughout the document partly from reference to out of date reports or documents and we have tried to correct those. An example is in section 3.5.13.2 in discussions of fishing regulations and fisheries management on Bull Shoals and Norfork tailwaters. Our comments more accurately reflect current regulations for these two tailwaters. Regulations for other tailwaters not discussed in this section are different and regulations can be expected to change.**

Response: **Concur; typographical and or factual errors have been changed per comments.**

Comment: **Table 1.3-1 (Environmental Compliance) is not referenced in the text. Although the information in the table is correct for the reservoirs, the releases from Table Rock, Bull Shoals, and Norfork dams are not in compliance with their respective State's water quality standard for dissolved oxygen and are listed under section 303d of the Federal Clean Water Act. Additionally, some releases from Beaver and Greers Ferry dams are below Arkansas' water quality standard for dissolved oxygen and releases from Bull Shoals and Norfork dams do not always provide for meeting State water quality standards for temperature in the White River. These tailwater water quality issues are mentioned elsewhere in the text.**

Response: **Comment noted.**

Comment: **The cave crayfish *Cambarus zophonastes* is only found near Mountain View, AR. It would not be affected by water levels in Beaver Lake or by discharges from the dam. It could potentially, although not likely, be affected by discharges from Bull Shoals or Norfork dams. The cave crayfish *Cambarus aculabrum* is found in the Sugar and Osage creek (Illinois River) drainages. The closest known location to Beaver Lake is east of Bella Vista so its range could potentially extend to near the lake. The Bristly Cave Crayfish *Camburus setosus* is found in the Flat Creek and James River drainages and its range probably extends to Table Rock Lake.**

Response: **Comment noted.**

Comment: **We agree, as this investigation suggests, that there could be minor short-term benefits to the lake fisheries due to changes in normal lake elevations. Also as the**

shoreline vegetation adjusts to the new water elevations, the fish spawning and rearing habitat provided by shoreline vegetation would likely resemble the previous habitat. These lakes will continue to provide the angling opportunities that they do now. The issues for management of the lake fisheries include impacts to facilities and angler access areas that may be inundated more or less frequently.

Response: **Concur; comment noted.**

Comment: **The tailwater fisheries would benefit significantly from minimum flows. Wetted area providing for forage and gamefish habitat in the tailwaters would increase, providing the potential for better fish growth and increased angling opportunities. Summer tailwater temp gradients would be improved in the upper reaches of the tailwaters. Dissolved oxygen in minimum flow releases would be improved if the modifications for releases include mechanisms for aeration. If aeration is not considered, then lower dissolved oxygen levels may accompany minimum flow releases.**

Response: **Concur.**

Arkansas Natural Heritage Commission

Comment: **My staff has reviewed the draft Environmental Impact Statement for the above-referenced undertaking. We found, in 2002, that this undertaking would have no effect on historic properties, and we see no reason to alter that previous finding. If the parameters of this project change so that the potential for impact to cultural resources is increased, this office should be given the opportunity for review once again.**

Response: **Concur.**

Missouri Department of Conservation

Comment: **Page ES-I, Project Authorization, 1'' paragraph. In previous correspondence dated August 16, 2004, MDC stated its support for alternative BS-3 at Bull Shoals. MDC reiterates our support for alternative BS-3. However, potential impacts on recreational facilities as a result of the eventual implementation of alternative BS-3 and the related reallocation of five (5) feet of storage from the flood pool are a continuing concern. With this in mind, we fully support the commitment detailed in the DEIS as follows: "Adversely impacted recreation facilities at Bull Shoals Lake . . . will be made whole, with the Sponsor covering all recreation facility costs." Quoting from the FY2006 legislation authorizing the implementation of alternative BS-3 included beginning on Page 4 of the DEIS. "The non-Federal interests shall provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake . . . to allow**

reasonable continued use of the facilities . . . ." Based on related discussions, we understand that the Arkansas Game and Fish Commission (AG&FC) is the lead "non-Federal interest" in this regard. AG&FC1s Mike Armstrong stated in recent correspondence that, "Our Commission has been consistent in stating that public facilities that fall within the zone of direct impact from raising the conservation pool on Bull Shoals 5 feet . . ., we will take direct responsibility for keeping whole." It should be clearly noted that MDC accepts no financial responsibility in this regard at Bull Shoals.

Response: **Concur. Paragraph 2 of Section 3.3 of the Executive Summary for the White River Minimum Flows EIS now contains the following statement, "**The State of Arkansas, most likely Arkansas Game and Fish Commission, has been identified as the "non-Federal interest". Note, because Section 132 of the FY06 Energy and Water Development Act did not identify a minimum flows implementation plan at Table Rock Lake, the Missouri Department of Conservation will not be held responsible for costs related to facility modifications resulting for minimum flows implementation."

Comment: **Page ES-1, Project Authorization. 1st paragraph. August 16, 2004, correspondence from MDC stated our support for alternative NF-2 at Norfork. MDC's primary concern regarding this project involved the impacts on recreational facilities in the upper ends of Norfork in Missouri from anything other than a flood pool reallocation. With the FY2006 congressional authorization of alternative NF-7 using a 50:50 reallocation, we expect to see impacts on facilities in the upper lake. If NF-7 is implemented at Norfork, it is reasonable to expect there to be about 1.75 feet less in the fall conservation pool, making navigation in the Missouri portion of Norfork Lake much more difficult. These impacts must be fully addressed. With this in mind, we fully support the commitment detailed in the DEIS as follows: "Adversely impacted recreation facilities at . . . Norfork Lake will be made whole, with the Sponsor covering all recreation facility costs." Quoting again from the FY2006 legislation authorizing the implementation of alternative NF-7 included beginning on Page 4 of the DEIS, "The non-Federal interests shall provide relocations or modifications to public and private lakeside facilities at . . . Norfork Lake to allow reasonable continued use of the facilities . . . ." Based on related discussions, we understand that the AG&FC is the lead "non-Federal interest" in this regard. It should be clearly noted that MDC accepts no financial responsibility in this regard at Norfork.**

Response: **Concur. See previous comment.**

Comment: **Page ES-2, Project Authorization, 1st continuing paragraph. The DEIS states that, "SWPA's allocated costs with respect to Bull Shoals and Norfork Dams will be reduced based on losses resulting from minimum flow operations." Further, the FY2006 authorizing legislation states, "The licensee . . . shall be fully compensated by the Corps of Engineers . . . ." We support this approach and hope to see a similar approach applied to authorizing legislation for minimum flow implementation at Table Rock.**

Response: Comment noted.

Comment: **Page ES-2, Project Authorization, 1st continuing paragraph. The final sentence in this paragraph should be modified to include the text highlighted in bold as follows: Beaver, Table Rock, and Greers Ferry Lakes will not implement minimum flow reallocations or operations, under current authorizing Federal legislation. MDC fully intends to pursue implementation of minimum flows at Table Rock to the eventual benefit of the coldwater fishery in Lake Taneycomo. MDC is on record in support of alternative TR5 for Table Rock Lake. However, we remain open to considering other options. In an August 31, 2004, letter to the Missouri congressional delegation, I stated that: ". . . we remain firm in our position that the reservoir projects were not fully mitigated when constructed." And ". . . the Department feels strongly that minimum flows should be viewed as mitigation for the loss of aquatic habitat capable of supporting a native fishery, requiring all costs to be 100% federally funded, including the cost of storage."**

Response: **Concur; modification has been made as requested.**

Comment: **Page ES-5, Improvements within the Tailwater Areas, 1st full paragraph. MDC welcomes the statement included in the DEIS that states, "It is assumed that any alternative that includes installation of a new service unit would have technology that will increase the DO of the outflow." While not fully quantified, we concur with this conclusion regarding improvements in the Table Rock tailwater (Lake Taneycomo) as a result of enhanced minimum flows and the related installation of new service units at Table Rock under alternative TR-5. In an April 26, 2006, correspondence from MDC to the U.S. Fish and Wildlife Service, we stated: ". . . the latest technology to enhance dissolved oxygen in minimum flow releases (e.g., auto-venting turbines, liquid oxygen injection, etc.) should be required. Efforts to implement other technologies (e.g., forebay diffusers) designed to resolve the issue of low dissolved oxygen levels during as much as 5 months each year should be pursued by all parties involved."**

Response: **Concur, DO increasing technology will be included at authorized projects where minimum flows infrastructure is installed.**

Comment: **Page 12, 1st paragraph (continued on Page 13), 3rd sentence. Regarding the present minimum flows at Table Rock and Lake Taneycomo, we strongly concur with the conclusion that, ". . . the "No Action" alternative . . ." results in ". . . the continuation of the sub-optimal trout fishery habitat below each dam."**

Response: **Concur and noted.**

Comment: **Page 25, Table 3.2-1. MDC suggests the following information be included in Table 3.2-1: MDC cooperates with the City of Rockaway Beach in Taney County on access facilities on Lake Taneycomo through our Community Assistance Program. This site encompasses approximately one (1) acre and provides access to the 2,080 acres of Lake Taneycomo.**

Response: **Concur.**

Comment: **Page 37, 1st continuing paragraph. Please note that a small portion of Table Rock Lake is located in Arkansas.**

Response: **Concur and noted.**

Comment: **Page 47, 1st paragraph. While MDC is the primary source of trout stocked in Lake Taneycomo, the DElS should also reflect the fact that more than 200,000 rainbow trout are annually stocked into Lake Taneycomo by the U.S. Fish and Wildlife Service Neosho National Fish Hatchery as partial mitigation for lost aquatic habitats.**

Response: **Concur, a sentence to that affect will be added to the FEIS.**

Comment: **Page 75, 2nd paragraph. Please replace the last sentence in this paragraph with the following: "The current Missouri state record brown trout was taken from Lake Taneycomo in 2005 and weighed 27 pounds, 10 ounces."**

Response: **Concur; sentence will be replaced with the above statement.**

Missouri Department of Natural Resources

Comment: **In the preferred alternative of the White River Minimum Flows Reallocation Study Report, the U.S. Army Corps of Engineers (Corps) identified costs in excess of $27 million to relocate roads, bridges, and recreation facilities, many in Missouri. The DEIS does not show these costs or how they will be funded. If the state of Arkansas is responsible for funding these relocations, the DEIS should clearly explain how this will be accomplished.**

Response: **During the Feasibility study phase it was determined that no roads or bridges within the study area would be flooded that don't already flood periodically. During the public study process, no state or county agencies voiced concern over the proposed storage reallocations. Also, During the Feasibility study phase it was determined that the loss of lake recreation due to changes in the water control plan were exponentially smaller than the tailwater benefits gained. Consequently the cost of moving recreation**

facilities that were adversely impacted by reallocated storage was significantly larger than the cost of lost recreation opportunities, therefore only reconnaissance level analysis was conducted on lake recreation facilities impacted during the Feasibility phase. Section 132 of the FY06 Energy and Water Development Act requires the non-Federal interest (most likely Arkansas Game and Fish Commission) to provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities as determined by the Secretary in consultation with the non-Federal interests. Once funds are allocated, the Preconstruction, Engineering, and Design Phase (PED Phase) will begin. During the PED phase the Corps and the non-Federal interest will develop a standard procedure using Hydrologic and Hydraulic data to identify adversely impacted lake facilities, plans, specifications, and costs for modifications or relocations. Public input will be sought in order to identify all potential facilities. The PED phase must be completed before the White River Minimum Flows storage reallocation can be implemented.

Comment: **Under the recommended reallocation less hydropower will be generated for use by customers of both states and that replacement energy will more than likely be produced by fossil fuel generation….. Compensation to Empire electric should be spelled out more completely in the DEIS and in the FEIS assurances to the electric rate payers should be given that they will not suffer any negative consequences resulting from this project.**

Response: **FY 2006 Energy and Water Resources Development Act. (PL 109-103), Sec. 132. White River Basin, Arkansas subset (3), requires the Administrator of the Southwestern Power Administration (SWPA) in consultation with the project licensee and the relevant state public utility commissions to determine any impacts on electric energy and capacity generated at Federal Energy Regulatory Commission Project No. 2221caused by the storage reallocation associated with BS3 at Bull Shoals Lake. The licensee of Project No. 2221 shall be fully compensated for those impacts on the basis of the present value of the estimated future lifetime replacement costs of the electrical energy and capacity at the time of implementation of the White River Minimum Flows project. The costs associated with the impacts shall be included in the costs of implementing the White River Minimum Flows project and allocated in accordance with FY 2006 Energy and Water Resources Development Act .(PL 109-103), Sec. 132. White River Basin, Arkansas subsection (a)(2). After the completion of the White River Minimum Flows Reallocation Report, and prior to the FY 2006 Energy and Water Resources Development Act, The Corps of Engineers Little Rock District, the Corps Hydropower Analysis Center, Corps Headquarters, SWPA, and the licensee of Project No. 2221 estimated the lifetime buyout to be in the range of $7,000,000 to $12,000,000 using 2005 energy replacement costs. During the Preconstruction, Engineering, and Design Phase, SWPA, in consultation with the licensee of Project No. 2221, will analyze historic generation patterns and lake levels, and use updated costs for replacement power in order to calculate the costs for the lifetime buyout.**

Comment: **The methodology for calculating air emissions in the DEIS are not adequately described and should be updated…..**

Response: **Air emissions data has been updated.**

Comment: **We recommend that the Corps of Engineers continue to monitor the effects of shoreline erosion, fluctuating water levels, boat wash and other actions, on archeological sites.**

Response: **Concur.**

Comment: **The Final EIS should address whether the changes in water levels will be sufficient to have an effect on karst features or ground water in the area……..The department recommends more current information be utilized other than the 1986 Water Atlas for information regarding structure-related groundwater movements and connections. MDNR has more current information and can assist in this area.**

Response: **Comment noted.**

State of Missouri, Office of Administration

Comment: **None of the agencies involved in the review had comments or recommendations to offer at this time. This concludes the Clearinghouse's review.**

Response: **Comment noted.**

State of Missouri, Maynard Wallace, State Representative

Comment: **This letter is to protest the decision of the Corps of Engineers to raise the power pool of Bull Shoals Lake to 659 feet. This will cause more frequent and extended flooding of agricultural land along the lake. This flooding will result in loss of production of hundreds of acres of the best farmland in Taney County, MO. I feel the studies done prior to this decision are inadequate and in error. This led to errors in the decision making process and grossly under estimated the negative impact on the economy of the lake area.**

Response: Do Not Concur. No significant increase to inpool flooding will occur as a result of minimum flows BS3 storage reallocation. Albeit minor, additional elevations along the

lake shore will be flooded. SUPER model maximum events (historic floods) show Bull Shoals to be 0.3-feet higher and Norfork 0.1-feet higher with minimum flows.

U.S. Department of Energy, Southwestern Power Administration

NOTE: Comments regarding the Executive Summary and the main body of the EIS were similar and therefore are grouped together. Changes were made to the Executive Summary as well as the main body of the EIS were the comments were relevant.

Comment: **Environmental Impact Statement, Section 1.1, Paragraph 2, Sentence 2, Page 1. The sentence needs to also state that the implied language in WRDA 1999 and 2000 was later repealed by PL 109-103.**

Response: **A sentence noting the repeal of Section 374 and 304 of WRDA 1999 and 2000 respectively was added to the end of the first paragraph of Section 2.1, Page 4.**

Comment: **Environmental Impact Statement, Section 1.2, Paragraph 1, Sentence 3, Page 1. A copy of Section 374 of WRDA 1999 and a copy of Section 304 of WRDA 200 are included in the reallocation report; however, it would be beneficial if copies of the cited legislation were included in the Environmental Impact statement as well. Please add the referenced copies to the Environmental Impact Statement.**

Response: **A sentence referencing the reader to the main report for Section 374 and 304 of WRDA 1999 and 2000 respectively, already exists in the EIS.**

Comment: **Environmental Impact Statement, Section 1.2, Paragraph 2, Sentence 4, Page 1. The sentence states that the purpose of the proposed action is to sustain the tailwater fishery. Southwestern believes that the purpose of the proposed action is to enhance a viable fishery that exists already.**

Response: **Comment noted.**

Comment: **Environmental Impact Statement, Section 1.3, Paragraph 2, Sentence 3, Page 2. How was it determined that the Black River has an insignificant effect on the main stem of the White River? Please justify the statement.**

Response: **Concur. The Black River Basin composes 43% of the total drainage area at its confluence and thus a major effect on the White River. Report now states, "The study area did not include the Black River Basin as there were no study proposals in that basin and the impacts of the study on the Black River Basin were insignificant due to minor changes to the releases from Bull Shoals and Norfork".**

Comment: **Environmental Impact Statement, Section 1.3, Paragraph 3, Sentence 2, Page 2. The sentence states the Table Rock tailwater extends from White River Mile 528.7 – 506.0. However, the Executive Summary states on Page ES-4 that most of the Table Rock tailwater is impacted by Taneycomo, the paragraph 4 in the referenced section describes the effects of Lake Taneycomo on the Table Rock Tailwater, and Table 3.5- 16 on Page 73 shows that most of Table Rock's tailwater is Taneycomo Lake. Please correct the tailwater length below Table Rock (528.7 – 523.0).**

Response: **Concur, change made.**

Comment: **Environmental Impact Statement, Section 1.3, Paragraph 6, Sentence 2, Page 2. The statement is incorrect. A viable fishery of native small mouth bass exists (and thrives according to an article published on 07/06/06 in the Arkansas Democrat Gazette, Northwest Edition).**

Response: **"within their respective cold-water tailwaters" was added to the end of the sentence to clarify that the warm water fishery was destroyed within the stream areas that were impacted by cold water releases.**

Comment: **Environmental Impact Statement, Section 2.1, Paragraph 1, Sentence 5, Page 4. The reallocation study included the Dependable Yield Mitigation Storage (DYMS) and Hydropower Yield Protection Operation (HYPO) for the flood control and 50/50 alternatives. Please include in the statement.**

Response: **Concur, as noted**

Comment: **Environmental Impact Statement, Section 2.2.1, Paragraph 2, Sentences 1 and 3, Page 6. Sentence 1 has flood pool non-capitalized and sentence 3 has flood pool capitalized. Correct for consistency.**

Response: **Concur; correction made.**

Comment: **Environmental Impact Statement, Section 2.2.1, Page 6. Please include a discussion (as is done with the conservation pool in Section 2.2.2 and Section 2.2.3) concerning the depletion of the storage allocated to minimum flows.**

Response: **Concur, as noted.**

Comment: **Environmental Impact Statement, Section 2.2.2, Paragraph 1, Sentence 5, Page 7. The sentence states that the reallocation calculation was from a mid-point of storage reference point "…so that a conservative volume…" could be used. However, it is NOT conservative when compared having the reference point at the bottom conservation pool and adding the "feet." Please delete "conservative" and replace it with "fair" or "equitable."**

Response: **Do not concur, suggested change does not improve understanding of methodology.**

Comment: **Environmental Impact Statement, Section 2.2.2, Paragraph 2. The discussion regarding the depletion of the storage allocated to minimum flows would apply to all three reallocation scenarios.**

Response: **Concur, added statement to section 2.2.1..**

Comment: **Environmental Impact Statement, Figure 2.2-2, Page 8. Dashed white line should be moved up. The "Fishery" should be shown in the medium blue shaded area.**

Response: **Do not concur, Figure 2.2-2 accurately describes a conservation pool reallocation.**

Comment: **Environmental Impact Statement, Section 2.2.3, Pages 8 – 9. This section does not clearly explain the distinction between the part of storage reallocated from the flood pool and the portion from the conservation pool. Please clarify.**

Response: **There is no distinction between storage reallocated from Conservation Pool and Flood Pool. The distinction comes from where the storage is reallocated from. The section accurately explains how the volume of minimum flow storage is calculated, and how existing storage allocations are impacted.**

Comment: **Environmental Impact Statement, Section 2.3.1, Paragraph 1, Sentence 2, Page 10. The sentence refers to "excess" power. Since there is minimal spill on the White River Projects, additional power is not created. When the water discharged for WRMF is taken from the conservation storage, the power is merely changed from on-peak power to off-peak**
power. Please correct.

Response: **"excess" deleted.**

Comment: **Environmental Impact Statement, Section 2.3.2, Paragraph 1, Sentence 2, Page 10. See comment 14.**

Response: **"excess" deleted.**

Comment: **Environmental Impact Statement, Section 2.4, Paragraph 1, Sentence 3, Page 13. The sentence states that the trout fishery is "sub-optimal;" however, in Paragraph 15 of Section 3.7.2.2 on Page 75 the EIS states that …"more trophy size brown trout exist per mile in some reaches of the White River than any other river in the world." A recent article in the Arkansas Democrat Gazette, Northwest Edition (07/06/06) states that the White River is "…now the nation's pre-eminent trout fishery." The fishery is NOT sub-optimal. Please delete "sub-optimal" from the sentence.**

Response: **Do not concur. A world class fishery does not necessarily imply that it is at its optimal potential.**

Comment: **Environmental Impact Statement, Section 2.5, Pages 14 -23. Please see the comments about these tables in the Executive Summary (comments 16 – 30 and 32 – 34 in the Executive Summary comments). Also, Southwestern disagrees with the characterization describing the impacts to hydropower from the proposed project as minimal.**

Response: **Do not concur with SWPA's comments. The Reallocation Report and the EIS adequately explain differences between the Corps and SWPA's hydropower valuation philosophy. Since the Energy and Water Act allows for a hydropower offset, there are no adverse hydropower impacts.**

Comment: **Environmental Impact Statement, Section 3.5.2, Paragraph 4, Sentence 1, Page 37. The conservation pool elevation of Beaver Lake is 1120.44 NGVD. Please correct.**

Response: **Do not concur, top of Beaver conservation pool is 1120 .43.**

Comment: **Environmental Impact Statement, Tables 3.5-1, 3.5-4, 3.5-7, 3.5-10 and 3.5-13, Pages 39, 46, 51, 57 and 62, respectively. The tables reporting the recreation data seem to be placed in the report with no reference to them in the text. If there is no reference to the tables in the text, there is no need to have the tables in the report. Please correct (delete or reference the tables).**

Response: **Do not concur; tables are referenced in report.**

Comment: **Environmental Impact Statement, Table 3.5-1, Page 39. Table should be re-titled "Recreation Data for Beaver Lake." Please Correct.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Table 3.5-1, Social Benefits sub-table, Page 39. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.**

Response: **Do not concur; the remaining portions of the table make the context clear that these are yearly figures.**

Comment: **Environmental Impact Statement, Table 3.5-1, Economic Benefits sub table, Page 39. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-1.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Section 3.5.2.3, Paragraph 2, Sentence 3, Page 40. The sentence states that the abundance of warm water fish in Beaver Lake provide recreational activities for the public. Please revise the sentence to state, "Even though the warm water fishery was impaired downstream of the project, Beaver Lake has enhanced the warm water fishery in the region and the abundance of warm water fish provides recreational activities enjoyed by many visitors."**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Section 3.5.2.4 Paragraph 1, Sentence 1, Page 40. To be consistent with the authorizing language of the legislation for the construction of the Beaver project, the impoundment should be referenced as Beaver Lake, NOT Beaver Reservoir.**

Response: **Concur; "Reservoir" changed to" Lake".**

Comment: **Environmental Impact Statement, Section 3.5.2.4 Paragraph 2, Sentence 4, Page 41. Please change the sentence to state, "Both the gray and Indiana bats occur at War Eagle Caverns, as well, and it is important to ensure increased water levels do not impact these populations; or that any impact is mitigated; or a Biological Opinion is developed in coordination with the US Fish and Wildlife Service to determine an acceptable "take" of the species."**

Response: **Do not concur; these changes to the sentence are not necessary here as the ideas are included in other areas of the report.**

Comment: **Environmental Impact Statement, Section 3.5.2.4 Paragraph 2, Sentence 7, Page 41. See comment 25. It is important to state that a raised pool is acceptable as long as proper regulations are followed as to mitigate to the impact to any particular endangered species.**

Response: **Do not concur; these changes to the sentence are not necessary here as the ideas are included in other areas of the report.**

Comment: **Environmental Impact Statement, Section 3.5.2.4 Paragraph 4, Sentence 1, Page 41. Why does the Corps need to avoid adversely impacting a species when it is not listed as endangered? Southwestern agrees that all resources should be managed responsibly; however, protecting a species that may be rare and may eventually be listed is a premature action. It needs to be determined how rare the cave isopod is before making the assumptions and commitments stated in this paragraph.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Section 3.5.3, Paragraphs 1, 4 and 5, Page 43. The pertinent data regarding the surface areas of Table Rock Lake are inconsistent. Please revise and include correct data.**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Section 3.5.3, Paragraph 1, Sentence 4, Page 43. The sentence does not read correctly. Please revise (delete impounds?).**

Response: **Concur; "has" was deleted from the sentence.**

Comment: **Environmental Impact Statement, Table 3.5-4, Page 46. Table should be re-titled "Recreation Data for Table Rock Lake." Please Correct.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Table 3.5-4, Social Benefits sub-table, Page 46. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.**

Response: **Do not concur; the remaining portions of the table make the context clear that these are yearly figures.**

Comment: **Environmental Impact Statement, Table 3.5-4, Economic Benefits sub table, Page 46. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-4.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Section 3.5.4 Paragraph 1, Sentence 1, Page 48. EDEC should be referred to as "Empire District Electric Company (EDEC)" in this case since it is the first time EDEC is referenced in the main report. Please correct.**

Response: **Concur; correction made in EIS.**

Comment: **Environmental Impact Statement, Section 3.5.4 Paragraph 1, Page 48. The paragraph should also include a statement conveying the fact that Taneycomo is a Federal Energy Regulatory Commission licensed hydroelectric project and the date and length of the last re-licensure of the project.**

Response: **Concur; changes made in EIS.**

Comment: **Environmental Impact Statement, Section 3.5.5 Paragraph 1, Sentence 1, Page 48. The figure should be referenced as Figure 3.5-3. Please correct.**

Response: **Concur; correction made in EIS.**

Comment: **Environmental Impact Statement, Section 3.5.5 Paragraph 1, Sentence 7, Page 49. Is the number ($86 million) referring to the original construction cost or the total cost of the project to date? Southwestern's data indicates $105.9 million. Please clarify. Also, it should be noted that similar cost data for Table Rock and Beaver are not included in the EIS. Please include the cost data for all projects in the appropriate sections of the EIS.**

Response: **The $86 million reference is the total cost of the construction of the Bull Shoals Lake and Dam in 1963 dollars. The total cost of the reservoir and dam in 2006 dollars is approximately $736 million. It is not possible to comment on Southwestern's data ($105.9 million); SWPA did not provide any information supporting their estimate, and therefore, no reasonable analysis or comparison of their estimate can be**

conducted. Table Rock and Beaver Lakes are not authorized for construction under the FY 2006 Energy and Water Act therefore additional economic evaluation for these projects adds no value to report.

Comment: **Environmental Impact Statement, Table 3.5-7, Page 51. Table should be re-titled "Recreation Data for Bull Shoals Lake." Please Correct.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Table 3.5-7, Social Benefits sub-table, Page 51. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.**

Response: **Do not concur; the remaining portions of the table make the context clear that these are yearly figures.**

Comment: **Environmental Impact Statement, Table 3.5-7, Economic Benefits sub table, Page 51. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-7. 9**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Section 3.5.6, Paragraph 1, Sentence 1, Page 54. The Figure referred to in this sentence is Figure 3.5-4. Please correct.**

Response: **Concur; correction made in EIS.**

Comment: **Environmental Impact Statement, Section 3.5.6, Paragraph 1, Sentence 7, Page 55. Is the number ($28.6 million) referring to the original construction cost or the total cost of the project to date? South western's data indicates $77.2 million. Please clarify.**

Response: **The $28.6 million reference is the total cost of the construction of the project in 1963 dollars. It is not possible to comment on Southwestern's data ($77.2 million); SWPA did not provide any information supporting their estimate, and therefore, no reasonable analysis or comparison of their estimate can be conducted.**

Comment: **Environmental Impact Statement, Table 3.5-10, Page 57. Table should be re-titled "Recreation Data for Norfork Lake." Please Correct.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Table 3.5-10, Social Benefits sub table, Page 57. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.**

Response: **Do not concur; the remaining portions of the table make the context clear that these are yearly figures.**

Comment: **Environmental Impact Statement, Table 3.5-10, Economic Benefits sub table, Page 57. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-10.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Section 3.5.6.3, Paragraph 1, Sentence 3, Page 58. Include a space between 580 and NGVD.**

Response: **Concur; space inserted in sentence.**

Comment: **Environmental Impact Statement, Section 3.5.6.3, Paragraph 2, Sentence 5, Page 58. AG&F should not be abbreviated the first time it occurs in the report, the sentence should read "Arkansas Game and Fish Commission (AGFC) submits…" Please correct.**

Response: **Concur; change made in EIS.**

Comment: **Environmental Impact Statement, Section 3.5.6.5, Paragraph 1, Sentence 1, Page 59. How much water storage does the City of Mountain Home have contracted? Please include the information in the report.**

Response: **The information will be included in the next version of the report.**

Comment: **Environmental Impact Statement, Section 3.5.6.5, Paragraph 1, Sentence 1, 2 and 3, Page 59. The three sentences refer to Norfork Lake as Lake Norfork. The lake is referenced elsewhere as Norfork Lake. Please correct.**

Response: **Concur; name changed to "Norfork Lake".**

Comment: **Environmental Impact Statement, Section 3.5.6.5, Paragraph 1, Page 59. Information regarding the remaining discretionary storage at Norfork, which has been included for Beaver, Table Rock and Bull Shoals, is omitted. Please include.**

Response: **Concur.**

Comment: **Environmental Impact Statement, Section 3.5.7, Paragraph 1, Sentence 7, Page 60. Is the number ($46.5 million) referring to the original construction cost or the total cost of the project to date? Southwestern's data indicates $58.0 million. Please clarify.**

Response: **The $46.5 million reference is the total cost of the construction of the project in 1963 dollars. It is not possible to comment on Southwestern's data ($58 million); SWPA did not provide any information supporting their estimate, and therefore, no reasonable analysis or comparison of their estimate can be conducted. Table Rock and Beaver Lakes are not authorized for construction under the FY 2006 Energy and Water Act therefore additional economic evaluation for these projects adds no value to report.**

Comment: **Environmental Impact Statement, Table 3.5-13, Page 62. Table should be re-titled "Recreation Data for Greers Ferry Lake." Please Correct.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Table 3.5-13, Social Benefits sub table, Page 62. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.**

Response: **Do not concur; the remaining portions of the table make the context clear that these are yearly figures.**

Comment: **Environmental Impact Statement, Table 3.5-13, Economic Benefits sub table, Page 62. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-13.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Section 3.5.7.3, Paragraph 2, Sentence 2, Page 63. Southwestern is not aware of any ongoing effort by the Corps to maintain lake levels during critical spawning periods that this sentence alludes to. In the past, a voluntary effort between the Corps, the White River Fisheries Partnership and Southwestern has tried to maintain lake levels during the critical spawning periods. If**

there is a continuing effort to provide stable lake levels during the spawning periods, please provide documentation that details these efforts.

Response: **Concur; sentence deleted.**

Comment: **Environmental Impact Statement, Section 3.5.7.3, Paragraphs 2 and 3, Page 63. Arkansas Game and Fish Commission should be abbreviated in these paragraphs.**

Response: **Concur.**

Comment: **Environmental Impact Statement, Section 3.5.7.5, Paragraph 1, Sentences 1 through 3, Page 64. There is no mention of the contracted water storage volume for the entities that utilize Greers Ferry Lake for M&I use. Please include the pertinent water storage data in this paragraph, or the amount of contracted discretionary storage.**

Response: **Concur.**

Comment: **Environmental Impact Statement, Section 3.5.10, Paragraph 2, Sentence 1, Page 66. What agency headquarters is being referred to in this sentence? Please clarify.**

Response: **Concur; "headquarters" deleted in sentence.**

Comment: **Environmental Impact Statement, Section 3.5.10, Paragraph 7, Sentence 2, Page 66. It is also true that the warm water of the Buffalo National River adversely impacts the cold water fishery of the White River. Please include a statement in this paragraph stating this fact.**

Response: **Do not concur.**

Comment: **Environmental Impact Statement, Section 3.5.10, Paragraph 9, Sentence 7, Page 67. Please correct the formatting issue (take out the extra line that separated the end of this sentence from its beginning).**

Response: **Concur; correction made in EIS.**

Comment: **Environmental Impact Statement, Section 3.6, Paragraph 1, Sentence 2, Page 67. The Arkansas Department of Pollution Control and Ecology has changed its name to the Arkansas Department of Environmental Quality (ADEQ). Please correct.**

Response: **Do not concur; the Commission is still named "The Arkansas Department of Pollution Control and Ecology Commission". Inserted Commission to clarify.**

Comment: **Environmental Impact Statement, Section 3.6, Paragraph 2, Sentence 2, Page 67. Capitalize "Lake" when referring to Beaver Lake and add Lake after each project's name.**

Response: **Concur.**

Comment: **Environmental Impact Statement, Section 3.6, Paragraph 2, Sentence 2, Page 67. The sentence is not clear. What is meant by "…with low trophic status expected if in natural (unpolluted) condition." Is the statement implying that with no pollution there would be very low nutrients in the lake to allow for aquatic growth? Please clarify.**

Response: **The statement means that in its natural state the lakes have very little nutrient content. Phosphorus and other nutrients when added to the lakes by point source and non-point source pollutants add nutrients to the lakes beneficial to aquatic organisms but can be adverse at higher levels.**

Comment: **Environmental Impact Statement, Section 3.6, Paragraph 14, Sentence 2, Page 69. How can the water be too cold? The warmer the water, the sooner it will become too warm for the trout in the downstream reaches. Please explain.**

Response: **Trout have necessary water temperature requirements for spawning and growth.**

Comment: **Environmental Impact Statement, Section 3.6, Paragraph 15, Sentence 1, Page 70. The sentence is not clear and is grammatically incorrect. Please correct.**

Response: **Sentence corrected.**

Comment: **Environmental Impact Statement, Section 3.7.2.1, Paragraph 4, Sentence 1, Page 71. The sentence states that the warm water fishery was destroyed. This is not true since there is a viable population of small mouth bass in the White River below the projects (see the Arkansas Democrat Gazette article published on 07/06/06).**

Response: **Concur; changed "destroyed" to "severely impacted".**

Comment: **Environmental Impact Statement, Section 3.7.2.1, Paragraph 4, Sentence 2, Page 71. The river is named the North Fork River, NOT the Norfork River.**

Response: **Concur; ”Norfork Rivers” changed to “North Fork River”.**

Comment: **Environmental Impact Statement, Section 3.7.2.1, Paragraph 4, Sentence 2, 3 and 4, Page 71. The use of kilograms is not consistent with the use of pounds and ounces on page 75. Please convert the kilograms to the equivalent weights.**

Response: **Concur; kilograms converted to pounds.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 4, Sentence 1, Page 72. The sentence states that changes in hydropower operations in the 1970’s prevented the growth of the trout. What were the changes in the hydropower operations that caused the trout growth to be inhibited? Southwestern is not aware of any operational changes**
at Bull Shoals. Please provide documentation of the operational changes or delete the statement listing hydropower operational changes preventing the growth of the trout.

Response: **Concur; citation added.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 4, Sentence 2, Page 72. The river is named the North Fork River, NOT the Norfork River.**

Response: **Concur “Norfork” changed to “North Fork”.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 6, Sentence 2, Page 72. The sentence states “…found few changes in angler no changes in stocking…” The sentence is not complete. Please correct.**

Response: **Concur; sentence rewritten.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 9, Sentence 10, Page 73. Delete “hydrolimnetic” and replace with “hypolimnetic”.**

Response: **Concur; changes made in EIS.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 10, Sentence 9, Page 73. Please change the “and” in the sentence to an.**

Response: **Concur; changes made in EIS.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 12, Sentence 1, Page 75. The sentence has Southwest capitalized and northwest not capitalized. Please correct to be consistent.**

Response: **Concur "Southwest Missouri" changed to "southwest Missouri"**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraphs 12, 13, 14 and 15, Page 75. The paragraphs state that the tailwaters of the hydropower projects in the region are "…world class…" and "…the best trout fishing streams in the world…" Yet, on page 13 of the EIS, it is stated that the trout fishery is sub-optimal. A "world class" fishery should not be described as sub-optimal. Please remove the sub-optimal description from page 13 of the EIS.**

Response: **Do not concur. A world class fishery does not necessarily imply that it is at its optimal potential.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 14, Sentence 2, Page 75. What is the basis for this statement? Why does a "world class" fishery need to be improved? Please explain.**

Response: **A world class fishery does not necessarily imply that it is at its optimal potential.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 15, Sentence 1, Page 75. There should be no dash (-) between the and life in the sentence. Please correct.**

Response: **Concur; change made in EIS.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 17, Sentence 1, Page 75. Why was Table Rock left out of the list? Please include Table Rock's information.**

Response: **Concur.**

Comment: **Environmental Impact Statement, Section 3.7.2.2, Paragraph 17, Sentence 2, Page 75. The sentence states that the proposed flows will have the "following effects." There are no effects described after the statement. Please include a description of the effects.**

Response: **Sentence deleted.**

Comment: **Environmental Impact Statement, Section 3.7.2.3, Paragraph 3, Sentence 2, Page 76. The sentence references "AR. Game and Fish." It should be referenced as AGFC. Please correct.**

Response: **Concur; reference corrected.**

Comment: **Environmental Impact Statement, Section 3.7.2.3, Paragraph 3, Sentence 4, Page 76. How can it be assured that the sloughs and oxbows …"will remain…" some of the finest warm water fishing? Please elaborate about the protections and enhancements that will be made to ensure the stated secure future.**

Response: **Deleted "and will remain" from sentence.**

Comment: **Environmental Impact Statement, Section 3.7.2.4, Paragraph 2, Sentence 1, Page 76. The 75 miles stated in the sentence should be referenced to the correct dam. Please correct.**

Response: **Changed 75 to 90 and added Bull Shoals Dam.**

Comment: **Environmental Impact Statement, Section 3.7.2.4, Paragraph 3, Page 77. Delete entire paragraph. It is the same as the previous paragraph.**

Response: **Concur.**

Comment: **Environmental Impact Statement, Section 3.7.2.4, Paragraph 4, Sentence 2, Page 77. The sentence uses kilometer to reference distances. For consistency, miles should be used. Please correct.**

Response: **Concur.**

Comment: **Environmental Impact Statement, Section 3.8, Paragraph 2, Page 78. The paragraph needs to include language that describes and quantifies the impact to the nation's air quality since the lost capacity and energy from the projects due to the minimum flows will be replaced with thermally generated energy. Please include the information.**

Response: **Do not concur; requested information is included in the "Environmental Consequences" Section where it belongs.**

Comment: **Environmental Impact Statement, Section 4.0, Paragraph 1, Sentence 2, Page 94. The sentence states that the fishery is sub-optimal. Delete sub-optimal. The report previously stated that the fishery is "world class." A "world class" fishery should not be classified as sub-optimal. Also, the paragraph fails to elaborate on the effects to the habitat the proposed actions will cause. Please detail the effects to the habitat.**

Response: **Do not concur. A world class fishery does not necessarily imply that it is at its optimal potential.**

Comment: **Environmental Impact Statement, Section 4.0, Paragraph 2, Sentence 2, Page 94. The SUPER model should be referred to in all capitalized letters. Please correct.**

Response: **Concur; "SUPER" changed to all capital letters.**

Comment: **Environmental Impact Statement, Section 4.2.1, Paragraph 2, Sentence 4, Page 95. The last part of the sentence does not make sense. How will the largest decrease in duration occur at Beaver? Please correct.**

Response: **Section 4.2.1 is about Geology, can't find references to decreased duration.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Beaver Lake Annual Pool Elevation-Duration for Pool Elevations of Interest Table, Page 99. For elevation 1121.93, it seems unusual that 1.5 feet above the top of conservation pool would be attained LONGER under current conditions than if the pool was raised 1.5 feet under the flood control option (current is 30.45 and flood pool option is 28.62 at elevation 1121.93). Please correct.**

Response: **Do not concur; results are taken from the SUPER model runs for Beaver Lake.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Beaver Lake Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest Table, Page 99. Some of the deltas are calculated incorrectly (- 13.09 and -7.78). Please correct.**

Response: **Do not concur; results are taken from the SUPER model runs for Beaver Lake.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Beaver Lake Annual Pool Elevation-Duration for Pool Elevations of Interest Table, Page 101. It does not make sense that if the storage for the proposed minimum flow was to be reallocated from the**

flood pool with DYMS that the flood elevation duration would be less frequent than the current operation elevation duration. Please correct.

Response: **Do not concur; results are taken from the SUPER model runs for Beaver Lake.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Beaver Lake Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest Table, Page 101. Some of the deltas are calculated incorrectly. Please correct.**

Response: **Concur, deltas corrected.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest Tables, Pages 103 – 118. Many of the deltas are calculated incorrectly. Please correct.**

Response: **Concur, the Black River Basin composes 43% of the total drainage area at its confluence and thus a major effect on the White River. It simply should have stated that the study area did not include the Black River Basin as there were no study proposals in that basin and the impacts of the study on the Black River Basin were insignificant due to minor changes to the releases from Bull Shoals and Norfork. Appropriate changes will be made.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Bull Shoals Lake annual pool elevation figure, Page 107. The ATOC elevation should be 656.5 for the 50/50 Split alternative. Please correct.**

Response: **Do not concur; difference (0.1) result from rounding.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Bull Shoals Lake seasonal May 15 – July 15 pool elevation figure, Page 107. The duration of the seasonal pool is May 15 – June 15. Please correct.**

Response: **The statement included in the EIS accounts for the transition to 656 NGVD that ends on approximately Juy15.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Bull Shoals Lake Differences in July - September Pool Elevation-Duration for Pool Elevations of Interest Table, Page 110. The difference in the elevation 654 row is not highlighted in the conservation column. Please correct.**

Response: **Do not concur; elevation 654 is not highlighted because it is not relevant in the period depicted.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Norfork Lake seasonal May – July 15 pool elevation figure, Page 111. The duration of the seasonal pool is May 15 – June 15. Please correct.**

Response: **The statement included in the EIS accounts for the transition from 555 to 554 NGVD that ends on approximately Juy15.**

Comment: **Environmental Impact Statement, Section 4.4.2.1, Greers Ferry Lake pool elevation figures, Page 115. Due to an adjustment for reallocated storage for water supply, Greers Ferry has been operating a different Seasonal Pool Plan than the one shown in the figures. Please correct.**

Response: **Comment noted.**

Comment: **Environmental Impact Statement, Section 4.5.1, Paragraph 1, Sentence 4, Page 119. The top of Beaver's flood pool is at elevation 1130.00 NGVD. The sentence states that changes at elevations 1120 to 1140 NGVD have been investigated. Changes to Beaver Lake above elevation 1130.00 NGVD would not be allowed. Please correct.**

Response: **Do not concur; the analysis was conducted and the sentence was changed to state this.**

Comment: **Environmental Impact Statement, Section 4.5.1, Beaver Lake Annual Pool Elevation-Duration for Pool Elevations of Interest Tables, Page 120. The values in these tables do not appear to be consistent with the tables presented on pages 99 – 102 of the report. Please correct.**

Response: **Do not concur. Section 4.5.1 refers to impacts on endangered species and relevant elevations, the values on pages 99-102 refer to fishery impact analysis.**

Comment: **Environmental Impact Statement, Section 4.5.3, Paragraph 1, Sentence 5, Page 123. The sentence states that additional analyses are needed to establish the significance of the effect of the proposed project. However, the next paragraph in this section states that a Biological Assessment (BA) has been completed by the Corps and the US fish and**
Wildlife (UFWS) has concurred. If the BA is complete and has been approved by USFWS, what additional analyses are needed to determine the effects of the proposed project on the Tumbling Creek Cave Snail? Please clarify.

Response: **Concur; deleted sentence.**

Comment: **Environmental Impact Statement, Section 4.5.4, Paragraph 1, Sentence 1, Page 126. An "e" needs to be added at the end of the lone "b" in the sentence. Please correct.**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Section 4.5.1, Greers Ferry Lake Annual Pool Elevation-Duration for Pool Elevations of Interest Tables, Page 127. These tables are not consistent with the table presented on pages 115 – 118 of the report. Please correct.**

Response: **Do not concur. Section 4.5.1 refers to impacts on endangered species and relevant elevations, the values on pages 99-102 refer to fishery impact analysis.**

Comment: **Environmental Impact Statement, Section 4.6, Paragraph 1, Sentence 1, Page 130. Change the sentence to read "…releases will remain in their current state…"**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Table 4.5.3.1, Page 130. The tailwater miles reported for Table Rock are inconsistent with the earlier reports of Table Rock's tailwater length. See Comment 5. Please correct.**

Response: **Concur.**

Comment: **Environmental Impact Statement, Section 4.6.1, Paragraph 2, Sentence 5, Page 131. The concept stated in the sentence is difficult to understand. A large hydropower flow released from the project would be just as difficult (if not even more so) to aerate as a small release. Please elaborate further on the proposed concept to clarify the ambiguity of the statement and to confirm the statement's assertions.**

Response: **Do not concur; statement asserts that higher flows will create more turbulence resulting in more aeration of the released water.**

Comment: **Environmental Impact Statement, Section 4.6.2, Paragraph 1, Sentence 1, Page 132. Delete the "was evaluated" that follows runs in the sentence.**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Section 4.6.2, Paragraph 1, Page 132. It would be beneficial if the study and associated graphs that are referred to in this paragraph could be included as part of the report. Please include the referenced information in this report.**

Response: **All referenced documents will be circulated together with the EIS.**

Comment: **Environmental Impact Statement, Section 4.6.2, Paragraph 2, Sentence 8, Page 132. Please change the sentence to read "…hydropower generators are in operation."**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Section 4.6.3.1, Paragraph 1, Sentence 1, Page 138. Please change the sentence to read "…at 210 cfs (house unit and leakage)…"**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Section 4.6.3.1, Paragraph 1, Sentence 3, Page 138. The figure that the sentence refers to appears to be Figure 4.6-1 NOT figure 8-2.**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Section 4.6.4, Paragraph 1, Sentence 1, Page 140. Change the sentence to read. "The AGFC target maxima considered to be stress thresholds for trout are listed in Table 4.6-3."**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Section 4.6.4, Paragraph 4, Sentence 4, Page 140. To provide the 1600 dsf from Bull Shoals, a seasonal pool plan must be in place. Add the statement to the report.**

Response: **Concur, there will be no change in seasonal pool operations. The seasonal pool plan was included in all SUPER model runs, and the effects of seasonal pool contribute to the forecasted duration and frequency tables for all proposed release and reallocation scenarios.**

Comment: **Environmental Impact Statement, Section 4.6.4, Paragraphs 7 and 8, Page 141. Sentences 1 and 2 in paragraph 7 and sentences 2 and 3 in paragraph 8 are exactly the same. Delete sentences 2 and 3 in paragraph 8.**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Section 4.6.4, Paragraph 7, Sentence 5, Page 141. The sentence refers to figures in section 4.7. There are no figures in section 4.7 of the report. The figures referred to are probably figures 4.6-2 and 4.6-3 on pages 142 and 143. Please correct.**

Response: **Concur; corrections made in EIS.**

Comment: **Environmental Impact Statement, Table 4.7-2, Average Annual Energy Loss Due to Reallocation of Storage from Each Pool, Page 145. The Conservation Pool column should have megawatt hours abbreviated with a capital W (i.e. MWh).**

Response: **Concur: Mwh changed to MWh.**

Comment: **Environmental Impact Statement, Table 4.7-2, Average Annual Energy Loss Due to Reallocation of Storage from Each Pool, Page 145. The energy loss should be greater out of the conservation pool than from the flood pool. The Table shows the energy loss from Beaver and Table Rock to be greater from the flood pool, but this is not correct. Please correct.**

Response: **Corrected**

Comment: **Environmental Impact Statement, Table 4.7-2, Average Annual Energy Loss Due to Reallocation of Storage from Each Pool, Page 145. Southwestern is not clear where the energy values shown this table came from. The values are very low as compared to Southwestern's computations and to the values provided in the HAC July 2003 report.**

Response: **Concur: values were updated in the EIS.**

Comment: **Environmental Impact Statement, Section 4.8, Paragraph 3, Sentence 2, Page 149. Southwestern strongly disagrees with the methodologies, assumptions and conclusions of the CVM method.**

Response: **Do not concur. The Contingent Valuation Method was the best method to evaluate the benefits of the project. ER 1105-2-100 details three methods to estimate demand for publicly provided recreation; Travel Cost Method, Contingent Valuation Method, and Unit Day Value. Contingent Valuation was preferred by the District, SWD, and OMB over the other two methods, because it allowed for an analysis that could be conducted by using information from individuals within the study area. The travel cost method would have used the cost of travel and value of time to determine the price of the resource being evaluated. The unit day value would have relied on the informed opinion of a few, if not one, individual.**

CVM allowed the Corps to survey the region to determine the price the people (only those who held fishing licenses) within the area would pay for an enhanced fishing experience; this would not have been possible with the other two methods. Travel Cost Method and Unit Day Value would have provided generalized and subjective ideas of the value of minimum flows whereas CVM provided a value of minimum flows based on direct input from fishermen in the study area.

Comment: **Environmental Impact Statement, Section 4.8, Paragraph 4, Sentence 12, Page 150. What idea is this sentence trying to convey? It appears to say no meaningful results could be derived from the small sample size. Please clarify.**

Response: **Do Not Concur: The statement is not implying that the results are not meaningful or can not be interpreted. The statement is "…too small to convey any meaningful statistical inference." When sample sizes are not large enough, statistical inference becomes problematic. When a sample size is too small, the sixth assumption of the Gauss-Markov Theorem is, most likely, violated and the remaining assumptions can also become compromised. This creates a situation which can cause the results of the analysis to not be the best linear unbiased estimators. This implies that it can not be said that the method used can provide an estimate within a certain level of significance, such as 1%, 2.5%, or 5%. This does not imply that there is no economic significance.**

Comment: **Environmental Impact Statement, Table 4.8-1, Potential Recreational Benefits From Tailwaters, Miles Column, Page 150. The number of miles shown for Table Rock is too large and inconsistent throughout the report. The actual tailwater length is about 6 miles. Please correct.**

Response: **Concur, Table Rock tailwater is listed as 22 miles only when referring to recreational benefits.**

Comment: **Environmental Impact Statement, Section 4.8.1, Paragraph 1, Sentences 7 and 8, Page 151. Southwestern disagrees with the statements. All that needs to be**

accomplished for any new encroachment into the flood pool would be to formulate a new Biological Opinion in Section 7 consultation with the USFWS.

Response: **The USFWS' opinion is that any reallocation in the flood pool is environmentally unacceptable.**

Comment: **Environmental Impact Statement, Tables 4.8.3 – 4.8.7, Beaver, Table Rock Bull Shoals, Norfork, and Greers Ferry Summary, Pages 152 – 156. The * footnote states that the tables summarize the tables found in appendix A. The referred to tables are NOT in Appendix A. Please include the tables in Appendix A.**

Response: The referred tables are in the main report. This sentence has been corrected in the EIS.

Comment: **Environmental Impact Statement, Section 4.9, Paragraph 2, Sentence 5, Page 156. This sentence is incomplete. Please finish the statement.**

Response: **Concur: sentence was deleted.**

Comment: **Environmental Impact Statement, Table 4.10-1, Cumulative Impacts Assessment, Page 158. As stated on page 157, the impacts of an individual reallocation may be "minor," but collectively, the reallocation of hydropower storage for the proposed project has a significant negative impact on the hydropower benefits. Please acknowledge in the report the significant negative impact to hydropower the cumulative reallocation has.**

Response: **"Minor" removed from statement.**

Comment: **Environmental Impact Statement, Section 6.0, Audience and Location, Page 163. There is no Associated Power. The entity's name is Associated Electric Cooperative, Incorporated. Please correct.**

Response: **Concur; appropriate name for this entity has been updated.**

Comment: **Environmental Impact Statement, Appendix A, Agency Coordination, Page 206. There appears to be no documentation of coordination with Southwestern. Southwestern provided formal comments in letters dated December 5, 2002 and July 27, 2004. Please include all appropriate letters regarding the proposed WRMF project that have been received from Southwestern in Appendix A.**

Response: **Concur; all appropriate documentation will be included.**

U.S. Department of Interior, Office of Environmental Policy and Compliance

U.S. Fish and Wildlife Service

Comment: **The USFWS supports the proposed action but believes it is only one part of needed mitigation for the original construction of the dams and their effects on the native fish species in the White River.**

Response: **Comment noted.**

Comment: **Water releases from the dams result in low D.O. and in the case of Norfork high levels of manganese that cause fish kills in the tailwater. These problems should be corrected as part of the original mitigation for the dams….. A long term comprehensive solution should be implemented to resolve all of the tailwater and NFH water quality problems. The Final EIS should state that this project will only partially correct the problems in the tailwater and that other solutions are needed.**

Response: Concur.

Comment: **USFWS agrees with AGFC and MDC that the states should not be responsible for the costs of water storage that is needed due to federal hydropower usage that has caused the tailwater problems.**

Response: **Reallocation of storage and planning, design and construction of White River Minimum Flows project facilities shall be considered fish and wildlife enhancement that provides national benefits and shall be a Federal expense in accordance with section 906(e) of the Water Resources Development Act of 1986 (33 U.S.C. 2283(e)).**

Comment: **USFWS supports the National Park Service claims that the cold water releases have impacted the warm water fisheries within the Buffalo National River and that these impacts have never been thoroughly mitigated……further study plans should be submitted as part of the Final EIS that are federally funded and that evaluate the impacts and recommend federally funded solutions.**

Response: **The Corps' position has always been that the dams were fully mitigated for in the past. If Congress decides to fund any future studies, the Corps would assist in anyway possible and within its authorities.**

Comment: **The FWS fully concurs that this project may affect, but is not likely to affect the Federally-listed threatened and endangered species identified in the project area and concurs with the Corps' previous determinations. Therefore, no further consultation with the FWS under section 7 of the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.) is required.**

Response: **Concur and noted.**

U.S. National park Service

Comment: **Recommend that the final EIS include an analysis of the impact of any White River flow regulations on the native warm-water fish fauna of both the White River and its Buffalo River Tributary.;**

Response: **The Corps believes that this information has been reasonably addressed in the DEIS as it relates to the Minimum Flow Study.**

Comment: **Recommend that the final EIS address any possible mitigation measures for the impacts resulting from the operation of the Bull Shoals or Norfork Dams on the ecology of Buffalo National River.**

Response: **The Corps' position has always been that the dams were fully mitigated for in the past. If Congress decides to fund any future studies, the Corps would assist in anyway possible and within its authorities.**

U.S Geological Survey

Comment: **Page 8. Section 2.2.3 Reallocate 50/50. second paragraph second sentence: and Page 14. Section 2.5, Comparison of Environmental Consequences of Alternatives - The text indicates this alternative will result in reductions in hydropower and flood storage; yet throughout the table, the section on water resources under the 50/50 alternative indicates an increase in storage for hydropower production. The same apparent inconsistency is present in the table presented in the executive summary.**

Response: **Concur, Statement changed.**

Comment: **Page 96. Section 4.3 Water Quality - There were four model studies conducted on Beaver Lake, Table Rock Lake, Bull Shoals Lake, and Norfork Lake; however, numbers referenced in this section are only from Beaver Lake. Discussion of model results should indicate what the temperature and dissolved oxygen increased or**

decreased relative to; as written, it is not clear whether the changes were upstream or downstream, one scenario relative to another, or to a baseline. The discussion ends by stating that predicted increases or decreases were similar to the error between measured and simulated values. This is a concern if the model is used for prediction (comparing model results to physical measurements or anticipated future measurements). However, if the model is used in a comparative mode (comparing results from a modeled baseline to modeled results when conditions are changed relative to that baseline), then any sources of inaccuracy are present in both models and "cancel out" so conclusions regarding increases or decreases are still valid.

Response: Concur.

Comment: **Finally, these works are not cited in the References section. A suggested rewrite of this paragraph is presented below; phrases and sentences to add are underlined. Under the No Action alternative there will be no change in the water quality of the study area. There is no significant effect expected on the water quality of the reservoirs due to the implementation of any of the reallocation alternatives. This conclusion is based largely on Temperature and Dissolved Oxygen Hydrodynamics models completed by the USGS (Galloway and Green, 2003: Green, et. al., 2003: Galloway and Green. 2002; Haggard and Green 2002). In an effort to assess the impact of increased minimum flows on temperature and dissolved oxygen concentrations of reservoir water quality, the USGS developed hydrodynamic temperature and dissolved oxygen models for each c the reservoirs with the exception of Greers Ferry. Simulations included: (1) the impact of additional minimum flows on tailwater temperature and dissolved oxygen qualities (current conditions); and (2) increasing the water surface elevation to account for the proposed reallocated storage. In scenario (1) water temperatures in the Beaver Lake tailwater appeared to increase (<1 degree C) and dissolved oxygen appeared to decrease (2.2 mg/l). Conversely, scenario (2) in Beaver Lake apparently lowered the outflow water temperature (<1 degree C) and increased the dissolved oxygen concentrations (<1.2 mg/l). However, these results were within the boundaries or similar to the error between measured and simulated water column values. (Although results did not differ greater than the margin of error in the model they do demonstrate. based on the sensitivity of the model. that little to no change would be expected in the real system. The decreasing trend in dissolved oxygen concentrations with the increase in minimum flow in Beaver Lake shows there is an apparent stress to the system. With the increase in surface elevation and additional minimum flow. water temperature and dissolved oxygen concentrations in the tailwater tended to improve. but again in small amounts.) These results have been consistent in all of the models. The dissolved oxygen in the tailwaters should increase from any alternative which results in releases from a new turbine or use of a siphon and aeration valve combination; however, the four model reports did not assess dissolved oxygen dynamics (increases or decreases) from any alternatives that result in releases from new turbines or use of siphons or aeration valve combinations only from increasing the pool elevation.**

References:
Galloway, Joel M. and Green, W. Reed, 2003, Simulation of hydrodynamics, temperature, and dissolved oxygen in Bull Shoals Lake, Arkansas, 1994-1995: U.S. Geological Survey Water-Resources Investigations Report 03-4077,30 p. Also available on the internet at: http://pubs.usgs.gov/wri/wri034077/WRIRO3-4077.pdf

Green, W. Reed, Galloway, Joel M., Richards, Joseph M., and Wesolowski, Edwin A. , 2003, Simulation of hydrodynamics, temperature, and dissolved oxygen in Table Rock Lake, Missouri, 19961997: U.S. Geological Survey Water-Resources Investigations Report 034237,46 p. Also available on the internet at: h~:l/mo.water.usgs.~ov/Reportslwrir03-4237-richards/report.pdf

Galloway, Joel M. and Green, W. Reed, 2002, Simulation of hydrodynamics, temperature, and dissolved oxygen in Norfork Lake, Arkansas, 1994-1995: U.S. Geological Survey Water-Resources Investigations Report 02-4250. Also available on the internet at: htto:/lar.water.us~s.zov/LOCAL REPORTSlWRIR02-4250.pdf

Haggard, Brian E. and Green, W. Reed, 2002, Simulation of hydrodynamics, temperature, and dissolved oxygen in Beaver Lake, Arkansas, 1994-1995: U.S. Geological Survey Water-Resources Investigations Report 02-41 16,28 p. Also available on the internet at: http://ar.water.usgs.zoviLOCAL REPORTSIWRIR 02- 41 16.pdf

***Response*: Concur.**

***Comment:* Page 99. Section 4.4.2.1 Lake Fishery Effects - Further explanation/clarification of the tables and figures beginning on page 99 would be helpful to the reader. For example, units for the columns following "elevation" in the tables (possibly depth above reservoir bottom?), reason for the shaded boxes, horizontal axis for the figures, etc.**

***Response:* Concur.**

U.S. Environmental Protection Agency

***Comment:* EPA rates the DEIS as "LO," i.e., EPA has "Lack of Objection" to the implementation of the proposed action.**

***Response:* Comment noted.**

***Comment:* Please correct the following statement found on p. 78 of the DEIS, under Section 3.18: "According to the Arkansas Department of Environmental Quality, the entire state of Arkansas is in compliance with all EPA ambient air quality standards."**

This statement is no longer correct as EPA designated Crittenden County as nonattainment for the 8-hour ozone standard on June 15, 2004. However, Crittenden County is not part of the White River watershed and so is unlikely to be impacted by any of the proposed plans. We recommend either correcting or deleting this sentence and also recommend clarifying or deleting the following sentence, also on p. 78 of the DEIS: "only pool concentrations occasionally approach the limit of the standard."

Response: **The sentences have been deleted or corrected in the FEIS to state that "The areas of Arkansas and Missouri where the five lakes are located are considered "attainment areas" and are therefore exempt from the "Conformity Rule" of the CAA."**

ADEQ
ARKANSAS
Department of Environmental Quality

June 20, 2006

Mr. Mike Biggs
Project Management Division
U. S. Army Corps of Engineers
P. O. Box 867
Little Rock, Arkansas 72203-0867

Dear Mr. Biggs:

The Department staff has reviewed the White River Minimum Flow EIS. The document covers most of our concerns for the White River system. However, in Section 3.6 the State's waters classification should reference the current approved version of Regulation # 2. The White River System tailwaters are classified as trout streams, with applicable water quality standards of 6 mg/l dissolved oxygen and stream temperature of 20 degrees C, which are often violated. In Section 3.5.5.3 Bull Shoals Reservoir is designated as an ERW and trout waters, and has a dissolved oxygen standard of 6 mg/l.

The staff has noted a lack of discussion of the impacts of minimum flow on the 303(d) listings. In order to remove the White at Bull Shoals and the Norfork from the Arkansas list of impaired waters, the EIS should show progress toward that goal instead of the general discussion currently included (Section 4.5.1). If the proposed generators with siphons or other aeration will add oxygen, reducing the deficit, the EIS should state those outcomes. If there is an alternative that further improves the oxygen situation, the EIS should also offer that alternative.

The White River Dissolved Oxygen Committee has identified forebay oxygen diffusion as the most efficient technology for increasing tailwaters dissolved oxygen concentrations and also for alleviating metals toxicity issues in the Norfork National Fish Hatchery operations. Will these alternatives provide that type of aeration or equivalent? Increasing minimum flows should aid in alleviation of routine summertime temperature standards violations in downstream waters.

Since the implementation of minimum flow will be costly, and the low oxygen levels will also be costly to remedy, a proposal that would satisfy both needs might be less costly than treating the two separately. The Department would support such an alternative.

The staff is also concerned about the effect of minimum flow on the infestation by "didymo". Will minimum flow add to the problem or improve it? We believe that the greater depth and current would limit didymo's growth somewhat, but this is speculation. A discussion of the various outcomes would be helpful.

ENVIRONMENTAL PRESERVATION AND TECHNICAL SERVICES DIVISION
8001 NATIONAL DRIVE / POST OFFICE BOX 8913 / LITTLE ROCK, ARKANSAS 72219-8913 / TELEPHONE 501-682-0937 / FAX 501-682-0936
www.adeq.state.ar.us

Thank you for the opportunity to comment.

Sincerely,

Dick Cassat, Chief
Environmental Preservation and Technical Services Division

Arkansas Game and Fish Commission

2 Natural Resources Drive Little Rock, Arkansas 72205

Mike Freeze
Chairman
England

Sheffield Nelson
Vice Chairman
Little Rock

Sonny Varnell
St. Paul

Freddie Black
Lake Village

Scott Henderson
Director

Brett Morgan
Little Rock

John Benjamin
Glenwood

George Dunklin Jr.
DeWitt

Dr. Kim Smith (Ex-Officio)
University of Arkansas
Fayetteville

June 26, 2006

Mr. Mike Biggs, Project Manager
U.S. Army Corps of Engineers
P.O. Box 0867
Little Rock, Arkansas 72203-0867

Dear Mike:

I have asked the Fisheries Division staff to review the draft Environmental Impact Statement (EIS) for minimum flows for the White, North Fork, and Little Red rivers. I understand the draft is in the process of being completed and some sections are absent or incomplete. Our comments are for the draft EIS provided. The enclosed Microsoft Word document file contains your draft EIS with our suggestions and comments.

There are factual or typographical errors throughout the document partly from reference to out of date reports or documents and we have tried to correct those. An example is in section 3.5.13.2 in discussions of fishing regulations and fisheries management on Bull Shoals and Norfork tailwaters. Our comments more accurately reflect current regulations for these two tailwaters. Regulations for other tailwaters not discussed in this section are different and regulations can be expected to change.

In discussions of authorized purposes for the White River projects, all authorized purposes should be listed. For the White River projects these include flood control, hydropower generation, water supply, recreation, and fish and wildlife. The tailwaters should be considered part of the White River Basin projects since flow and water quality is largely regulated by dam releases.

Table 1.3-1 (Environmental Compliance) is not referenced in the text. Although the information in the table is correct for the reservoirs, the releases from Table Rock, Bull Shoals, and Norfork dams are not in compliance with their respective State's water quality standard for dissolved oxygen and are listed under section 303d of the Federal Clean Water Act. Additionally, some releases from Beaver and Greers Ferry dams are below Arkansas' water quality standard for dissolved oxygen and releases from Bull Shoals and Norfork dams do not always provide for meeting State water quality standards for temperature in the White River. These tailwater water quality issues are mentioned elsewhere in the text.

The cave crayfish *Cambarus zophonastes* is only found near Mountain View, AR. It would not be affected by water levels in Beaver Lake or by discharges from the dam. It could potentially, although not likely, be affected by discharges from Bull Shoals or Norfork dams.
The cave crayfish *Cambarus aculabrum* is found in the Sugar and Osage creek (Illinois River) drainages. The closest known location to Beaver Lake is east of Bella Vista so its range could potentially extend to near the lake. The Bristly Cave Crayfish *Cambarus setosus* is found in the Flat Creek and James River drainages and its range probably extends to Table Rock Lake.

We agree that the effects of the White River Basin flood control projects and the series of three lock and dams between Guion and Batesville on the ecology of the Buffalo River system have never been fully addressed. Additionally, stocking of the White River with non-native trout adds to the complexity of managing the Buffalo River for native species. However, we feel that impediments to native fish movements created by the three lock and dams downstream of the confluence of the White and Buffalo rivers and the cold water releases from Bull Shoals Dam are among the primary sources of the ecological problems that must be overcome in managing the Buffalo River.

We agree, as this investigation suggests, that there could be minor short-term benefits to the lake fisheries due to changes in normal lake elevations. Also as the shoreline vegetation adjusts to the new water elevations, the fish spawning and rearing habitat provided by shoreline vegetation would likely resemble the previous habitat. These lakes will continue to provide the angling opportunities that they do now. The issues for management of the lake fisheries include impacts to facilities and angler access areas that may be inundated more or less frequently.

The tailwater fisheries would benefit significantly from minimum flows. Wetted area providing for forage and gamefish habitat in the tailwaters would increase, providing the potential for better fish growth and increased angling opportunities. Summer tailwater temperatures would be improved in the upper reaches of the tailwaters. Dissolved oxygen in minimum flow releases would be improved if the modifications for releases include mechanisms for aeration. If aeration is not considered, then lower dissolved oxygen levels may accompany minimum flow releases.

Thank you for the opportunity to comment.

Sincerely,

Scott Henderson, Director
Arkansas Game and Fish Commission

The Department of
Arkansas
Heritage

Mike Huckabee, Governor
Cathie Matthews, Director

Arkansas Arts Council

Arkansas Natural Heritage Commission

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars Cultural Center

Old State House Museum

Arkansas Historic Preservation Program

1500 Tower Building
323 Center Street
Little Rock, AR 72201
(501) 324-9880
fax: (501) 324-9184
tdd: (501) 324-9811
e-mail: info@arkansaspreservation.org
website:
www.arkansaspreservation.org

An Equal Opportunity Employer

July 18, 2006

Mr. Roger Hicklin
Deputy Chief
Little Rock District corps of Engineers
Planning & Environmental Office
Post Office Box 867
Little Rock, Arkansas 72203-0867

RE: Multi County - General
Section 106 Review - COE
White River Minimum Flows
AHPP Tracking No: 45718

Dear Mr. Hicklin:

My staff has reviewed the draft Environmental Impact Statement for the above-referenced undertaking. We found, in 2002, that this undertaking would have no effect on historic properties, and we see no reason to alter that previous finding. If the parameters of this project change so that the potential for impact to cultural resources is increased, this office should be given the opportunity for review once again.

Thank you for the opportunity to comment on this undertaking. If you have any questions, please contact Steve Imhoff of my staff at (501) 324-9880.

Sincerely,

Ken Grunewald
Deputy State Historic Preservation Officer

cc: Dr. Richard Allen, Cherokee Nation
Mr. Robert Cast, Caddo Nation of Oklahoma
Dr. Ann M. Early, Arkansas Archeological Survey
Mr. Charles O. Enyart, Eastern Shawnee Tribe of Oklahoma
Mr. Bruce Gonzales, Delaware Tribe of Western Oklahoma
Ms. Rebecca Hawkins, The Shawnee Tribe
Mr. Brice Obermeyer, Delaware Tribe of Indians
Mr. Anthony Whitehorn, Osage Nation
Mr. George G. Wickliffe, United Keetoowah Band of Cherokees
Ms. Carrie V. Wilson, Quapaw Tribe of Oklahoma

MISSOURI DEPARTMENT OF CONSERVATION

Headquarters

2901 West Truman Boulevard, P.O. Box 180, Jefferson City, Missouri 65102-0180

Telephone: 573/751-4115 ▲ Missouri Relay Center: 1-800-735-2966 (TDD)

JOHN D. HOSKINS, Director

August 15, 2006

Mr. Mike Biggs, Project Manager
U.S. Army Corps of Engineers
Planning, Environmental and Regulatory Division
P.O. Box 867
Little Rock, Arkansas 72203-0867

Dear Mr. Biggs:

RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT, WHITE RIVER MINIMUM FLOW STUDY

As requested, the Missouri Department of Conservation (MDC) has reviewed the May 2006 Draft Environmental Impact Statement (DEIS), White River Minimum Flow Study. Before providing comments, I want to reiterate MDC's concern that fish and wildlife impacts have not been fully mitigated along the White River in Missouri. Efforts to enhance habitat conditions in the reservoirs and their tailwaters, including appropriate minimum flows, should be pursued. The recreational fishery and the public will significantly benefit from a designated, instantaneous minimum flow in the tailwaters.

As stated in my August 16, 2004, correspondence to you, MDC continues to support the National Economic Development plan alternative TR-5 for Table Rock. The TR-5 alternative seems to be the best opportunity for implementing the minimum flow plan at Table Rock while resulting in the least cost and impact to hydropower, flood control and in-lake recreation. Because the TR-5 alternative uses the existing conservation pool to provide minimum flow releases, it has the advantage of avoiding direct impacts to recreational and public use facilities on Table Rock Lake. Therefore, MDC or any other sponsor would incur no financial responsibility in this regard at Table Rock.

Overall, MDC concurs with the environmental consequences stated in the DEIS (Section 4.0). MDC offers the following general comments regarding the DEIS:

MDC has been a long-term participant in minimum flow studies in the White River basin and remains a strong and consistent supporter of enhanced instream flows at the White River hydropower projects, especially for the tailwater of Table Rock and in Lake Taneycomo. Obviously, the economic value of Lake Taneycomo's sport fishery is an important consideration in justifying enhanced instream flows, and MDC is pleased to see that the DIES has confirmed the positive benefit/cost (B/C) ratios for establishing minimum flows at the White River projects. Based on these findings and our long-standing commitment to further improve the world class trout fishery in Lake Taneycomo, we plan to aggressively pursue implementation of minimum flows at Table Rock Dam in the immediate future.

MDC offers the following specific comments regarding the DEIS:

- Page ES-1, Project Authorization, 1st paragraph. In previous correspondence dated August 16, 2004, MDC stated its support for alternative BS-3 at Bull Shoals. MDC reiterates our support for alternative BS-3. However, potential impacts on recreational facilities as a result of the eventual implementation of alternative BS-3 and the related reallocation of five (5) feet of storage from the flood pool are a continuing concern. With this in mind, we fully support the commitment detailed in the DEIS as follows: "Adversely impacted recreation facilities at Bull Shoals Lake . . . will be made whole, with the Sponsor covering all recreation facility costs." Quoting from the FY2006 legislation authorizing the implementation of alternative BS-3 included beginning on Page 4 of the DEIS, "The non-Federal interests shall provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake . . . to allow reasonable continued use of the facilities . . . ." Based on related discussions, we understand that the Arkansas Game and Fish Commission (AG&FC) is the lead "non-Federal interest" in this regard. AG&FC's Mike Armstrong stated in recent correspondence that, "Our Commission has been consistent in stating that public facilities that fall within the zone of direct impact from raising the conservation pool on Bull Shoals 5 feet . . ., we will take direct responsibility for keeping whole." It should be clearly noted that MDC accepts no financial responsibility in this regard at Bull Shoals.

- Page ES-1, Project Authorization, 1st paragraph. August 16, 2004, correspondence from MDC stated our support for alternative NF-2 at Norfork. MDC's primary concern regarding this project involved the impacts on recreational facilities in the upper ends of Norfork in Missouri from anything other than a flood pool reallocation. With the FY2006 congressional authorization of alternative NF-7 using a 50:50 reallocation, we expect to see impacts on facilities in the upper lake. If NF-7 is implemented at Norfork, it is reasonable to expect there to be about 1.75 feet less in the fall conservation pool, making navigation in the Missouri portion of Norfork Lake much more difficult. These impacts must be fully addressed. With this in mind, we fully support the commitment detailed in the DEIS as follows: "Adversely impacted recreation facilities at . . . Norfork Lake will be made whole, with the Sponsor covering all recreation facility costs." Quoting again from the FY2006 legislation authorizing the implementation of alternative NF-7 included beginning on Page 4 of the DEIS, "The non-Federal interests shall provide relocations or modifications to public and private lakeside facilities at . . . Norfork Lake to allow reasonable continued use of the facilities . . . ." Based on related discussions, we understand that the AG&FC is the lead "non-Federal interest" in this regard. It should be clearly noted that MDC accepts no financial responsibility in this regard at Norfork.

- Page ES-2, Project Authorization, 1st continuing paragraph. The DEIS states that, "SWPA's allocated costs with respect to Bull Shoals and Norfork Dams will be reduced based on losses resulting from minimum flow operations." Further, the FY2006 authorizing legislation states, "The licensee . . . shall be fully compensated by the Corps of Engineers . . . ." We support this approach and hope to see a similar approach applied to authorizing legislation for minimum flow implementation at Table Rock.

- Page ES-2, Project Authorization, 1st continuing paragraph. The final sentence in this paragraph should be modified to include the text highlighted in **bold** as follows:

  > Beaver, Table Rock, and Greers Ferry Lakes will not implement minimum flow reallocations or operations, **under current authorizing Federal legislation**.

  MDC fully intends to pursue implementation of minimum flows at Table Rock to the eventual benefit of the coldwater fishery in Lake Taneycomo. MDC is on record in support of alternative TR5 for Table Rock Lake. However, we remain open to considering other options. In an August 31, 2004, letter to the Missouri congressional delegation, I stated that:

  > ". . . we remain firm in our position that the reservoir projects were not fully mitigated when constructed." and
  >
  > ". . . the Department feels strongly that minimum flows should be viewed as mitigation for the loss of aquatic habitat capable of supporting a native fishery, requiring all costs to be 100% federally funded, including the cost of storage."

- Page ES-5, Improvements within the Tailwater Areas, 1st full paragraph. MDC welcomes the statement included in the DEIS that states, "It is assumed that any alternative that includes installation of a new service unit would have technology that will increase the DO of the outflow." While not fully quantified, we concur with this conclusion regarding improvements in the Table Rock tailwater (Lake Taneycomo) as a result of enhanced minimum flows and the related installation of new service units at Table Rock under alternative TR-5. In an April 26, 2006, correspondence from MDC to the U.S. Fish and Wildlife Service, we stated:

  > ". . . the latest technology to enhance dissolved oxygen in minimum flow releases (e.g., auto-venting turbines, liquid oxygen injection, etc.) should be required. Efforts to implement other technologies (e.g., forebay diffusers) designed to resolve the issue of low dissolved oxygen levels during as much as 5 months each year should be pursued by all parties involved."

- Page 12, 1st paragraph (continued on Page 13), 3rd sentence. Regarding the present minimum flows at Table Rock and Lake Taneycomo, we strongly concur with the conclusion that, ". . . the "No Action" alternative . . ." results in ". . . the continuation of the sub-optimal trout fishery habitat below each dam."

- Page 25, Table 3.2-1. MDC suggests the following information be included in Table 3.2-1: MDC cooperates with the City of Rockaway Beach in Taney County on access facilities on Lake Taneycomo through our Community Assistance Program. This site encompasses approximately one (1) acre and provides access to the 2,080 acres of Lake Taneycomo.

- Page 37, 1st continuing paragraph. Please note that a small portion of Table Rock Lake is located in Arkansas.

- Page 47, 1st paragraph. While MDC is the primary source of trout stocked in Lake Taneycomo, the DEIS should also reflect the fact that more than 200,000 rainbow trout are annually stocked into Lake Taneycomo by the U.S. Fish and Wildlife Service Neosho National Fish Hatchery as partial mitigation for lost aquatic habitats.

- Page 75, 2nd paragraph. Please replace the last sentence in this paragraph with the following: "The current Missouri state record brown trout was taken from Lake Taneycomo in 2005 and weighed 27 pounds, 10 ounces."

The Missouri Department of Conservation appreciates this opportunity to provide information and suggestions to improve the DEIS and subsequently better address the critical resources at stake. If you have any questions regarding the content of this correspondence, please don't hesitate to contact Mr. Mike Smith at 573-522-4115, extension 3152, mike.smith@mdc.mo.gov, or Mr. Chris Vitello at 417-895-6881, extension 260, chris.vitello@mdc.mo.gov.

Sincerely,

John Hoskins

JOHN D. HOSKINS
DIRECTOR

c: Senator Christopher (Kit) Bond
Senator James Talent
Representative Jo Ann Emerson
Representative Roy Blunt
Ms. Denise Garnier Brown, Assistant Director
Mr. John Smith, Assistant Director
Ms. Jane Epperson, Policy Coordination Unit Supervisor
Mr. Steve Eder, Fisheries Chief
Mr. Mike Smith, Policy Coordination
Mr. Chris Vitello, Fisheries Regional Supervisor
Mr. Charles Scott, USFWS
Mr. Scott Henderson, Director, AGFC
Mr. Mike Armstrong, Fisheries Chief, AGFC
Mr. Doyle Childers, Director, MODNR
Mr. Floyd Gilzow, Deputy Director, MODNR
Mr. Robert Stout, Planner, MODNR
Mr. Bill Bryan, AGO
Ms. Stacy Burks, District Office Director
Mr. Steve McIntosh, Field Representative

STATE OF MISSOURI Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

August 18, 2006

White River Minimum Flow Project
c/o Mike Biggs
Planning, Environmental and Regulatory Division
P.O. Box 867
Little Rock, AR 72203-0867

Re: White River Minimum Flows Reallocation Study and Draft Environmental Impact Statement

Dear Mr. Biggs:

The Missouri Department of Natural Resources appreciates the opportunity to comment on the White River Minimum Flows Reallocation Study and Draft Environmental Impact Statement (DEIS). We have completed an extensive review of the study and offer the following comments. The department strongly encourages the Corps to address the issues identified in this comment letter in either a subsequent Draft or Final Environmental Impact Statement.

Although, the department endorses the goal of this project to provide a minimum flow to sustain the tail water fisheries in the White River, we find the DEIS lacking in the presentation of project impacts. The department recognizes that, in addition to improving the trout fisheries in the basin, the project will have impacts on energy production, air and water quality.

Please know that a central concern of our evaluation of the DEIS is the designation of the responsibilities of the non-Federal interests outlined in the Energy and Water Appropriations Act of 2006. Officials and staff of the Arkansas Game and Fish Commission (AGFC) on several public occasions have identified the agency, and by extension, the State of Arkansas, as the project sponsor.

AGFC has also stated that Arkansas taxpayers are prepared to assume and fully fund the liabilities outlined in the Energy and Water Appropriations Act of 2006 to "provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities with the storage reallocation as determined by the Secretary in consultation with the non-Federal interests." We recognize that agencies in either Missouri or Arkansas are unable to commit to funding significant projects without approval of their General Assembly. This makes it impossible to provide any guarantees that payments will be made.

In the preferred alternative of the White River Minimum Flows Reallocation Study Report, the U.S. Army Corps of Engineers (Corps) identified costs in excess of $27 million to relocate roads, bridges, and recreation facilities, many in Missouri. The DEIS does not show these costs or how they will be funded. If the State of Arkansas is responsible for funding these relocations, the DEIS should clearly explain how this will be accomplished.

The DEIS should clearly state that the State of Arkansas has full knowledge of the general size of this financial liability and has knowingly assumed the financial and political responsibility to make whole the public and private interests in Missouri with Arkansas tax dollars or funds from other sources. If in fact, AGFC has accepted this responsibility, they are to be commended for taking such a bold step to improve cold water fisheries in their state.

If the State of Arkansas is not prepared to assume this responsibility, then the DEIS should present a viable alternative to how these responsibilities will be addressed during implementation. Missouri's response to this DEIS in no way limits any actions Missouri might take should the State of Arkansas fail to provide full and fair compensation in a timely manner as they have said they will do and as outlined in the federal act.

The department recognizes that under the recommended reallocation option less hydroelectric power will be generated for use by customers in both states and that this lost power will be replaced by fossil fuel power generation. While the DEIS states that Empire "will be compensated with a one-time buy-out for losses due to Bull Shoals storage reallocation," the methodology is not defined in a way that allows us to determine whether Empire will be fully compensated over time. Therefore, it is possible that there may be long-term financial consequences for Missouri ratepayers of Empire District Electric Company should the replacement power cost more than the hydroelectric power Empire now receives from the Lake Taneycomo Powersite hydroelectric facility after compensation. In the event that the one-time compensation payment to Empire proves to be inadequate, the final EIS should describe any assurances Empire's ratepayers will have that they will avoid any negative consequences resulting from this project.

Additionally, the Corps does not appear to reflect either the costs of compensating Empire and Southwestern Power Administration (SWPA) nor the costs of relocating bridges, roads, or park facilities in its benefit/cost analysis.

The DEIS states that SWPA will "annually calculate losses to federal hydropower interests from Bull Shoals and Norfork Dams; the allocated costs will be reduced based on losses resulting from minimum flows operations." The DEIS states that project researchers used the SWD-SUPER simulation to determine the net reduction in average annual generation at each project." However, the DEIS does not make it clear as to whether this model or some other method will be used to calculate the losses to hydropower interests. The DEIS should clearly state how the calculations will be made and what impacts if any the loss of hydropower will have on electrical customers. Because the DEIS does not describe this model or the inputs used for the simulation, it is impossible to comment on the projections used in the DEIS. The department suggests that

the DEIS includes a more detailed explanation of the origin and functions of the simulation model and adequate detail to evaluate data and methodologies on which these analyses are based.

The DEIS examines the increase in annual emissions of NO_x, SO_2 and CO_2 that may result from shifting generation to other fossil-fuel fired plants to compensate for the loss in generation at the Bull Shoals hydroelectric facility. The DEIS characterizes these increases as "minor." While this characterization may be accurate, the DEIS fails to document the methodologies used to make this evaluation or to substantiate their conclusion.

In addition it may be difficult to sustain the position that the impact of increased emissions will be insignificant until it can be determined where replacement power might be generated. An increase in emissions at a plant in an SO_2 or NO_x non-compliance area could be significant. Similar increases in emissions for plants in air quality maintenance areas could have even greater impact on citizens in those areas should the resulting additional pollutants shift the area into non-compliance. The discussion of air quality should also acknowledge that, in addition to affecting human health, emissions of SO_2 and high concentrations of ground-level ozone (for which NO_x is a precursor) could have deleterious impacts on crops, forests and other plants.

These oversights may result in the proposed Environmental Impact Statement not meeting the requirements outlined under the National Environmental Policy Act. The department regrets that a promised public meeting to be held in Missouri was never arranged and feels that this oversight weakens the NEPA process in that full public disclosure, discussion and participation in the decision-making process is not achieved.

The selected alternative would increase the amount of water in the Bull Shoals and Norfolk Lake reservoirs available to sustain minimum flow on an annual basis. This would better sustain and improve the trout fishery in about 80 miles of White River below Bull Shoals and Norfork lakes. The department continues to have concerns regarding the historically low levels of dissolved oxygen in the tailwaters of Table Rock Lake and the impact on the hydrology of Lake Taneycomo that results from the energy management decisions that allow water temperature to fluctuate significantly at the Powersite facility. We support the concerns about the need for improvement in the water quality in this area that has been raised in the separate comments submitted by the Missouri Department of Conservation. The department sees the need to take action to address theses concerns and endorses the use of the technologies to maintain adequate levels of dissolved oxygen as water is released through the dams at all of the lakes considered in this DEIS.

We have reviewed the cultural resources information provided and have determined that no additional threat to historic properties is likely to occur. We recommend that the Corps of Engineers continue to monitor the effects of shoreline erosion, fluctuating water level, boat wash and other actions, on archaeological sites. If you have any questions, please feel free to contact Ms. Judith Deel at State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 or call (573) 751-7862.

The department would like the Final EIS to address whether the changes in water levels will be sufficient to have an effect on karst features or ground water in the area. This was not addressed in this report. The department recommends that a more current source of information than the 1986 Water Atlas would provide more accurate information on the potential for structure-related groundwater movements/connections. The department has completed considerable geologic mapping in this area over the last 20 years. For additional information and assistance in this area, feel free to contact Ms. Cheryl Seeger in the department's Division of Geology and Land Survey. She may be reached at 573-368-2184.

The department appreciates the opportunity to review and comment on this project and we will be happy to assist the Corps in the event that any additional information or assistance is required. Please feel free to contact Mr. Robert Stout of my staff if you have any questions or concerns. He may be reached by mail at P.O. Box 176, Jefferson City MO 65102-0176 or by phone at (573) 751-7402.

Thank you.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

Doyle Childers
Director

DC:rsj

Matt Blunt
Governor

Michael N. Keathley
Commissioner

State of Missouri
OFFICE OF ADMINISTRATION
Intergovernmental Relations
Post Office Box 809
Jefferson City, 65102
573/751-1851

06/09/06

Roger C. Hicklin
Acting Chief
Planning and Environmental Office
P.O. Box 867
Little Rock, AK 72203-0867

Dear Mr. Hicklin:

Subject: 0506029
EA Assistance

The Missouri Federal Assistance Clearinghouse, in cooperation with state and local agencies interested or possibly affected, has completed the review on the above project application.

None of the agencies involved in the review had comments or recommendations to offer at this time. This concludes the Clearinghouse's review.

A copy of this letter is to be attached to the application as evidence of compliance with the State Clearinghouse requirements.

Please be advised that I am the new contact for the Federal Funding Clearinghouse. You can send future requests to the following address: Sara VanderFeltz, Federal Funding Clearinghouse, 201 West Capitol, Room 125, and Jefferson City, Missouri 65101.

Sincerely,

Sara VanderFeltz

Sara VanderFeltz
Administrative Assistant

CAPITOL OFFICE
State Capitol – Room 410A
201 West Capitol Avenue
Jefferson City, MO 65101-6806
573-751-2042
FAX: 573-526-0575
E-Mail:
maynard.wallace@house.mo.gov

HOME ADDRESS
HCR 77, BOX 75
THORNFIELD, MO 65762
417-265-1303

MAYNARD WALLACE
State Representative
District 143

COMMITTEES

Appropriations-Education
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Education

Higher Education

Agri-Business

Local Government

Tourism Commission

August 7, 2006

Mike Biggs
Corps of Engineers
P.O. Box 867
Little Rock, AR 72203

This letter is to protest the decision of the Corps of Engineers to raise the power pool of Bull Shoals Lake to 659 feet. This will cause more frequent and extended flooding of agricultural land along the lake.

This flooding will result in loss of production of hundreds of acres of the best farmland in Taney County, MO.

I feel the studies done prior to this decision are inadequate and in error. This led to errors in the decision making process and grossly under estimated the negative impact on the economy of the lake area.

Sincerely,

Maynard Wallace

Maynard Wallace

Department of Energy
Southwestern Power Administration
One West Third Street
Tulsa, Oklahoma 74103-3519

AUG 16 2006

Mr. Mike Biggs
Project Manager
Programs and Project Management Division
U.S. Army Corps of Engineers, Little Rock District
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mr. Biggs:

This is in response to a letter from Mr. Roger C. Hicklin dated May 30, 2006, requesting comments on the Draft Environmental Impact Statement (DEIS) for the White River Minimum Flow Reallocation Study. We appreciate the extension of the comment period deadline from July 18, 2006, to August 18, 2006. Please find Southwestern Power Administration's (Southwestern) specific comments regarding the DEIS detailed in the enclosure. In addition, Southwestern has the following major concerns.

Southwestern recognizes that minimum flow plans BS-3 and NF-7 have been authorized at Bull Shoals and Norfork, respectively, in the FY 2006 Energy and Water Resources Development Act. Plan BS-3 will reallocate five feet of flood storage at Bull Shoals and will utilize a main turbine for minimum flow releases. Plan NF-7 will reallocate 1.75 feet of flood storage and 1.75 feet of conservation storage at Norfork and will utilize a siphon system and the existing station service unit for minimum flow releases. It is imperative that plans BS-3 and NF-7 be implemented as studied and formulated. Dependable yield mitigation storage (DYMS) for hydropower (or hydropower yield protection operation (HYPO) as it is termed in the reallocation report) must be included for storage reallocated from the flood control pools to ensure that the impacts to the Federal hydropower purpose are minimized. Additionally, if the current summertime daily releases to provide cold water for the downstream fisheries are to continue, then the current seasonal pools must be included with the increased pools as formulated in the study. Otherwise, those releases will have to be taken from the reallocated minimum flows storage.

The compensation to the Federal hydropower purpose for the impacts of minimum flows, as detailed in the DEIS, is of particular concern to Southwestern. The DEIS states that Southwestern "…will calculate losses to the Federal Hydropower interests annually." (page ES-2); however, the authorizing language clearly states that the losses to the Federal hydropower purpose will be determined by Southwestern "…on the basis of the present value of the estimated future lifetime replacement cost of the electrical energy and capacity at the time of implementation of the White River Minimum Flows project." It is Southwestern's intention to

calculate the impacts of the project at the time of implementation and to determine a one-time credit to be applied to the Federal hydropower purpose for the losses as indicated in the legislation.

Southwestern believes that before minimum flows are implemented, several actions must take place. Empire District Electric Company must be compensated for losses to their Federal Energy Regulatory Commission licensed hydropower project at Powersite Dam due to the storage reallocation at Bull Shoals Lake. The Federal hydropower purpose must be compensated for losses due to minimum flows at Bull Shoals and Norfork. Lastly, water must be sufficiently accumulated in the reallocated storage to provide the minimum flows.

We appreciate the opportunity to provide comments on the DEIS. Please contact Mr. George Robbins at 918-595-6680 or George.Robbins@swpa.gov if you have any questions.

Sincerely,

Forrest E. Reeves
Assistant Administrator
Office of Corporate Operations

Enclosure

cc: Ted Coombes (SPRA)

August 16, 2006

Southwestern Power Administration Comments for the Draft Environmental Impact Statement – White River Minimum Flow Study
May 2006

Executive Summary:

(Note: Paragraphs are numbered from the beginning of the referenced section or sub-section)

1. Purpose and Need, Paragraph 1, Sentences 1 and 4, Page ES-1. Both section 374 Water Resources Development Act (WRDA) of 1999 and section 304 WRDA 2000 were repealed by section 132 of Public Law (PL) 109-103. Please state that PL 109-103 contains the authorizing language for the White River Minimum Flow (WRMF) project.

2. Initial Project Study Authority, Paragraph 1, Sentence 3, Page ES-1. A copy of Section 374 of WRDA 1999 and Section 304 of WRDA 2000 are included in the reallocation report; however, it would be beneficial if copies of the cited legislation were included in the Environmental Impact statement as well. Please add the referenced copies to the Environmental Impact Statement.

3. Initial Project Study Authority, Paragraph 3, Sentence 1, Page ES-1. The sentence states, "…completed in 2004 evaluated three reallocation plans were evaluated at…" Please remove the "were evaluated" from the sentence.

4. Project Authorization, Paragraph 1, Sentence 2, Page ES-1. "…Secretary is authorized implementation…" the wording is incorrect, please change.

5. Project Authorization, Paragraph 1, Sentence 4, Page ES-1. The private utility affected by the WRMF is Empire District Electric Company (EDEC). Please correct.

6. Project Authorization, Paragraph 1, Sentence 6, Page ES-2. The sentence states, "… interest annually." The legislation requires a one-time payment for the present value of the lost benefits. Please correct.

7. Project Authorization, Paragraph 1, Sentence 7, Page ES-2. The sentence states that the losses will be calculated on an annual basis. However, per Section 132 (4) Offset, the reduction "…shall be determined by the Administrator of the Southwestern Power

Administration on the basis of present values of the estimated lifetime replacement cost of the electrical energy and capacity at the time of implementation." This is a one time adjustment, NOT an annual adjustment. Please correct.

8. Project Authorization, Paragraph 1, Sentence 7, Page ES-2. The sentence states, "…reduced based on losses…" Please change to "…reduce based on estimated future lifetime replacement costs of losses…"

9. Alternatives for Storage Reallocation, Paragraph 1, Page ES-2. There is no mention of Dependable Yield Mitigation Storage (DYMS) or Hydropower Yield Protection Operation (HYPO) in the paragraph for the flood control and 50/50 alternatives. Please include.

10. Changes to the Reservoirs and Tailwaters, Paragraph 1, Sentence 1, Page ES-3. When referring to the SUPER model, all letters should be capitalized. Please correct.

11. Changes to the Reservoirs and Tailwaters, Paragraph 1, Sentence 2, Page ES-3. Delete the second period at the end of the sentence.

12. Changes to the Reservoirs and Tailwaters, Paragraph 2, Sentence 4, Page ES-3. This sentence indicates that a flood pool alternative was studied for Beaver Lake. Southwestern believes that this is incorrect and that there were just several conservation pool scenarios for Beaver Lake. Please correct.

13. Changes to the Reservoirs and Tailwaters, Paragraph 3, Sentence 1, Page ES-3. The sentence states, "The effects associated will be limited…" This statement is unclear. Please correct.

14. Improvements Within the Tailwater Areas, Paragraph 1, Sentence 1, Page ES-4. The project, as authorized, will only increase the wetted area and duration at Bull Shoals and Norfork. Change the sentence to state "…at each tailwater where the project is implemented."

15. Improvements within the Tailwater Area, Paragraph 3, Sentence 5, Page ES-5. The statement is unclear. How does additional volume of releases increase aeration? Please clarify.

16. Comparison of Alternatives at each Reservoir, Tables 2.2.1 – 2.3.5, Pages ES-6 – ES-16. There are numerous instances where the impacts to hydropower are characterized as "minor." Southwestern disagrees with this assumption and has calculated the very significant effect to hydropower that the proposed project will have. Please correct.

17. Comparison of Alternatives at each Reservoir, 2.2.1 Beaver Summary Comparison of Alternatives, Fishery Row, Page ES-7. The first two sentences in all three columns of the Fishery row are the same. This cannot be accurate. Please correct.

18. Comparison of Alternatives at each Reservoir, 2.2.1 Beaver Summary Comparison of Alternatives, T and E Species Row, Page ES-7. The first column claims a benefit to the species of concern due to decreased pool elevations. This cannot be true since the first column is dealing with a flood pool reallocation. Please correct.

19. Comparison of Alternatives at each Reservoir, 2.2.1 Beaver Summary Comparison of Alternatives, Flood Control Row, Page ES-7. Please refer to the Beaver Lake Summary on page ES-17. Column two should show a minor positive benefit of $2,000 and column three should show only a minor negative benefit of $1,000. Please correct.

20. Comparison of Alternatives at each Reservoir, 2.2.1 Beaver Summary Comparison of Alternatives, Air Quality Row, Page ES-8. In all three columns, the air quality section should be referenced as section 4.7, not 4.6. Please correct.

21. Comparison of Alternatives at each Reservoir, 2.2.2 Table Rock Summary Comparison of Alternatives, Fishery Row, Page ES-9. The statements in all three columns are the same. This cannot be correct. Please revise.

22. Comparison of Alternatives at each Reservoir, 2.2.2 Table Rock Summary Comparison of Alternatives, Recreation Benefits Row, Page ES-10. Column one and three refer to revenues and column two refers to benefits. We believe that all three should be referring to benefits. Please correct.

23. Comparison of Alternatives at each Reservoir, 2.2.2 Table Rock Summary Comparison of Alternatives, Air Quality Row, Page ES-10. See Comment 20.

24. Comparison of Alternatives at each Reservoir, 2.2.3 Bull Shoals Summary Comparison of Alternatives, Terrestrial and Fishery Rows, Page ES-11. The statements in column one of the rows is inconsistent. How will the duration decrease at the top of the conservation pool (as stated in the fishery column) and the duration increase in the near lake area (as stated in the terrestrial column)? Please correct.

25. Comparison of Alternatives at each Reservoir, 2.2.3 Bull Shoals Summary Comparison of Alternatives, Recreation Benefits Rows, Page ES-12. Columns one and three refer to revenues. They are benefits. Please correct.

26. Comparison of Alternatives at each Reservoir, 2.2.3 Bull Shoals Summary Comparison of Alternatives, Air Quality Row, Page ES-12. See Comment 20.

27. Comparison of Alternatives at each Reservoir, 2.3.4 Norfork Summary Comparison of Alternatives, Terrestrial and Fishery Rows, Page ES-13. See Comment 24.

28. Comparison of Alternatives at each Reservoir, 2.3.4 Norfork Summary Comparison of Alternatives, Air Quality Row, Page ES-14. See Comment 20.

29. Comparison of Alternatives at each Reservoir, 2.3.5 Greers Ferry Summary Comparison of Alternatives, Terrestrial and Fishery Rows, Page ES-15. See Comment 24.

30. Comparison of Alternatives at each Reservoir, 2.3.5 Greers Ferry Summary Comparison of Alternatives, Air Quality Row, Page ES-16. See Comment 20.

31. Economic Data, Paragraph 1, Sentence 5, Page ES-17. DYMS and HYPO are referred to in this sentence; however the acronyms are not defined. Please define DYMS (Dependable Yield Mitigation Storage) and HYPO (Hydropower Yield Protection Operation) in the paragraph.

32. Economic Data, Lake Summary Tables, Pages ES-17 – ES-21. There is no reference that describes what each alternative is (what is BV4?). Table 2.3-1 on page 11 of the Draft WRMF Study Environmental Impact Statement (EIS) should be referenced. Please correct.

33. Economic Data, Bull Shoals Summary, Page ES-19. The summary table should include a footnote for BS3 that states that BS3 is the authorized plan. Please correct.

34. Economic Data, Norfork Summary, Page ES-20. The summary table should include a footnote for NF7 that states that NF7 is the authorized plan.

Draft White River Minimum Flow Study Environmental Impact Statement, May 2006:

(Note: Paragraphs are numbered from the beginning of the referenced section or sub-section)

1. Environmental Impact Statement, Section 1.1, Paragraph 2, Sentence 2, Page 1. The sentence needs to also state that the implied language in WRDA 1999 and 2000 was later repealed by PL 109-103.

2. Environmental Impact Statement, Section 1.2, Paragraph 1, Sentence 3, Page 1. A copy of Section 374 of WRDA 1999 and a copy of Section 304 of WRDA 200 are included in the reallocation report; however, it would be beneficial if copies of the cited legislation were included in the Environmental Impact statement as well. Please add the referenced copies to the Environmental Impact Statement.

3. Environmental Impact Statement, Section 1.2, Paragraph 2, Sentence 4, Page 1. The sentence states that the purpose of the proposed action is to sustain the tailwater fishery. Southwestern believes that the purpose of the proposed action is to *enhance* a viable fishery that exists already.

4. Environmental Impact Statement, Section 1.3, Paragraph 2, Sentence 3, Page 2. How was it determined that the Black River has an insignificant effect on the main stem of the White River? Please justify the statement.

5. Environmental Impact Statement, Section 1.3, Paragraph 3, Sentence 2, Page 2. The sentence states the Table Rock tailwater extends from White River Mile 528.7 – 506.0. However, the Executive Summary states on Page ES-4 that most of the Table Rock tailwater is impacted by Taneycomo, the paragraph 4 in the referenced section describes the effects of Lake Taneycomo on the Table Rock Tailwater, and Table 3.5-16 on Page 73 shows that most of Table Rock's tailwater is Taneycomo Lake. Please correct the tailwater length below Table Rock (528.7 – 523.0).

6. Environmental Impact Statement, Section 1.3, Paragraph 6, Sentence 2, Page 2. The statement is incorrect. A viable fishery of native small mouth bass exists (and thrives according to an article published on 07/06/06 in the Arkansas Democrat Gazette, Northwest Edition).

7. Environmental Impact Statement, Section 2.1, Paragraph 1, Sentence 5, Page 4. The reallocation study included the Dependable Yield Mitigation Storage (DYMS) and Hydropower Yield Protection Operation (HYPO) for the flood control and 50/50 alternatives. Please include in the statement.

8. Environmental Impact Statement, Section 2.2.1, Paragraph 2, Sentences 1 and 3, Page 6. Sentence 1 has flood pool non-capitalized and sentence 3 has flood pool capitalized. Correct for consistency.

9. Environmental Impact Statement, Section 2.2.1, Page 6. Please include a discussion (as is done with the conservation pool in Section 2.2.2 and Section 2.2.3) concerning the depletion of the storage allocated to minimum flows.

10. Environmental Impact Statement, Section 2.2.2, Paragraph 1, Sentence 5, Page 7. The sentence states that the reallocation calculation was from a mid-point of storage reference point "...so that a conservative volume..." could be used. However, it is NOT conservative when compared having the reference point at the bottom conservation pool and adding the "feet." Please delete "conservative" and replace it with "fair" or "equitable."

11. Environmental Impact Statement, Section 2.2.2, Paragraph 2. The discussion regarding the depletion of the storage allocated to minimum flows would apply to all three reallocation scenarios.

12. Environmental Impact Statement, Figure 2.2-2, Page 8. Dashed white line should be moved up. The "Fishery" should be shown in the medium blue shaded area.

13. Environmental Impact Statement, Section 2.2.3, Pages 8 – 9. This section does not clearly explain the distinction between the part of storage reallocated from the flood pool and the portion from the conservation pool. Please clarify.

14. Environmental Impact Statement, Section 2.3.1, Paragraph 1, Sentence 2, Page 10. The sentence refers to "excess" power. Since there is minimal spill on the White River Projects, additional power is not created. When the water discharged for WRMF is taken from the conservation storage, the power is merely changed from on-peak power to off-peak power. Please correct.

15. Environmental Impact Statement, Section 2.3.2, Paragraph 1, Sentence 2, Page 10. See comment 14.

16. Environmental Impact Statement, Section 2.4, Paragraph 1, Sentence 3, Page 13. The sentence states that the trout fishery is "sub-optimal;" however, in Paragraph 15 of Section 3.7.2.2 on Page 75 the EIS states that ..."more trophy size brown trout exist per mile in some reaches of the White River than any other river in the world." A recent article in the

Arkansas Democrat Gazette, Northwest Edition (07/06/06) states that the White River is "…now the nation's pre-eminent trout fishery." The fishery is NOT sub-optimal. Please delete "sub-optimal" from the sentence.

17. Environmental Impact Statement, Section 2.5, Pages 14 -23. Please see the comments about these tables in the Executive Summary (comments 16 – 30 and 32 – 34 in the Executive Summary comments). Also, Southwestern disagrees with the characterization describing the impacts to hydropower from the proposed project as minimal.

18. Environmental Impact Statement, Section 3.5.2, Paragraph 4, Sentence 1, Page 37. The conservation pool elevation of Beaver Lake is 1120.44 NGVD. Please correct.

19. Environmental Impact Statement, Tables 3.5-1, 3.5-4, 3.5-7, 3.5-10 and 3.5-13, Pages 39, 46, 51, 57 and 62, respectively. The tables reporting the recreation data seem to be placed in the report with no reference to them in the text. If there is no reference to the tables in the text, there is no need to have the tables in the report. Please correct (delete or reference the tables).

20. Environmental Impact Statement, Table 3.5-1, Page 39. Table should be re-titled "Recreation Data for Beaver Lake." Please Correct.

21. Environmental Impact Statement, Table 3.5-1, Social Benefits sub-table, Page 39. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.

22. Environmental Impact Statement, Table 3.5-1, Economic Benefits sub-table, Page 39. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-1.

23. Environmental Impact Statement, Section 3.5.2.3, Paragraph 2, Sentence 3, Page 40. The sentence states that the abundance of warm water fish in Beaver Lake provide recreational activities for the public. Please revise the sentence to state, "Even though the warm water fishery was impaired downstream of the project, Beaver Lake has enhanced the warm water fishery in the region and the abundance of warm water fish provides recreational activities enjoyed by many visitors."

24. Environmental Impact Statement, Section 3.5.2.4 Paragraph 1, Sentence 1, Page 40. To be consistent with the authorizing language of the legislation for the construction of the Beaver project, the

impoundment should be referenced as Beaver Lake, NOT Beaver Reservoir.

25. Environmental Impact Statement, Section 3.5.2.4 Paragraph 2, Sentence 4, Page 41. Please change the sentence to state, "Both the gray and Indiana bats occur at War Eagle Caverns, as well, and it is important to ensure increased water levels do not impact these populations; or that any impact is mitigated; or a Biological Opinion is developed in coordination with the US Fish and Wildlife Service to determine an acceptable "take" of the species."

26. Environmental Impact Statement, Section 3.5.2.4 Paragraph 2, Sentence 7, Page 41. See comment 25. It is important to state that a raised pool is acceptable as long as proper regulations are followed as to mitigate to the impact to any particular endangered species.

27. Environmental Impact Statement, Section 3.5.2.4 Paragraph 4, Sentence 1, Page 41. Why does the Corps need to avoid adversely impacting a species when it is not listed as endangered? Southwestern agrees that all resources should be managed responsibly; however, protecting a species that may be rare and may eventually be listed is a premature action. It needs to be determined how rare the cave isopod is before making the assumptions and commitments stated in this paragraph.

28. Environmental Impact Statement, Section 3.5.2.5 Paragraph 1, Sentence 3, Page 42. The sentence refers to the "original 50,000 acre-feet...discretionary authority." How much water supply storage was in the original conservation pool allocation? Also, does the 2,000 acre-feet of remaining water supply storage account for the 31,000 acre-feet of storage for the Carroll-Boone reallocation and the storage needed for the proposed trout hatchery?

29. Environmental Impact Statement, Section 3.5.3, Paragraphs 1, 4 and 5, Page 43. The pertinent data regarding the surface areas of Table Rock Lake are inconsistent. Please revise and include correct data.

30. Environmental Impact Statement, Section 3.5.3, Paragraph 1, Sentence 4, Page 43. The sentence does not read correctly. Please revise (delete impounds?).

31. Environmental Impact Statement, Table 3.5-4, Page 46. Table should be re-titled "Recreation Data for Table Rock Lake." Please Correct.

32. Environmental Impact Statement, Table 3.5-4, Social Benefits sub-table, Page 46. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.

33. Environmental Impact Statement, Table 3.5-4, Economic Benefits sub-table, Page 46. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-4.

34. Environmental Impact Statement, Section 3.5.4 Paragraph 1, Sentence 1, Page 48. EDEC should be referred to as "Empire District Electric Company (EDEC)" in this case since it is the first time EDEC is referenced in the main report. Please correct.

35. Environmental Impact Statement, Section 3.5.4 Paragraph 1, Page 48. The paragraph should also include a statement conveying the fact that Taneycomo is a Federal Energy Regulatory Commission licensed hydroelectric project and the date and length of the last re-licensure of the project.

36. Environmental Impact Statement, Section 3.5.5 Paragraph 1, Sentence 1, Page 48. The figure should be referenced as Figure 3.5-3. Please correct.

37. Environmental Impact Statement, Section 3.5.5 Paragraph 1, Sentence 7, Page 49. Is the number ($86 million) referring to the original construction cost or the total cost of the project to date? Southwestern's data indicates $105.9 million. Please clarify. Also, it should be noted that similar cost data for Table Rock and Beaver are not included in the EIS. Please include the cost data for all projects in the appropriate sections of the EIS.

38. Environmental Impact Statement, Table 3.5-7, Page 51. Table should be re-titled "Recreation Data for Bull Shoals Lake." Please Correct.

39. Environmental Impact Statement, Table 3.5-7, Social Benefits sub-table, Page 51. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.

40. Environmental Impact Statement, Table 3.5-7, Economic Benefits sub-table, Page 51. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-7.

41. Environmental Impact Statement, Section 3.5.6, Paragraph 1, Sentence 1, Page 54. The Figure referred to in this sentence is Figure 3.5-4. Please correct.

42. Environmental Impact Statement, Section 3.5.6, Paragraph 1, Sentence 7, Page 55. Is the number ($28.6 million) referring to the original construction cost or the total cost of the project to date? Southwestern's data indicates $77.2 million. Please clarify.

43. Environmental Impact Statement, Table 3.5-10, Page 57. Table should be re-titled "Recreation Data for Norfork Lake." Please Correct.

44. Environmental Impact Statement, Table 3.5-10, Social Benefits sub-table, Page 57. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.

45. Environmental Impact Statement, Table 3.5-10, Economic Benefits sub-table, Page 57. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-10.

46. Environmental Impact Statement, Section 3.5.6.3, Paragraph 1, Sentence 3, Page 58. Include a space between 580 and NGVD.

47. Environmental Impact Statement, Section 3.5.6.3, Paragraph 2, Sentence 5, Page 58. AG&F should not be abbreviated the first time it occurs in the report, the sentence should read "Arkansas Game and Fish Commission (AGFC) submits..." Please correct.

48. Environmental Impact Statement, Section 3.5.6.5, Paragraph 1, Sentence 1, Page 59. How much water storage does the City of Mountain Home have contracted? Please include the information in the report.

49. Environmental Impact Statement, Section 3.5.6.5, Paragraph 1, Sentence 1, 2 and 3, Page 59. The three sentences refer to Norfork Lake as Lake Norfork. The lake is referenced elsewhere as Norfork Lake. Please correct.

50. Environmental Impact Statement, Section 3.5.6.5, Paragraph 1, Page 59. Information regarding the remaining discretionary storage at Norfork, which has been included for Beaver, Table Rock and Bull Shoals, is omitted. Please include.

51. Environmental Impact Statement, Section 3.5.7, Paragraph 1, Sentence 7, Page 60. Is the number ($46.5 million) referring to the original

construction cost or the total cost of the project to date? Southwestern's data indicates $58.0 million. Please clarify.

52. Environmental Impact Statement, Table 3.5-13, Page 62. Table should be re-titled "Recreation Data for Greers Ferry Lake." Please Correct.

53. Environmental Impact Statement, Table 3.5-13, Social Benefits sub-table, Page 62. Are the "Visits (Person-trips)" an annual calculation or a project lifetime total? Please clarify.

54. Environmental Impact Statement, Table 3.5-13, Economic Benefits sub-table, Page 62. Hydropower and water supply ALSO provide an economic benefit. Unless the table is re-titled to reflect only recreation, please include those benefits in Table 3.5-13.

55. Environmental Impact Statement, Section 3.5.7.3, Paragraph 2, Sentence 2, Page 63. Southwestern is not aware of any ongoing effort by the Corps to maintain lake levels during critical spawning periods that this sentence alludes to. In the past, a voluntary effort between the Corps, the White River Fisheries Partnership and Southwestern has tried to maintain lake levels during the critical spawning periods. If there is a continuing effort to provide stable lake levels during the spawning periods, please provide documentation that details these efforts.

56. Environmental Impact Statement, Section 3.5.7.3, Paragraphs 2 and 3, Page 63. Arkansas Game and Fish Commission should be abbreviated in these paragraphs.

57. Environmental Impact Statement, Section 3.5.7.5, Paragraph 1, Sentences 1 through 3, Page 64. There is no mention of the contracted water storage volume for the entities that utilize Greers Ferry Lake for M&I use. Please include the pertinent water storage data in this paragraph, or the amount of contracted discretionary storage.

58. Environmental Impact Statement, Section 3.5.10, Paragraph 2, Sentence 1, Page 66. What agency headquarters is being referred to in this sentence? Please clarify.

59. Environmental Impact Statement, Section 3.5.10, Paragraph 7, Sentence 2, Page 66. It is also true that the warm water of the Buffalo National River adversely impacts the cold water fishery of the White River. Please include a statement in this paragraph stating this fact.

60. Environmental Impact Statement, Section 3.5.10, Paragraph 9, Sentence 7, Page 67. Please correct the formatting issue (take out the extra line that separated the end of this sentence from its beginning).

61. Environmental Impact Statement, Section 3.6, Paragraph 1, Sentence 2, Page 67. The Arkansas Department of Pollution Control and Ecology has changed its name to the Arkansas Department of Environmental Quality (ADEQ). Please correct.

62. Environmental Impact Statement, Section 3.6, Paragraph 2, Sentence 2, Page 67. Capitalize "Lake" when referring to Beaver Lake and add Lake after each project's name.

63. Environmental Impact Statement, Section 3.6, Paragraph 2, Sentence 2, Page 67. The sentence is not clear. What is meant by "…with low trophic status expected if in natural (unpolluted) condition." Is the statement implying that with no pollution there would be very low nutrients in the lake to allow for aquatic growth? Please clarify.

64. Environmental Impact Statement, Section 3.6, Paragraph 14, Sentence 2, Page 69. How can the water be too cold? The warmer the water, the sooner it will become too warm for the trout in the downstream reaches. Please explain.

65. Environmental Impact Statement, Section 3.6, Paragraph 15, Sentence 1, Page 70. The sentence is not clear and is grammatically incorrect. Please correct.

66. Environmental Impact Statement, Section 3.7.2.1, Paragraph 4, Sentence 1, Page 71. The sentence states that the warm water fishery was destroyed. This is not true since there is a viable population of small mouth bass in the White River below the projects (see the Arkansas Democrat Gazette article published on 07/06/06).

67. Environmental Impact Statement, Section 3.7.2.1, Paragraph 4, Sentence 2, Page 71. The river is named the North Fork River, NOT the Norfork River.

68. Environmental Impact Statement, Section 3.7.2.1, Paragraph 4, Sentence 2, 3 and 4, Page 71. The use of kilograms is not consistent with the use of pounds and ounces on page 75. Please convert the kilograms to the equivalent weights.

69. Environmental Impact Statement, Section 3.7.2.2, Paragraph 4, Sentence 1, Page 72. The sentence states that changes in hydropower operations in the 1970's prevented the growth of the trout. What were the changes in the hydropower operations that caused the trout growth to be inhibited? Southwestern is not aware of any operational changes at Bull Shoals. Please provide documentation of the operational

changes or delete the statement listing hydropower operational changes preventing the growth of the trout.

70. Environmental Impact Statement, Section 3.7.2.2, Paragraph 4, Sentence 2, Page 72. The river is named the North Fork River, NOT the Norfork River.

71. Environmental Impact Statement, Section 3.7.2.2, Paragraph 6, Sentence 2, Page 72. The sentence states "...found few changes in angler no changes in stocking..." The sentence is not complete. Please correct.

72. Environmental Impact Statement, Section 3.7.2.2, Paragraph 9, Sentence 10, Page 73. Delete "hydrolimnetic" and replace with "hypolimnetic".

73. Environmental Impact Statement, Section 3.7.2.2, Paragraph 10, Sentence 9, Page 73. Please change the "and" in the sentence to an.

74. Environmental Impact Statement, Section 3.7.2.2, Paragraph 12, Sentence 1, Page 75. The sentence has Southwest capitalized and northwest not capitalized. Please correct to be consistent.

75. Environmental Impact Statement, Section 3.7.2.2, Paragraphs 12, 13, 14 and 15, Page 75. The paragraphs state that the tailwaters of the hydropower projects in the region are "...world class..." and "...the best trout fishing streams in the world..." Yet, on page 13 of the EIS, it is stated that the trout fishery is sub-optimal. A "world class" fishery should not be described as sub-optimal. Please remove the sub-optimal description from page 13 of the EIS.

76. Environmental Impact Statement, Section 3.7.2.2, Paragraph 14, Sentence 2, Page 75. What is the basis for this statement? Why does a "world class" fishery need to be improved? Please explain.

77. Environmental Impact Statement, Section 3.7.2.2, Paragraph 15, Sentence 1, Page 75. There should be no dash (-) between the and life in the sentence. Please correct.

78. Environmental Impact Statement, Section 3.7.2.2, Paragraph 17, Sentence 1, Page 75. Why was Table Rock left out of the list? Please include Table Rock's information.

79. Environmental Impact Statement, Section 3.7.2.2, Paragraph 17, Sentence 2, Page 75. The sentence states that the proposed flows will

have the "following effects." There are no effects described after the statement. Please include a description of the effects.

80. Environmental Impact Statement, Section 3.7.2.3, Paragraph 3, Sentence 2, Page 76. The sentence references "AR. Game and Fish." It should be referenced as AGFC. Please correct.

81. Environmental Impact Statement, Section 3.7.2.3, Paragraph 3, Sentence 4, Page 76. How can it be assured that the sloughs and oxbows ..."will remain..." some of the finest warm water fishing? Please elaborate about the protections and enhancements that will be made to ensure the stated secure future.

82. Environmental Impact Statement, Section 3.7.2.4, Paragraph 2, Sentence 1, Page 76. The 75 miles stated in the sentence should be referenced to the correct dam. Please correct.

83. Environmental Impact Statement, Section 3.7.2.4, Paragraph 3, Page 77. Delete entire paragraph. It is the same as the previous paragraph.

84. Environmental Impact Statement, Section 3.7.2.4, Paragraph 4, Sentence 2, Page 77. The sentence uses kilometer to reference distances. For consistency, miles should be used. Please correct.

85. Environmental Impact Statement, Section 3.8, Paragraph 2, Page 78. The paragraph needs to include language that describes and quantifies the impact to the nation's air quality since the lost capacity and energy from the projects due to the minimum flows will be replaced with thermally generated energy. Please include the information.

86. Environmental Impact Statement, Section 4.0, Paragraph 1, Sentence 2, Page 94. The sentence states that the fishery is sub-optimal. Delete sub-optimal. The report previously stated that the fishery is "world class." A "world class" fishery should not be classified as sub-optimal. Also, the paragraph fails to elaborate on the effects to the habitat the proposed actions will cause. Please detail the effects to the habitat.

87. Environmental Impact Statement, Section 4.0, Paragraph 2, Sentence 2, Page 94. The SUPER model should be referred to in all capitalized letters. Please correct.

88. Environmental Impact Statement, Section 4.2.1, Paragraph 2, Sentence 4, Page 95. The last part of the sentence does not make sense. How will the largest decrease in duration occur at Beaver? Please correct.

89. Environmental Impact Statement, Section 4.4.2.1, Beaver Lake Annual Pool Elevation-Duration for Pool Elevations of Interest Table, Page 99. For elevation 1121.93, it seems unusual that 1.5 feet above the top of conservation pool would be attained LONGER under current conditions than if the pool was raised 1.5 feet under the flood control option (current is 30.45 and flood pool option is 28.62 at elevation 1121.93). Please correct.

90. Environmental Impact Statement, Section 4.4.2.1, Beaver Lake Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest Table, Page 99. Some of the deltas are calculated incorrectly (-13.09 and -7.78). Please correct.

91. Environmental Impact Statement, Section 4.4.2.1, Beaver Lake Annual Pool Elevation-Duration for Pool Elevations of Interest Table, Page 101. It does not make sense that if the storage for the proposed minimum flow was to be reallocated from the flood pool with DYMS that the flood elevation duration would be less frequent than the current operation elevation duration. Please correct.

92. Environmental Impact Statement, Section 4.4.2.1, Beaver Lake Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest Table, Page 101. Some of the deltas are calculated incorrectly. Please correct.

93. Environmental Impact Statement, Section 4.4.2.1, Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest Tables, Pages 103 – 118. Many of the deltas are calculated incorrectly. Please correct.

94. Environmental Impact Statement, Section 4.4.2.1, Bull Shoals Lake annual pool elevation figure, Page 107. The ATOC elevation should be 656.5 for the 50/50 Split alternative. Please correct.

95. Environmental Impact Statement, Section 4.4.2.1, Bull Shoals Lake seasonal May 15 – July 15 pool elevation figure, Page 107. The duration of the seasonal pool is May 15 – June 15. Please correct.

96. Environmental Impact Statement, Section 4.4.2.1, Bull Shoals Lake Differences in July - September Pool Elevation-Duration for Pool Elevations of Interest Table, Page 110. The difference in the elevation 654 row is not highlighted in the conservation column. Please correct.

97. Environmental Impact Statement, Section 4.4.2.1, Norfork Lake seasonal May – July 15 pool elevation figure, Page 111. The duration of the seasonal pool is May 15 – June 15. Please correct.

98. Environmental Impact Statement, Section 4.4.2.1, Greers Ferry Lake pool elevation figures, Page 115. Due to an adjustment for reallocated storage for water supply, Greers Ferry has been operating a different Seasonal Pool Plan than the one shown in the figures. Please correct.

99. Environmental Impact Statement, Section 4.5.1, Paragraph 1, Sentence 4, Page 119. The top of Beaver's flood pool is at elevation 1130.00 NGVD. The sentence states that changes at elevations 1120 to 1140 NGVD have been investigated. Changes to Beaver Lake above elevation 1130.00 NGVD would not be allowed. Please correct.

100. Environmental Impact Statement, Section 4.5.1, Beaver Lake Annual Pool Elevation-Duration for Pool Elevations of Interest Tables, Page 120. The values in these tables do not appear to be consistent with the tables presented on pages 99 – 102 of the report. Please correct.

101. Environmental Impact Statement, Section 4.5.3, Paragraph 1, Sentence 5, Page 123. The sentence states that additional analyses are needed to establish the significance of the effect of the proposed project. However, the next paragraph in this section states that a Biological Assessment (BA) has been completed by the Corps and the US fish and Wildlife (USFWS) has concurred. If the BA is complete and has been approved by USFWS, what additional analyses are needed to determine the effects of the proposed project on the Tumbling Creek Cave Snail? Please clarify.

102. Environmental Impact Statement, Section 4.5.4, Paragraph 1, Sentence 1, Page 126. An "e" needs to be added at the end of the lone "b" in the sentence. Please correct.

103. Environmental Impact Statement, Section 4.5.1, Greers Ferry Lake Annual Pool Elevation-Duration for Pool Elevations of Interest Tables, Page 127. These tables are not consistent with the table presented on pages 115 – 118 of the report. Please correct.

104. Environmental Impact Statement, Section 4.6, Paragraph 1, Sentence 1, Page 130. Change the sentence to read "…releases will remain in their current state…"

105. Environmental Impact Statement, Table 4.5.3.1, Page 130. The tailwater miles reported for Table Rock are inconsistent with the earlier reports of Table Rock's tailwater length. See Comment 5. Please correct.

106. Environmental Impact Statement, Section 4.6.1, Paragraph 2, Sentence 5, Page 131. The concept stated in the sentence is difficult to understand. A large hydropower flow released from the project would be just as difficult (if not even more so) to aerate as a small release. Please elaborate further on the proposed concept to clarify the ambiguity of the statement and to confirm the statement's assertions.

107. Environmental Impact Statement, Section 4.6.2, Paragraph 1, Sentence 1, Page 132. Delete the "was evaluated" that follows runs in the sentence.

108. Environmental Impact Statement, Section 4.6.2, Paragraph 1, Page 132. It would be beneficial if the study and associated graphs that are referred to in this paragraph could be included as part of the report. Please include the referenced information in this report.

109. Environmental Impact Statement, Section 4.6.2, Paragraph 2, Sentence 8, Page 132. Please change the sentence to read "…hydropower generators are in operation."

110. Environmental Impact Statement, Section 4.6.3.1, Paragraph 1, Sentence 1, Page 138. Please change the sentence to read "…at 210 cfs (house unit and leakage)…"

111. Environmental Impact Statement, Section 4.6.3.1, Paragraph 1, Sentence 3, Page 138. The figure that the sentence refers to appears to be Figure 4.6-1 NOT figure 8-2.

112. Environmental Impact Statement, Section 4.6.4, Paragraph 1, Sentence 1, Page 140. Change the sentence to read. "The AGFC target maxima considered to be stress thresholds for trout are listed in Table 4.6-3."

113. Environmental Impact Statement, Section 4.6.4, Paragraph 4, Sentence 4, Page 140. To provide the 1600 dsf from Bull Shoals, a seasonal pool plan must be in place. Add the statement to the report.

114. Environmental Impact Statement, Section 4.6.4, Paragraphs 7 and 8, Page 141. Sentences 1 and 2 in paragraph 7 and sentences 2 and 3 in paragraph 8 are exactly the same. Delete sentences 2 and 3 in paragraph 8.

115. Environmental Impact Statement, Section 4.6.4, Paragraph 7, Sentence 5, Page 141. The sentence refers to figures in section 4.7. There are no figures in section 4.7 of the report. The figures referred to

are probably figures 4.6-2 and 4.6-3 on pages 142 and 143. Please correct.

116. Environmental Impact Statement, Table 4.7-2, Average Annual Energy Loss Due to Reallocation of Storage from Each Pool, Page 145. The Conservation Pool column should have megawatt hours abbreviated with a capital W (i.e. MWh).

117. Environmental Impact Statement, Table 4.7-2, Average Annual Energy Loss Due to Reallocation of Storage from Each Pool, Page 145. The energy loss should be greater out of the conservation pool than from the flood pool. The Table shows the energy loss from Beaver and Table Rock to be greater from the flood pool, but this is not correct. Please correct.

118. Environmental Impact Statement, Table 4.7-2, Average Annual Energy Loss Due to Reallocation of Storage from Each Pool, Page 145. Southwestern is not clear where the energy values shown this table came from. The values are very low as compared to Southwestern's computations and to the values provided in the HAC July 2003 report.

119. Environmental Impact Statement, Section 4.8, Paragraph 3, Sentence 2, Page 149. Southwestern strongly disagrees with the methodologies, assumptions and conclusions of the CVM method.

120. Environmental Impact Statement, Section 4.8, Paragraph 4, Sentence 12, Page 150. What idea is this sentence trying to convey? It appears to say no meaningful results could be derived from the small sample size. Please clarify.

121. Environmental Impact Statement, Table 4.8-1, Potential Recreational Benefits From Tailwaters, Miles Column, Page 150. The number of miles shown for Table Rock is too large and inconsistent throughout the report. The actual tailwater length is about 6 miles. Please correct.

122. Environmental Impact Statement, Section 4.8.1, Paragraph 1, Sentences 7 and 8, Page 151. Southwestern disagrees with the statements. All that needs to be accomplished for any new encroachment into the flood pool would to formulate a new Biological Opinion in Section 7 consultation with the USFWS.

123. Environmental Impact Statement, Tables 4.8.3 – 4.8.7, Beaver, Table Rock Bull Shoals, Norfork, and Greers Ferry Summary, Pages 152 – 156. The * footnote states that the tables summarize the tables found

in appendix A. The referred to tables are NOT in Appendix A. Please include the tables in Appendix A.

124. Environmental Impact Statement, Section 4.9, Paragraph 2, Sentence 5, Page 156. This sentence is incomplete. Please finish the statement.

125. Environmental Impact Statement, Table 4.10-1, Cumulative Impacts Assessment, Page 158. As stated on page 157, the impacts of an individual reallocation may be "minor," but collectively, the reallocation of hydropower storage for the proposed project has a significant negative impact on the hydropower benefits. Please acknowledge in the report the significant negative impact to hydropower the cumulative reallocation has.

126. Environmental Impact Statement, Section 6.0, Audience and Location, Page 163. There is no Associated Power. The entity's name is Associated Electric Cooperative, Incorporated. Please correct.

127. Environmental Impact Statement, Appendix A, Agency Coordination, Page 206. There appears to be no documentation of coordination with Southwestern. Southwestern provided formal comments in letters dated December 5, 2002 and July 27, 2004. Please include all appropriate letters regarding the proposed WRMF project that have been received from Southwestern in Appendix A.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
P.O. Box 26567 (MC-9)
Albuquerque, New Mexico 87125-6567

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

July 17, 2006

File 9043.1
ER 06/576

Colonel Wally Z. Walters
District Engineer
Department of the Army
Corps of Engineers, Little Rock District
Post Office Box 867
Little Rock, Arkansas 72203-0867

Dear Colonel Walters:

The U.S. Department of the Interior (DOI) has reviewed the Draft Environmental Impact Statement (DEIS) for the White River Minimum Flow Reallocation Study in Arkansas. In this regard, the DOI offers the following comments and recommendations for your consideration as you develop the final environmental documentation.

The Water Resource Development Acts (WRDA) of 1999 and 2000 modified the basic authorization and operation for the five multipurpose White River Basin lakes; Beaver, Table Rock, and Bull Shoals Lakes on the White River; Norfork Lake on the North Fork River; and Greer Ferry Lake on the Little Red River. The proposed action is to provide an operating plan that accomplishes congressionally authorized project purposes while balancing permitted private uses, social and economic needs, and the application of sound environmental stewardship to managed resources.

U.S. Fish and Wildlife Service (FWS) Comments

General Comments

The FWS is actively involved in mitigating the effects of damming the White River through trout production at FWS national fish hatcheries. Hundreds of thousands of trout produced at state and Federal fish hatcheries are stocked in the tailwaters of these dams annually, producing a world class trout fishery. Numerous world record trout have been caught in the tailwaters of these dams, contributing to the nationally important recreational trout fishing industry. However, over time, we have become aware of water quality issues attributable to the reservoirs and their releases that were not previously

understood or addressed through mitigation or operations. Water quality, climate change, development, habitat loss, recreational demands, power demands, and an aging hatchery system are all contributing to the complex and difficult task of maintaining the trout fishery. The continued success of this mitigation effort will depend on the adaptation of trout production along with fisheries, recreation, development, habitat, and water quality management to meet these new challenges.

The action components for the recommended alternative, to provide a minimum flow to sustain the tailwater fishery as directed in the WRDA of 1999 and 2000, would have minimal adverse impacts on terrestrial and aquatic fish and wildlife resources. In addition, the FWS does not believe that the implementation of minimum flows on the White River will contribute to the further decline of any threatened or endangered species. This project is designed to improve habitat for trout that were introduced as mitigation for impacts resulting from the initial impoundment of these rivers. The FWS believes that this project will achieve its goal and support the improvement of habitat for the mitigation fishery, the persisting native fishery and the associated wildlife. However, the FWS believes that this project and other actions are necessary to provide the full extent of functional and appropriate mitigation relating to the initial impoundments. The need to alter releases and improve water quality in the reservoirs and tailwaters is evidence of the inadequacy of the previously anticipated impacts and mitigation. A mitigation fishery cannot achieve its goals of compensation if the habitat and water quality are not equally and adequately mitigated and maintained.

The FWS is equally concerned about the additional water quality issues in the tailwaters and at Norfork and Greers Ferry National Fish Hatcheries (NFH). The Arkansas Department of Environmental Quality recently added the North Fork tailwater to its 303(d) list of impaired waterbodies due to the decrease of dissolved oxygen (DO) to levels below state standards. In addition, the combined effects of reservoir stratification, depth, geology, high temperatures, anoxia, and no light result in increased concentrations and releases of manganese and hydrogen sulfide. The resulting low DO releases and manganese precipitants are causing fish mortality in both the tailwater and the hatcheries.

Norfork, Greers Ferry, Mammoth Spring, and Neosho NFHs, and the cooperative trout stocking program with the Arkansas Game and Fish Commission (AGFC) and Missouri Department of Conservation (MDC), were established to mitigate for the loss of the native fishery resulting from the coldwater releases created by the reservoirs. The trout that are grown in these hatcheries and stocked in the tailwaters are part of that mitigation and should be maintained in accordance with the original intent and objectives. The current situation demands that in order to sustain appropriate and viable mitigation, action must be taken to resolve these water quality issues in the tailwaters and the hatcheries created by the damming of these rivers.

The FWS sees this as only a part of the solution and supports the AGFC in taking immediate action to prevent further trout mortality, but the state should not be ultimately responsible for improving water quality problems attributable to a Federal project. Furthermore, the minimum flow releases will not resolve the water quality problems of

the hatcheries. Reducing the mortality of stocked trout in the tailwaters will become increasingly irrelevant if trout mortality continues or increases during production in the hatcheries. The FWS supports this project; however, a long term and comprehensive solution should be implemented to resolve all of the tailwater and NFH water quality problems.

We recommend that the FWS, the Southwest Power Association (SWPA), Corps, MDC, AGFC, and the Arkansas Department of Environmental Quality continue to work toward developing a solution for the tailwaters and the hatcheries. One project currently being considered involves the construction of two mechanical aerators immediately below the power house in the tailwater of Norfork Reservoir to improve DO during the non-generation periods. The floating aerators will be supplied by the AGFC and the Corps will design a structure to mount and hold the aerators in place. However, projects like this alone will not resolve the water quality issues or efficiently maintain mitigation objectives. The aerators will not resolve the water quality problems of Norfork NFH.

The SWPA, in cooperation with the White River Dissolved Oxygen Committee, AGFC, and the Corps, is investigating the use of a forebay oxygen diffuser system to increase DO in Norfork Reservoir near the dam. This would improve the water quality of the reservoir as well as outflows into the tailwater and Norfork NFH. However, this would only improve the situation at Norfork and would have no effect on other water quality and mitigation issues. Similar projects and modifications would be necessary at each of the reservoirs to achieve the same improvements and to achieve mitigation objectives.

The FWS supports the proposed action to prevent further trout mortality. However, the FWS and the state should not be entirely responsible for improving additional water quality problems and maintaining a mitigation fishery attributable to a Federal project sponsored by another agency or agencies. Currently the FWS, MDC, and AGFC expend their appropriations and funds to offset mitigation fishery costs through hatchery production and stocking. Over time, these costs have increased and the facilities have aged resulting in strained budgets and antiquated facilities. The initial funds provided for construction of the Greers Ferry, Norfork, Mammoth Spring, and Neosho NFHs have proven inadequate to meet long-term needs for maintenance and operations, and without sponsor agency assistance, these objectives will continue to become increasingly difficult to meet.

A June 14, 2000, General Accounting Office (GAO) report recommended that, "To provide an additional source of funding for hatchery operations that mitigate the impacts of Federal water development projects that benefit third parties, such as water users or electric power recipients, we recommend that the Congress provide the Service with clear authority to seek reimbursement from Federal water development agencies and/or project beneficiaries for all hatchery operation and maintenance expenses associated with such projects." In 2004, the Office of Management and Budget directed the DOI to "provide OMB with a status report on the progress of DOI's efforts to convert the NFHS mitigation hatcheries into full cost recovery operations by April 2005." More recently, the 2006 House Resolution H.R. 537 was introduced to more clearly define the roles and

responsibilities of the FWS and the project sponsor(s). If passed, H.R. 537 would establish that, "...a sponsor agency shall pay to the Service the total amount of funds necessary to meet the mitigation fishery costs to meet objectives described in the fishery mitigation plan for a respective water development project. The funds to be obligated for this purpose shall be identified in advance by the Director of the United States Fish and Wildlife Service." In light of these recommendations and Congressional interest, the FWS and the DOI are pursuing the issue of cost reimbursement for fishery mitigation programs.

A long term and comprehensive solution needs to be implemented to resolve the tailwater and NFH water quality problems. The final EIS should acknowledge that the minimum flow project is only a partial solution and that other options are being investigated whereby the Federal government will resolve these issues in the tailwaters and at Norfork and Greers Ferry NFHs.

Additional Fish and Wildlife Coordination Act Comments

The FWS agrees with AGFC's and MDC's belief that fish and wildlife impacts related to the reservoir projects on the White and Greers Ferry Rivers have never been appropriately mitigated. We concur with this belief and their assertion that the cost of water storage should be a Federal responsibility and that the proposed project is appropriate as partial mitigation for the loss of habitat to support a native fishery. We also agree with AGFC and MDC that incremental changes in flow as a result of evolving power demands over the past few decades have further deteriorated the in-stream ecosystems. Therefore, any restoration costs should be a Federal responsibility borne as a benefit to the Nation and implementation costs of this and other mitigation projects should be at 100 percent Federal expense.

The FWS remains concerned that previous unmitigated impacts and future potential effects to the National Park Service (NPS) Buffalo National River (BNR) and other tributaries along the system have not been fully considered or mitigated. Additional impact study and a long-term monitoring program would serve to 1) assess the true extent of the previous and future potential impacts, and 2) identify and address any unmet mitigation needs.

According to the NPS, the White River's cold-water habitat that currently affects the Buffalo River is approximately 70 miles in length. This large cold-water segment encompasses the confluence of the Buffalo River and continues approximately 25 miles downstream of the river's confluence. The cold-water segment is thought to be inhibiting migration patterns of native, warm-water fish into the Buffalo River, and increasing the range of non-native, cold water fish during the winter months. Reduced abundances and extirpations of common warm-water fish species is also thought to negatively affect native mussel communities within the Buffalo River. Effects on other aquatic communities such as macroinvertebrates are unknown.

The NPS and the FWS share similar concerns related to thermal barriers; that increasing the volume, duration and intensity of cold water releases could exacerbate ecosystem disruptions, further impacting native aquatic communities within the BNR as well as other tributaries along the river. It is the FWS's opinion that the Federal sponsor(s) of the initial project should request guidance and funding to support the BNR, AGFC, and MDC in assessing the extent of cold-water impacts and provide appropriate compensation to satisfy previously unmitigated obligations and to assist these agencies with implementation of their management objectives. Furthermore, the sponsor(s) of the proposed project should provide for long-term monitoring to assess additional impacts and develop a plan for providing appropriate mitigation, compensation, and/or adaptive management actions to offset impacts to the BNR and additional White River tributaries. The long-term monitoring and mitigation plan should be submitted as part of the final EIS to insure that there is complete and thorough assessment of, and compensation for, the loss of habitat. These concerns and recommendations have been reiterated below in separate comments provided by the NPS.

Endangered Species Act Comments

At the FWS's request and in accordance with section 7(c) of the Endangered Species Act (ESA), the Corps has completed a Biological Assessment (BA) for potential impacts to the Tumbling Creek Cave and the associated Federally-listed species at that site. The purpose of the BA was to specifically evaluate the potential effects of water storage reallocation alternatives in Bull Shoals Lake on Federally-listed endangered species which include the Tumbling Creek cavesnail, Indiana bat, and gray bat. The Corps' assessment concluded that the proposed action alternatives would have no effect on the Federally-listed endangered gray bat and Indiana bat. In addition, the Corps found that the reallocation of 5 feet of storage from the proposed storage alternatives may affect, but is not likely to adversely affect the Tumbling Creek cavesnail. The FWS reviewed the BA and concurred with these findings by letter on July 13, 2004.

The effects of raising the pools in each reservoir were evaluated extensively as the impacts of this action could have a large effect on numerous ecosystems, both aquatic and terrestrial. The increased frequency and duration of flooding of karst habitat has been estimated through analysis of the Super Model, and based on the results, the FWS concurs with the Corps' January 24, 2006, assessment that this project may affect, but is not likely to adversely affect threatened and endangered species.

The Corps has cooperated thoroughly with the FWS in the assessment of all potential effects to threatened and endangered species over the range of the study. No other BAs were requested or are required. The FWS fully concurs that this project may affect, but is not likely to adversely affect the Federally-listed threatened or endangered species identified in the project area and concurs with the Corps' previous determinations. Therefore, no further consultation with the FWS under section 7 of the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.) is required.

Summary FWS Comments

The FWS believes that the DEIS is missing certain components pertaining to the assessment of, and mitigation for, fish and wildlife resource impacts that should be implemented to offset unavoidable impacts. We believe that in order to ensure that fish and wildlife resources receive appropriate consideration, the Corps should:

- Seek additional funding and support to offset unmitigated impacts from the initial projects. Restoration costs should be a Federal responsibility borne as a benefit to the Nation and implementation costs of this and other mitigation projects should be at 100 percent Federal expense;
- Require the sponsor to fully assess and describe potential impacts to aquatic fish and wildlife resources in the final EIS through the implementation of a long-term monitoring and adaptive management plan;
- Develop a specific mitigation plan for aquatic resource impacts through interagency coordination that would minimize, avoid, and fully compensate for project impacts, and include the mitigation plan in the final EIS;
- Address how mitigation needs and/or necessary adaptive management actions identified through the long-term monitoring program will be met;
- Include the cost of aquatic resources mitigation features, the long-term monitoring program, and an estimate of the funds that would be needed to address mitigation needs identified through long-term monitoring in the final benefit: cost analysis; and
- Identify previously unmitigated impacts to allow for the determination of additional impacts associated with the proposed project.

The FWS supports this project; however, a long term and comprehensive solution needs to be implemented to resolve the tailwater and NFH water quality problems and mitigation shortfalls. The final EIS should acknowledge that the minimum flow project is also only a partial solution and that other options are being investigated whereby the Federal government will resolve these issues in the tailwaters and at Norfork and Greers Ferry NFHs.

These comments as well as additional comments and recommendations will be provided in the final Fish and Wildlife Coordination Act Report prepared by the FWS. If you have any questions related to these comments, please contact Lindsey Lewis, FWS, Arkansas Field Office, at (501) 513-4489.

U.S. National Park Service Comments

The NPS has concerns with the White River Minimum Flow Reallocation Study and the potential effects of the preferred alternative on the BNR, a unit of the National Park System. We thank your staff for including issues important to the NPS in this document, which covers a large geographic area and many important interests.

The analysis clearly shows the thermal migration barrier, that is currently impacting the BNR's fish community as discussed in the DEIS, will become cooler and extend further downstream for variable but increased lengths of time. What the analysis does not examine is how this change in the nature and timing of the thermal migration barrier would further impact the remaining native fisheries of the BNR.

While an assessment of warm-water fisheries impacts are not specifically required in the WRDA authorizing this study, the National Environmental Policy Act requires Federal agencies to disclose and analyze any environmental effects which cannot be avoided should the proposal be implemented. We continue to reiterate the position taken by the BNR as stated in their August 8, 2000, letter to your office. That letter stated in part:

> "1. We recommend the final EIS include an analysis of the impact of any White River flow regulations on the native warm-water fish fauna of both the White River and its Buffalo River Tributary.
>
> 2. We recommend the final EIS address any possible mitigation measures for the impacts resulting from the operation of the Bull Shoals or Norfork Dams on the ecology of Buffalo National River."

We suggest the best way to work out any differences regarding this matter between our agencies, and perhaps with other agencies having similar concerns, is to convene an interagency meeting of knowledgeable fisheries staff and resource managers to discuss these concerns and develop a strategy for addressing them as needed. Please contact Chief of Resource Management, David Mott, National Park Service, Buffalo National River, 402 North Walnut, Suite 136, Harrison, Arkansas 72601, telephone 870-741-5446, extension 270; he will assist in setting up the meeting. For matters related to consultation and coordination with the NPS, please contact the Regional Environmental Coordinator, Nick Chevance, NPS, Midwest Regional Office, at (402) 661-1844.

U.S. Geological Survey Comments

Page 8, Section 2.2.3 Reallocate 50/50, second paragraph second sentence; and Page 14, Section 2.5, Comparison of Environmental Consequences of Alternatives - The text indicates this alternative will result in reductions in hydropower and flood storage; yet throughout the table, the section on water resources under the 50/50 alternative indicates an increase in storage for hydropower production. The same apparent inconsistency is present in the table presented in the executive summary.

Page 96, Section 4.3 Water Quality - There were four model studies conducted on Beaver Lake, Table Rock Lake, Bull Shoals Lake, and Norfork Lake; however, numbers referenced in this section are only from Beaver Lake. Discussion of model results should indicate what the temperature and dissolved oxygen increased or decreased relative to; as written, it is not clear whether the changes were upstream or downstream, one scenario relative to another, or to a baseline. The discussion ends by stating that predicted increases or decreases were similar to the error between measured and simulated values.

This is a concern if the model is used for prediction (comparing model results to physical measurements or anticipated future measurements). However, if the model is used in a comparative mode (comparing results from a modeled baseline to modeled results when conditions are changed relative to that baseline), then any sources of inaccuracy are present in both models and "cancel out" so conclusions regarding increases or decreases are still valid. Finally, these works are not cited in the References section. A suggested rewrite of this paragraph is presented below; phrases and sentences to add are underlined.

> Under the No Action alternative there will be no change in the water quality of the study area. There is no significant effect expected on the water quality of the reservoirs due to the implementation of any of the reallocation alternatives. This conclusion is based largely on Temperature and Dissolved Oxygen Hydrodynamics models completed by the USGS (Galloway and Green, 2003; Green, et. al., 2003; Galloway and Green, 2002; Haggard and Green 2002). In an effort to assess the impact of increased minimum flows on temperature and dissolved oxygen concentrations of reservoir water quality, the USGS developed hydrodynamic temperature and dissolved oxygen models for each of the reservoirs with the exception of Greers Ferry. Simulations included: (1) the impact of additional minimum flows on tailwater temperature and dissolved oxygen qualities (current conditions); and (2) increasing the water surface elevation to account for the proposed reallocated storage. In scenario (1) water temperatures in the Beaver Lake tailwater appeared to increase (<1 degree C) and dissolved oxygen appeared to decrease (<2.2 mg/l). Conversely, scenario (2) in Beaver Lake apparently lowered the outflow water temperature (<1 degree C) and increased the dissolved oxygen concentrations (<1.2 mg/l ~~degree C~~). However, these results were within the boundaries or similar to the error between measured and simulated water column values. (Although results did not differ greater than the margin of error in the model they do demonstrate, based on the sensitivity of the model, that little to no change would be expected in the real system. The decreasing trend in dissolved oxygen concentrations with the increase in minimum flow in Beaver Lake shows there is an apparent stress to the system. With the increase in surface elevation and adding additional minimum flow, water temperature and dissolved oxygen concentrations in the tailwater tended to improve, but again in small amounts.) These results have been consistent in all of the models. The dissolved oxygen in the tailwaters should increase from any alternative which results in releases from a new turbine or use of a siphon and aeration valve combination; however, the four model reports did not assess dissolved oxygen dynamics (increases or decreases) from any alternatives that result in releases from new turbines or use of siphons or aeration valve combinations, only from increasing the pool elevation.

Page 99, Section 4.4.2.1 Lake Fishery Effects - Further explanation/clarification of the tables and figures beginning on page 99 would be helpful to the reader. For example, units for the columns following "elevation" in the tables (possibly depth above reservoir bottom?), reason for the shaded boxes, horizontal axis for the figures, etc.

References:

Galloway, Joel M. and Green, W. Reed, 2003, Simulation of hydrodynamics, temperature, and dissolved oxygen in Bull Shoals Lake, Arkansas, 1994-1995: U.S. Geological Survey Water-Resources Investigations Report 03-4077, 30 p. Also available on the internet at: http://pubs.usgs.gov/wri/wri034077/WRIR03-4077.pdf

Green, W. Reed, Galloway, Joel M., Richards, Joseph M., and Wesolowski, Edwin A. , 2003, Simulation of hydrodynamics, temperature, and dissolved oxygen in Table Rock Lake, Missouri, 1996–1997: U.S. Geological Survey Water-Resources Investigations Report 03–4237, 46 p. Also available on the internet at: http://mo.water.usgs.gov/Reports/wrir03-4237-richards/report.pdf

Galloway, Joel M. and Green, W. Reed, 2002, Simulation of hydrodynamics, temperature, and dissolved oxygen in Norfork Lake, Arkansas, 1994-1995: U.S. Geological Survey Water-Resources Investigations Report 02-4250. Also available on the internet at: http://ar.water.usgs.gov/LOCAL_REPORTS/WRIR02-4250.pdf

Haggard, Brian E. and Green, W. Reed, 2002, Simulation of hydrodynamics, temperature, and dissolved oxygen in Beaver Lake, Arkansas, 1994-1995: U.S. Geological Survey Water-Resources Investigations Report 02-4116, 28 p. Also available on the internet at: http://ar.water.usgs.gov/LOCAL_REPORTS/WRIR_02-4116.pdf

If you have any questions concerning comments from the USGS, please contact Lloyd Woosley, Chief of the USGS Environmental Affairs Program, at (703) 648-5028 or at lwoosley@usgs.gov.

Thank you for the opportunity to provide these comments and recommendations. We trust they will be of use as you prepare the final document.

Sincerely,

Stephen R. Spencer
Regional Environmental Officer

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUL 18 2006

Mr. Mike Briggs
EIS Manager
Little Rock District
Corps of Engineers
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mr. Briggs:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality Regulations (CEQ) for Implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the Draft Environmental Impact Statement (DEIS) for the White River Minimum Flow Reallocation Study, Arkansas. The study examines the impacts of reallocating storage in Beaver, Table Rock, Bull Shoals, Norfork, and Greers Ferry Reservoirs to improve trout fishing in the White, North Fork, and Little Rock Rivers.

EPA rates the DEIS as "**LO,**" i.e., EPA has "**Lack of Objection** to the implementation of the proposed action." EPA has some comments to offer on air quality impacts and asks that these comments be addressed and responded to in the Final EIS (FEIS). Our enclosed detail comments are offered to complement and to more fully insure compliance with the requirements of NEPA and the Council on Environmental Quality (CEQ) regulations.

Our classification will be published in the Federal Register according to our responsibility under Section 309 of the Clean Air Act to inform the public of our views on proposed Federal actions. If you have any questions, please contact Mike Jansky of my staff at (214) 665-7451 or by e-mail at jansky.michael@epa.gov for assistance.

EPA appreciates the opportunity to review the DEIS. Please send our office two (2) copies of the FEIS when it is sent to the Office of Federal Activities, EPA (Mail Code 2252A), Ariel Rios Federal Building, 1200 Pennsylvania Ave, N.W., Washington, D.C. 20004.

Sincerely yours,

Rhonda M. Smith, Chief
Office of Planning and
Coordination (6EN-XP)

Enclosure

DETAILED COMMENTS
ON THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE
WHITE RIVER MINIMUM FLOW STUDY

COMMENTS

This proposed project has the potential to affect the airshed in several counties in Arkansas. All of the potentially affected counties in Arkansas are in attainment for all of the National Ambient Air Quality Standards. As such, project-level conformity requirements are not applicable under either the transportation or general conformity regulations. No significant adverse air quality impacts in Arkansas are expected from this project.

The document informs the public that any increase in the flow of the White River could result in a loss of hydroelectric power and the possible resultant need to offset this power loss by increasing output of other power stations, some of which might be combustion stations. While this information is preliminary, the document does provide estimates of the increase in emissions that might occur as a result of this activity. In all cases the estimated emissions are minor and in any case, any increases in emissions from combustion power plants would be subject to existing permits in accordance with the review and approval process of the Arkansas Department of Environmental Quality and/or the EPA.

In addition, please correct the following statement found on p.78 of the DEIS, under Section 3.8: "According to the Arkansas Department of Environmental Quality, the entire state of Arkansas is in compliance with all EPA ambient air quality standards." This statement is no longer correct as EPA designated Crittenden County as nonattainment for the 8-hour ozone standard on June 15, 2004. However, Crittenden County is not part of the White River watershed and so is unlikely to be impacted by any of the proposed plans. We recommend either correcting or deleting this sentence and also recommend clarifying or deleting the following sentence, also on p.78 of the DEIS: "Only pool concentrations occasionally approach the limit of the standard."

2006 DEIS Written Comments from Individuals and Corresponding Responses

Written Comments received by individuals on the Draft Environmental Impact Statement were in many cases similar in context. Therefore individual comments were grouped together and responded to on the following pages. The actual comments are listed following these response pages for the reviewer's information.

Comment: **Has there been a financial impact study done to determine the impact of minimum flows to businesses on Lake Norfork and if so what were the results?**

Response: **No financial impact study has been conducted. However, a stage visitation curve was used in the SUPER model to gage the economic impacts to lake recreation.**

Comment: **From what source will the cost of the siphon tube be obtained on Lake Norfork?**

Response: **The cost of completing the design and construction of the siphon system is a Federal expense, as stated in Section 132 of the FY06 Energy and Water Development Act.**

Comment: **What lake recreational facilities (boat ramps, camp sites, etc.) will be lost or impacted by the minimum flow project?**

Response: **No recreational facility will be lost. During the Feasibility study phase it was determined that the loss of lake recreation due to changes in the water control plan were exponentially smaller than the tailwater benefits gained. Consequently the cost of moving recreation facilities that were adversely impacted by reallocated storage was significantly larger than the cost of lost recreation opportunities, therefore only reconnaissance level analysis was conducted on lake recreation facilities impacted during the Feasibility phase. Section 132 of the FY06 Energy and Water Development Act requires the non-Federal interest (most likely Arkansas Game and Fish Commission) to provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities as determined by the Secretary in consultation with the non-Federal interests. Once funds are allocated, the Preconstruction, Engineering, and Design Phase (PED Phase) will begin. During the PED phase the Corps and the non-Federal interest will develop a standard procedure using Hydrologic and Hydraulic data to identify adversely impacted lake facilities, plans, specifications, and costs for modifications or relocations. Public input will be sought in order to identify all potential facilities. The PED phase must be completed before the White River Minimum Flows storage reallocation can be implemented.**

Comment: **The study does not address the economic impact to the "Twin Lakes" (Norfork and Bull Shoals) due to impacts to recreational facilities from the minimum flow project……**

Response: **The study did include impacts to recreation. SWL was directed by HQ to include either impacts to in-pool and downstream recreation or the costs to keep recreational facilities "whole." The impact to recreational facilities was examined using a stage visitation curve in the SUPER model.**

Comment: **Economic impact on Ozark County will be horrific!**

Response: **The respondent does not understand the question.**

Comment: **What roads will be underwater due to the project?**

Response: **During the Feasibility study phase it was determined that no roads within the study area would be flooded that don't already flood periodically. During the public study process, no state or county agencies voiced concern over the proposed storage reallocations . Section 132 of the FY06 Energy and Water Development Act requires the non-Federal interest (most likely Arkansas Game and Fish Commission) to provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities as determined by the Secretary in consultation with the non-Federal interests. Once funds are allocated, the Preconstruction, Engineering, and Design Phase (PED Phase) will begin. During the PED phase the Corps and the non-Federal interest will develop a standard procedure using Hydrologic and Hydraulic data to identify adversely impacted lake facilities, plans, specifications, and costs for modifications or relocations. Public input will be sought in order to identify all potential facilities. The PED phase must be completed before the White River Minimum Flows storage reallocation can be implemented.**

Comment: **What recreational facilities will be impacted by this project?**

Response: **During the Feasibility study phase it was determined that the loss of lake recreation due to changes in the water control plan were exponentially smaller than the tailwater benefits gained. Consequently the cost of moving recreation facilities that were adversely impacted by reallocated storage was significantly larger than the cost of lost recreation opportunities, therefore only reconnaissance level analysis was conducted on lake recreation facilities impacted during the Feasibility phase. Section 132 of the FY06 Energy and Water Development Act requires the non-Federal interest (most likely Arkansas Game and Fish Commission) to provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities as determined by the Secretary in consultation with the non-Federal interests. Once funds are allocated, the Preconstruction, Engineering, and Design Phase (PED Phase) will begin. During the PED phase the Corps and the non-Federal interest will develop a standard procedure using Hydrologic and Hydraulic data to identify adversely impacted lake facilities, plans, specifications, and costs for modifications or relocations. Public input will be sought in order to identify all potential facilities. The PED phase must be completed before the White River Minimum Flows storage reallocation can be implemented.**

Comment: **There is no provision for when the lakes become low to shut off water for the minimum flow project!**

Response: **The non-Federal interest will not be allowed to release more water than the reallocated storage associated with plans BS-3 and NF-7. During the Preconstruction, Engineering, and Design Phase (PED Phase) the new Water Management Plan will be developed. The New Plan will include water supply accounting procedures and the updated Drought Contingency Plan.**

Comment: **Who will pay for all the relocations and new facilities (recreation, roads, etc.)?**

Response: **Section 132 of the FY06 Energy and Water Development Act requires the non-Federal interest (most likely Arkansas Game and Fish Commission) to provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities as determined by the Secretary in consultation with the non-Federal interests. Once funds are allocated, the Preconstruction, Engineering, and Design Phase (PED Phase) will begin. During the PED phase the Corps and the non-Federal interest will develop a standard procedure using Hydrologic and Hydraulic data to identify adversely impacted lake facilities, plans, specifications, and costs for modifications or relocations. Public input will be sought in order to identify all potential facilities. The PED phase must be completed before the White River Minimum Flows storage reallocation can be implemented.**

Comment: **The Minimum Flow project is intended to allow more boats to travel up-river to aid fishing guides and their customers..!**

Response: **The Water Resource Development Acts (WRDA) of 1999 and 2000 modified the basic authorization and operation for the five multipurpose White River Basin lakes: Beaver, Table Rock, and Bull Shoals Lakes on the White River; Norfork Lake on the North Fork River; and Greers Ferry Lake on the Little Red River. Under the original authorization, water levels have been managed primarily for flood control and hydroelectric power generation, and to a lesser extent water supply. The new modified authorization includes a provision to store water in the lakes to sustain the downstream trout fishery. Because all of the storage space in the lakes is already allocated (there is no surplus storage) there would need to be a reallocation of storage to implement the added measure. The reallocated water storage is intended to provide round the clock minimum flows. The minimum flows release is intended to stabilize the cold water habitat, benefiting both game and non game aquatic species and improve the tailwater water quality.**

Comment: **Why are all 5 lakes used in benefits calculations when only 2 lakes will be changed?**

Response: **The District's duty was to conduct a study in accordance with the Water Resource Development Acts. The District was obligated, by law, to examine all five lakes. The benefits were distributed to all 5 lakes using accepted economic procedures. Section 132 of the FY06 Energy**

and Water Development Act repealed WRDA 99 & 00 and authorized BS-3 and NF-7 as identified in the FY04 White River Minimum Flows Reallocation Report.

Comment: **Low water levels will prevent some fire departments from being able to obtain water from the lakes.**

Response: **During the Feasibility Phase of the study it was determined using Hydrologic & Hydraulic data that the proposed storage reallocations will not result in lake levels outside the existing range of lake levels. Reallocation from the flood pool actually produces a higher minimum pool elevation frequency than the current plan. At Bull Shoals the BS-3 reallocation results in elevations being 3.3 feet higher between 10% and 90% frequency with a maximum of 4.4 feet higher at the 80% frequency. At Norfork the NF-7 reallocation results in elevations that are higher in every month below the 85% time equaled or exceeded, and on average are 2.3-feet lower in every month above the 85% time equaled or exceeded.**

Comment: **Natural sand beaches exist in Norfork Lake near Jordan Marina. The project will destroy these beaches want it?**

Response: **To determine whether or not the beach will be destroyed has not be determined. During the six year Feasibility Study phase not concerns were raised with regards to the before mentioned "natural sand beaches". During the Preconstruction, Engineering, and Design Phase (PED Phase) the beach will need to be geospatial located including elevations. Frequency and Duration curves will be used to compare existing frequency of flooding and the duration of flooding. If the analysis shows recreation opportunities at the beach are significantly adversely impacted relocation or modification costs will be the responsibility of the non-Federal interest. The non Federal interest has been unofficially identified as the Arkansas Game and Fish Commission.**

Comment: **Minimum flows project will prevent wade fishing on the Norfork River!**

Response: **During the Feasibility Study Phase, minimum flows test release were made at Norfork Dam on June 4, 2000. The release schedule was announced publicly and input from landowners, fishermen, and concerned citizens were encouraged. The over whelming majority of comments received liked the river levels produced by the test release, with no adverse effects to wade fishermen. The river level with minimum flows was approximately 9-inches higher than conditions with out minimum flows.**

Comment: **Only Norfork and Bull Shoals should be evaluated since they are the only lakes with authorization by Congress……**

Response: **The District was directed to conduct a study in accordance with the Water Resource Development Acts of 1999 and 2000. The District was obligated, by law, to examine all five lakes.**

Congress used Section 132 of the FY06 Energy and Water Development Act to authorize Bull Shoals BS-3 and Norfork NF-7 as well as repeal WRDA 99 & 00.

Comment: **There is no provision in NF-7 to improve low oxygen levels that occur in the Norfork River…..The seasonal low DO levels should be corrected since the dams cause the problem and the recent court rulings state that the dams are a "discharger" and violate the CWA.**

Response: **Comment noted.**

Comment: **Will more flooding occur on agricultural land due to the Minimum Flow project?**

Response: **No increase to down stream flooding will occur as a result of minimum flows. Albeit minor, additional elevations along the lake shore will be flooded. SUPER model maximum events (historic floods) show Bull Shoals to be 0.3-feet higher and Norfork 0.1-feet higher with minimum flows.**

Comment: **"COE limits public viewing of documents to 5 project offices along WR and Little Rock District Office, and public meetings/workshops to Mt. Home and Bentonville, a long way from many affected folks from two states that may have to pay for reallocation……."**

Response: **The Corps of Engineers has made hard copies of the documents available at Beaver, Table Rock, Bull Shoals, Norfork, and Greers Ferry Project Offices. There are also copies available for public review in the Little Rock Corps' PA0 office. In addition, as stated above the Corps will furnish anyone who asks, a copy of a free CD containing the Reallocation Report, Chiefs Report, and Draft EIS. The documents are also available on the internet at http://www.swl.usace.army.mil/planning/wrminflow.html. It is the Corps' intent to make the documents available to anyone interested in the Reallocation Report, Chiefs Report, and Draft EIS. We believe we have fulfilled that intent by providing the documents free of charge as described above. However, due to the considerable cost of reproducing hard copies of the documents, and the lack of Minimum Flows Study funds we feel that those individual/organizations should pay reproduction costs if hard copies are required.**

Southwestern Power Resources Association

P. O. Box 471827
3840 S. 103 E. Ave., Ste. 117
Tulsa, Oklahoma 74147
918-622-7800
FAX 918-622-8141

August 15, 2006

U.S. Army Corps of Engineers
Little Rock District
Attn: Mike Biggs CESWL-PM
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mr. Biggs:

Southwestern Power Resources Association (SPRA) represents the rural electric cooperatives and municipally owned electric utilities that purchase the hydroelectric energy and capacity generated at 24 Corps of Engineers multipurpose water resource projects in our region, including five in the White River basin. This energy and capacity is marketed to our members by Southwestern Power Administration (SWPA), an agency of the U.S. Department of Energy. Because, as noted by General Strock[1], hydropower would be the most significantly affected of all authorized project purposes by minimum flow releases from White River reservoirs, SPRA and its members, individually and collectively, have a great deal at stake in the issue under consideration. Consequently, we respectfully submit the following comments concerning the Draft Environmental Impact Statement (Draft EIS) for the White River Reallocation Study.

SPRA has participated at great lengths in all the meetings, studies and analyses that have led to the issuance of the Draft EIS. Our review of this document revealed several concerns with technical, clerical and factual details. However, we have reviewed draft comments prepared by SWPA, and all of the issues we had concerns with have been addressed in that agency's comments. Consequently, rather than duplicating efforts and making the public review process more complicated, SPRA supports and concurs with the issues raised and conclusions reached in SWPA's formal comments. There are a few overarching issues, however, that we wish to expound upon.

Seasonal Pools at Bull Shoals and Norfork Lakes

In the early 1970s, Arkansas Game and Fish Commission (AGFC) approached the Corps' Little Rock District (LRD) about making releases from Bull Shoals and Norfork Lakes when ambient air temperatures caused a rise in downstream river temperatures that were affecting trout habitat. In subsequent meetings including AGFC, LRD & SWPA, it was agreed that releases from these two projects would be made through the generators to lower downstream temperatures when certain climatological parameters were exceeded. As part and parcel to this arrangement, it was agreed to implement a seasonal pool (a seasonal increase in the top of the conservation pool) to

[1] Letter from Maj. Gen. Carl A. Strock transmitting letter report of the Chief of Engineers on White River Minimum Flows to Congress, July 30, 2004.

partially mitigate the negative impacts to the hydropower purpose of requiring generation at periods when it would not normally be scheduled to meet customer load requirements.

During the study of minimum flow releases, it was our understanding that LRD assumed the seasonal pool and temperature-based releases would continue when it conducted analyses of impacts of the various minimum flow release alternatives. These study findings were incorporated in the subsequent Chief's Letter Report on the White River Minimum Flow Reallocation Study and served as the basis for authorization of minimum flow reallocations included in the FY 2006 Energy and Water Appropriations Act. They were also the basis for many of the findings and conclusions in the instant Draft EIS.

Even though the Draft EIS was formulated on the basis that seasonal pools and ambient temperature-based releases would continue, the document does not appear to establish unequivocally whether these operational guidelines would continue after storage is reallocated for minimum flow releases. SPRA strongly encourages that the draft EIS be revised to make clear that seasonal pools will remain in operation if temperature-based releases continue. In the alternative, any releases made to comply with guidelines based on downstream ambient air temperatures should be made from storage reallocated to minimum flow releases, and not from hydropower storage.

Maintaining Power Pool Yields

In at least three instances[2] the White River Minimum Flows Reallocation Study Report recognizes that any reallocation from the flood control pool of a project will reduce the critical period dependable yield per unit of storage for all users of the conservation pool, including municipal and industrial water supply and power. To keep existing conservation storage holders whole, Dependable Yield Mitigation Storage (DYMS) may be applied to preserve the existing yield of all water supply users and Hydropower Yield Protection Operation (HYPO) may be applied to all power storage. The final reallocation report states, "All plans that are identified as potentially implementable and have a flood pool storage reallocation will include DYMS for water supply users and HYPO for hydropower."[3] Indeed, all tables and figures in the report reflecting impacts on authorized purposes assumed inclusion of DYMS and HYPO.[4]

The Draft EIS is based upon the findings and conclusions of the final reallocation report, which in turn is based upon inclusion of DYMS and HYPO in all alternatives that involve reallocation of the flood control pool, including the recommended alternatives BS3 and NF7. Indeed, the Executive Summary of the Draft EIS reiterates the statement from the final reallocation report: "All plans that were identified as potentially implementable and have a flood pool storage reallocation will include DYMS for water supply users and HYPO for hydropower users."[5]

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[2] Pp. 17-18, 32 and 38, White River Minimum Flows Reallocation Study Report, July 2004.
[3] *Ibid.*, p. 32.
[4] *Ibid.*, p. 17.
[5] Draft Environmental Impact Statement, White River Minimum Flow Study, p. ES-17.

However, we could find no other reference to DYMS or HYPO anywhere else in the Draft EIS, not even a definition for these acronyms.

Both the final reallocation report and the Draft EIS conclude that the recommended reallocation alternatives would include both DYMS and HYPO. However, the Draft EIS should be revised to clarify this in the body of the document (not just the Executive Summary), and the two acronyms should be defined. SPRA does not support any flood pool reallocation that does not include HYPO.

Requirements for Implementation

Although not addressed *per se* in the Draft EIS, a particular requirement to implement the proposed reallocation and minimum flow releases was raised by LRD staff during the public workshops and other public meetings held in conjunction with the comment period. The LRD staff noted that compensation required for energy and/or capacity reductions to Empire District Electric Co.'s hydroelectric operations on Lake Taneycomo would have to be determined by SWPA and funding in the amount of the computed damages would have to be appropriated by Congress before reallocation and minimum flow releases could take place. SPRA concurs with this conclusion.

Another condition that must be met but was omitted at these workshops is cited in Section 132 of the FY 2006 Energy & Water Appropriations Act. This section states that SWPA will calculate its cost to replace any energy and/or capacity lost because of the reallocations and requires the Corps to credit repayment of the power purpose by this amount. Compensation of SWPA and its power customers is just as important a prerequisite to initiating reallocation and minimum flow releases as is compensation to Empire District Electric Co.

Although mentioned at the workshops, SPRA feels that it is important to stress that even after reallocation occurs, minimum flow releases cannot begin until water has been captured in the storage allocated to minimum flows. In light of the current drought, significant inflows will be necessary before storage begins to accumulate in the minimum flows account. Hopefully for everyone involved, rains will soon begin generating significant inflows into the projects. Even when inflows are credited to the minimum flows storage account, however, releases for this purpose must be restricted to the amount in the minimum flows storage account.

Downstream Recreation Benefits Calculations

During the course of public meetings held in conjunction with the public comment period on the EIS, questions were raised about the validity of findings in the final reallocation study relating to the amount of downstream recreation benefits that would result from minimum flow releases. In responding to these questions, LRD staff stated that it had been rumored that SWPA's power customers had commissioned a study of these impacts, but said study had never been shared with the Corps.

SPRA's current President was attending the meeting in question. He acknowledged that our association had commissioned such a study, and that a copy of the study would be included in our association's comments. Accordingly, a copy of "A Critique of CV Methodology and Collins and Deck's 'Estimation of the Benefits to Trout Fishery of Increased Minimum Flows at the Bull Shoals and Greers Ferry Dams'", by Terrel Gallaway, Ph. D., is attached as Appendix A. But before addressing Dr. Gallaway's findings, it might be enlightening to discuss why this study was not previously provided to the Corps.

When LRD began preparing the White River Minimum Flows Reallocation Study, SPRA learned that downstream recreation benefits attributable to minimum flow releases would be calculated using the controversial Contingent Valuation Method (CVM). SPRA subsequently obtained from LRD a copy of the CVM studies prepared for the Corps under contract by Jeffrey T. Collins, Ph. D., and Katherine A. Deck of the University of Arkansas. This led SPRA to engage Dr. Gallaway of Southwest Missouri State University to prepare a critique of CVM in general, and how it was applied by Collins and Deck to estimate downstream recreation benefits accruing from minimum flow releases.

It was the intent of SPRA to submit Dr. Gallaway's report as part of our association's comments on the draft White River Minimum Flows Reallocation Study. In the normal course of Corps business, LRD would have released a draft reallocation report for review and comment by the public. LRD would then be obligated to review all comments received; indicate whether it disagreed or agreed in whole or in part with individual comments; revise the report accordingly and forward it to the Corps' Southwestern Division. The division would then have reviewed the report and the comments, directed LRD to make any changes the division staff deemed necessary, and forwarded the revised report to Corps Headquarters, where the review and revision process would be repeated. After the district, division and headquarters were satisfied with the report, the final version would have been forwarded to Congress and released to the public.

For whatever reason, the public process was short-circuited in this instance, and ***there was no opportunity given for public comment on the report at any stage of the drafting and revision process.*** Instead, General Strock forwarded a "Chief's Letter Report" – much simplified and shorter than similar reallocation study reports – to Congress by letter dated July 30, 2004. Because SPRA – along with the rest of the public – was never given an opportunity to review and comment on the draft reallocation study, there was no opportunity to submit Dr. Gallaway's critique of the White River CVM study – until now. Again, this is the only reallocation study report, to our knowledge, that was ever completed and forwarded to Congress without a formal public review process and without a single opportunity to offer comments, suggestions or critique of the document.

SPRA strongly supports the public review and comment process for all Corps studies. We firmly believe that this process can lead to a much improved final document. We are distressed – not only for our own sake, but for the entire public – that it was ignored in the instance of the White

River Minimum Flows Reallocation Study. What is to be gained by deliberately eliminating the public comment process? Indeed, there is much to be lost when the public's voice is not heard.

SPRA remains convinced that merits of the controversial Contingent Valuation Method of calculating public benefits are highly questionable at best, and that the Collins and Deck CVM study of downstream recreation benefits attributable to minimum flow releases is fatally flawed. Although we were prepared to question the estimate of downstream recreation benefits during public review of the draft reallocation study, it would appear that this question has been preempted by Congressional action. Instead, we are presented with the opportunity only to comment on the environmental impacts of this decision.

Consequently, SPRA has chosen not to debate the merits of these issues in these comments. However, the Draft EIS cites statistics taken from the Collins and Deck study, and this is the first and only opportunity the public has had to question the basis and validity of these findings. Therefore, we have included "Pick a Number: A Critique of Contingent Valuation Methodology and its Application in Public Policy" by Roger Bate as Appendix B, and "Misleading Quantification: The Contingent Valuation of Environmental Quality" by Robert K. Niewijk as Appendix C of our comments. We will leave it to other stakeholders to address this issue more fully.

Conclusion

SPRA appreciates this opportunity to provide comments on the Draft EIS. We only wish we and the other stakeholders and general citizens had been afforded the same opportunity to comment on the draft reallocation study report. We look forward to reading the final EIS, and respectfully request that we be sent a copy of LRD's revisions to the Draft EIS when they are completed.

Sincerely,

Ted Coombes

Ted Coombes
Executive Director

J. Y. Massey
2019 Fuller Street
Mountain Home, Arkansas 72653
870-425-7454

28 June 06

Re: White River Min. Flow

Dear Mr. Biggs,

After carefully reading the EIS for the above project, I strongly support alternative BS3 for Bull Shoals and NF7 for Norfork Lake.

Thanks for your consideration.

Respectfully,

J Y Massey

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

7/1/06

I'am a resident of Mtn Home, Ar. And as a Concerned citizen I would like to Know: after Studying the draft of the EIS white River Minimum flow study as it relates to the Lake Norfork area. The facts and figures as shown in this study are alarming to me. I do not agree with the Purposed lake level in Norfork Lake as stated and I think more Studies are needed

Sincerely,
Gene Gonsales

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
GENE GONSALES

Organization:
NORFORK LAKE STRIPPER CLUB

Address:
12 HAL DRIVE
MTN HOME, AR 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

1. Has there been a financial impact study done to determine the impact of minimum flow to businesses on lake Norfork? If so, what are the results?

2. From what source will the cost of the siphon tube be obtained on lake Norfork?

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Thomas P Reynolds

Organization:

Address:
547 Mossy Rock
MOUNTAIN HOME, AR 72653

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I'VE LIVED BESIDE THE WHITE RIVER FOR 16 YEARS IN THE LIVINGSTON CREEK AREA. I WANT MINIMUM FLOW DUE TO THE MASSIVE FISH KILLS I SEE EVERY SUMMER & FALL. THE MOSS FROM CALICO ROCK (THI YEAR SOUTH IS THE WORSE I'VE EVER SEEN AND IT MAKE IT NEARLY IMPOSSIBLE TO FISH. ITS THE RESULT OF LOW WATER AND WARM WATER. DON'T TELL ME ITS FROM CHICKEN HOUSES BECAUSE THERE ARE NONE IN THIS AREA. IF THERE IS ONE OR TWO NORTH OF HERE, MAKE SURE THEY ARE ENVIRONMENTAL SAFE.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
CURTIS R. FESLER

Organization:
PRIVATE CITIZEN

Address:
649 SUNSET VALLEY DR.
MOUNTAIN VIEW AR.
72560

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I AM IN FAVOR OF MINIMUM FLOW. DROPPING THE WHITE RIVER LEVELS TO SUCH LOW LEVELS IS KILLING TROUT EVERY YEAR. THEY NEED COOLER, DEEPER WATER TO SURVIVE.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
LINDA FESLER

Organization:
& CONCERNED CITIZEN

Address:
649 SUNSET VALLEY DR.
MOUNTAIN VIEW AR.
72560

additional space on the back ⟶

Jim Barnett
250 N. 11th Street
Batesville, AR 72501

July 12, 2006

U. S. Army Corps of Engineers
Operations Division, Reservoir Control Branch
P. O. Box 867
Little Rock, AR 72203-0867

Attn: White River Minimum Flow Reallocation Study

Dear Sirs:

I would like to register my strong support for higher minimum flows on the White River. On June 14, 2006 the minimum flow here at Batesville fell to 820 cfs. The 29 year median daily flow at that time in June is around 9,000 cfs. At Calico Rock the minimum flows fell below 1,000 cfs. on July 5, 6, and 7. The flows did recover to a maximum of 5,000 to 6,000 cfs. on those dates, but these drastic fluctions are very damaging to the tiny plants and animals on the gravel bars and shoals. These little creatures and plants form the basis for the food chain in the upper White River. Killing them lowers the capacity of the river to sustain marine life all the way up to the bass and trout that are at the top of the food chain.

When flows are low in the Mount Olive and Mountain View stretches of the river the hot summer weather can raise the water temperatures to levels that are very dangerous to trout. A warm summer shower can raise the temperature even further. When these conditions occur help in the form of cold water from the dams is two days away. By the time this help arrives it is too late.

I served on The White River Coordinating Committee from its inception to its demise, and I know how jealously the Southwest Power Administration guards its prerogative to control water flows, but a higher minimum flow, and a reduction in the fluctuation, particularly in the fast falls resulting from reducing flows too abruptly, will pay big dividends in the productivity of the river as a premier fishing and recreation stream. I am 80, and I am fortunate to have experienced the White River before it was controlled. Marine life was so prolific it is difficult to imagine now. I think some moderation in the extreme ups and downs of the river levels, and a higher minimum flow, will help move the river back to the fish factory it once was.

Sincerely,

Jim Barnett

Deadline 7/18/0

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

AFTER REVIEWING THE POSITION PAPER OF NORFORK LAKE CHAMBER OF COMME MINIMUM FLOW REALLOCATION, I AM AMAZED BY THE EXTREMELY NARROW VIEW TO THE TOTAL PICTURE OF PROMOTING AND ALLOWING ANY MAJOR POOL DEPTH CHANGES.

1. GROSS WATER LEVELS FLUCTUATIONS, BOTH HIGHER AND LOWER, WILL HAVE GREAT IMPACT ON THE MAIN BAXTER COUNTY ECONOMY OF ATTRACTING TOURISTS TO THE AREA. WITH HIGHER WATER LEVELS (INCREASE IN POOL DEPTH) ALL RECREATION BEACHS IN HENDERSON AND JORDAN AREA WILL BE COVERED WITH WATER AND THUS LOST TO LAKE USERS.
2. ALL LOADING/LAUNCHING RAMPS WILL BE EFFECTED. MOST LAKESIDE PARKS WILL LOOSE CAMPSITES, PARKING AREAS, AND USER ROADS.
3. LAND OWNERS IN TRIBUTARIES THAT ARE IN FLAT VALLEY FLOORS WILL LOOSE USE OF NON-CORP ACREAGE THAT IS PRIVATELY OWNED.

(OVER)

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
THEODORE S. SWITZ, PRES. & CEO
Theodore S. Switz
Organization:
BARREN FORK RANCH, INC.
Address:
BOX 2473
JORDAN, AR 72519

4. No Review Has Been Made Of The Total Adverse Changes In The Twin Lakes Area Financial Picture Where Special Benefit Of An Untried Experiment In Increasing The Trout Fisheries Will Be Real By A Minor Segment Of The Economy.

For A Maximum Increase Of Only 4% In The Baxter County Economy, This Plan Seems To Have Far Too Many Speculative Unevaluated Adverse Economic Impacts To Proceed.

I Am Strongly Against These "Experiment" And Feel Their Should Be "No Action" Taken On This Minimum Flow Realloc Plans.

Theodore S. Switz

Theodore S. Switz
Barren Fork Ranch, Inc.

Deadline 1/18/0

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

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The White River Minimum Flow Reallocation Study states a potential of increasing the river's economic value (though only by about 4%), but, in return, the process would obviously decrease the economic value of Norfork Lake by a great deal more.

The lake marina's access & parking, launch ramps and campgrounds will be negatively impacted by the higher lake levels needed to support the increase in river flow. Higher "normal" lake levels to support the plan will cause the sand beach areas of the Jordan area (used extensively by locals and visitors to the lake) to be under water and no longer useable. This will result →

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Jack & Carol Pior

Organization:
local residents

Address:
184 Barren Fork Ranch Road
Jordan, AR 72519

in a significant economic impact to the several marinas in this area of the lake as well as a serious recreational impact to the public.

This plan will also make the lake water level less stable, therefore causing a significant negative impact to the spawning phases of the several sport fish species in the lake.

The EIS report provides no factual proof that the plan would improve the fishery of the river and does not address the negative economic and recreational impact to the "Twin Lakes". There there should be "NO ACTION" taken on this minimum flow reallocation plan!

Jack Dior

Deadline 7/18/06

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

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Sheets attached Thanks

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: PATRICIA SLICE

Organization:

Address: 17 McGANN MTN TRL.
JORDAN AR
72519

We have heard that there were studies going on and finally I was able to get my hands on a paper published by the Norfork Lake Chamber of Commerce, their Position Paper. I tried to find the report itself on the internet and it appears that it has been "pulled". The URL I had was http://www.swl.usace.army.mil/planning/wrminflow.html and it seems to be no longer available.

We moved to Jordan, AR, on the south side of Lake Norfork in December 2004 after living in Minnesota until retirement. I know that the Army Corps of Engineers does not have a responsibility to keep a lake viable just because people retire to the area, but this last winter was quite remarkable in that we saw what a low lake level did to the tourism in the area. The lake went down to around 538 feet and during that period we were very reluctant to take our boat out on the lake no knowing what we would run in to.

Tell me if I am right, that this report says that the lake can be drawn down for maintenance of the trout fishing to a level of 510 feet. This is almost incomprehensible to me in that I saw what 538 feet was like and I cannot even imagine what 510 feet would be like. Knowing that the "normal" level of the lake is approximately 552 feet and that the lake fish habitat is optimal at approximately 530-540 feet, drawing the lake down to 510 feet could cause a huge impact on lake fishing at the expense of trout fishing, say up at Gaston's. Just a question, but is Gaston's paying the Congressman some bucks on the side for this?

In speaking with the owners of the Jordan Marina, Keller's Cove, and the Quarry Marina, there has been no contact from the Army Corps of Engineers to see what kind of impact this draw down would cause to their businesses. I know last winter there were articles in the Baxter Bulletin (Mountain Home, AR) that showed pictures of a cove where a Marina was and the docks were all "grounded". I think that is a possibility for Jordan, Keller's, and Quarry if this new minimum flow is enacted. If word gets about to the tourists looking to spend their dollars in the Lakes areas that the lakes will be down the 510 feet, or even to the 538 feet that we had last winter, tourism in this area will be severely impacted. To take a one-sided approach and only look at how the trout fishing would be "potentially" better is very narrow minded.

I think that the ACE also needs to know that if the lake levels are allowed to go any lower than they did during the winter of 2005-2006, that this places a huge stress on our local fire department, as we rely on the lake for water supply for fire suppression. Both my husband and I volunteered for the Rodney Volunteer Fire Protection District and last January we started practicing water shuttling out of the lake to lower the ISO rating in our fire district. It was difficult, at best, to get water out at the 538 foot level, and trying to get water out at 510 feet would be nearly impossible without spending many more dollars to fund suction hose and pumps. This lower of the lake level is going to prove disastrous to local property owners if the fire department cannot get the needed water out of the lake.

We do not want these proposed changes to the minimum flow to go through. It would harm both personal pursuits of enjoyment, plus it would harm the local economy. I

can imagine that the levels would also bring about large fish kills if the low levels are for longer periods.

I implore the ACE to take a thorough and complete look at the economic disaster looming if this new minimum flow is enacted. If the time is taken and the actual impact seen I am sure minimum flow would be left as is at Lakes Norfork and Bull Shoals.

Patricia Slice
17 McGann Mountain Trail
P.O. Box 2484
Jordan, AR 72519
870-499-3406

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

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TO WHOM IT MAY CONCERN:
I AM SURE THAT THIS OPINION IS NOT NEEDED, BECAUSE I CAN'T IMAGINE ANY BOARD TRYING TO FIX SOMETHING THAT IS NOT BROKEN.
IT SEEMS TO ME BY CHANGING THE FLOW RATE FROM NORFORK AND BULL SHOALS; THE CHANGES YOU WILL SEE IN NOT ONLY THE RIVER, BUT IN THE LAKE AND RECREATIONAL ACTIVITIES ON BOTH LAKES WILL CAUSE SUCH A FUSS AND OUTCRY THAT THERE CAN'T BE ENOUGH BENEFIT TO COVER THIS MUCH CHANGE - PLEASE - PLEASE LEAVE THE SYSTEM THAT IS WORKING ALONE -
THANK YOU -
P I AM SURE THAT JIM HINKLE, IF HE WERE STILL ON THE BOARD, WOULD NOT LET THIS HAPPEN -

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
RICHARD BERGENS
Richard Bergens
Organization:
BOAT OWNER ON NORFORK AND TROUT FISHERMAN ON THE WHITE
Address:
404 - WEST WEBB ST.
P.O. BOX 1623
MOUNTAIN VIEW,
AR. 72560

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

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Lake Norfork

1.) Longer, Lower, More frequent Low Water Events will Have A very Negative Impact on Fishing, Fish Habitat, Recreation, Lake Oriented Businesses And City of Mt Home Drinking Water Availability. If The Lake Ever Attains The 510' Level All These Activities Will Have Ceased

2.) Reference 2.4. It is Absolutely Asinine & Quite Disproportionate To project the Idea that "Congress Demands Something be done and that "No Action" is not an Alternative. This Point Should be Restated in Honest & Easy to Understand Language not Double Talk.

3. There is No Guarantee That This Concoction will Work & it Appears that Anything Done to Increase Minimum Flow will Have a Negative Impact on Everything That Goes on on the Lake

4. If it Isn't Broken – Don't Fix it. Leave the Lake & River Alone

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Gary W. Rees

Organization:

Address:
658 Pioneer Trail
Mt Home, AR
72653-7827

additional space on the back

July 11, 2006
US Army Corps of Engineers
Little Rock District
ATTN: Mike Biggs
CESWL-PM
PO BOX 867
Little Rock, AR 72203-0867

Since minimum flow is not cost-prohibitive or bad for the ecology, and you KNOW how to implement minimum flow….

COULD WE AND THE TROUT PLEASE HAVE SOME WATER!

MINIMUM FLOW……..YES!!!

Robert M. Johnson

731 Riverside Dr.
White River Ranchettes
Flippin, AR

Contact: 269-469-3244

Deadline 7/18/06

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

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(1) PLEASE LEAVE LAKE NORFORK ALONE!
(2) THE CHANGES BEING DISCUSSED WOULD ADVERSELY AFFECT FISHING IN THE LAKE. OVER TIME.
(3) DOCK OWNERS WOULD HAVE EXTRA EXPENSES THROUGHOUT THE YEAR IN HAVING TO CHANGE DOCK POSITIONS.
(4) TROUT FISHING IS ALREADY GOOD. IT DOESN'T NEED TO BE IMPROVED.
(5) PLEASE DON'T LET MR. GASTON'S GREED SCREW UP OUR LAKES. MANY TOURIST COME FOR THE LAKE FISHING (BASS TOURNAMENTS), NOT FOR TROUT FISHING.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Tom Turley
Organization:

Address:
239 McGANN MTN TRL
JORDAN, AR 72519

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

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I can see no adverse effects to the upper part of the lake, possibly the roads & bridges would not be closed. Something would be built to go around these areas.

The raise of the lake would improve recreation what I consider is more dollars, brought in by recreationers.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
JOHN JUDD

Organization:

Address:
HC 4 Box 6045
THEODOSIA, MO. 65761

additional space on the back →

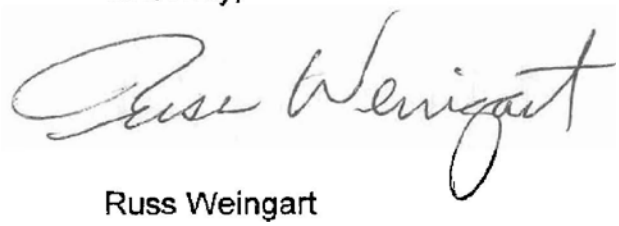
Mr Russ Weingart
908 Par Drive
Mountain Home, AR
Ph#870-424-3408

Dear Sir,

I read with interest that the Corps was looking for comments on the minimum flow from Norfork and Bull Shoals dams. I have boats on Norfork (Tracy) that I both fish and swim from. I also enjoy fishing on the rivers with a river boat. Since I use both the lake and the river I thought I would send along my comments.

I believe that the minimum flow should be instituted as soon as possible. I believe that if an amount of water is allocated to keeping the rivers fish friendly there would be almost no effect on the lake levels. The low water conditions of last year are only a seasonal variance that can only be improved with more water earmarked for the maintenance of minimum flow. Thank you for giving me the opportunity to voice my opinion.

Sincerely,



Russ Weingart

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

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JULY 6, 2006

This will cause a tremendous negative impact financially to the citizens and businesses on and around Bull Shoals and Norfork Lake

I feel strongly that this has not been adequately examined.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
MAYNARD WALLACE
Organization:
State Legislator (Mo.)
Address:
HCR 77, Box 75
THORNFIELD, MO.
65762

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

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Concerned about low laying County Rd.

Concerned about Camp grounds in Theodosia area being flooded & impact on the town of Theodosia

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: [illegible]

Organization: Private Land Owner

Address: P.O. Box 206
Theodosia, Mo 65761

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Economic Impact on Ozark County will be Horrific

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Rotterbock

Organization:

Address: HC 1 BOX 1165
ISABELLA MO. 65672

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

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If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

1 ROADS THAT WILL be UNDER WATER.
2 PARKS & MARINAS & ACCESSES THAT WILL BE AFFECTED.
3 PROLONG THE COMMENT TIME.
4 INVOLVE MISSOURI MORE
5 THE UPPER BASIN WILL BE AFFECTED MORE THAN THE LOWER RIVER ETC.
6 KEEP POLITICS OUT OF IT.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Jerry Austin

Organization:

Address:
HC-3 3475-A
Theodosia MO. 65761

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WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

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There is no provision to shut down minimum flow during periods of very low levels (lake). There must be a provision OF THE LAW that states min flow will cease when the lake reaches a minimum lake level. That level should be at the 654 NGVD.

Minimum flow should not be able to draw the lake level below the 654 NGVD

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Michael N. Tolly

Organization: BS. lake land Owner

Address: NC 3 Box 3338
Theodosia, Mo 65761

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

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ROAD WORK ON MARION COUTY 164 & 163
LOW WATE BRIDS AND OZORK 151 .4

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:

Organization:

Address:

additional space on the back

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

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(1) LOWER WATER FLOW HOW LOW DO YOU GO FEET
(2) LOW WATER BRIDES AS WATER GO UP
(3) WHY, NOT THE REST OF THE WAY HELP US

THANKS TO ROGER
MR WOOD'S

MARION COUNTY

HIGH WATER ON 163 & 164 OZARK ISL LOW WATER BRIDES ON HIGH WATER.
(WHY! UP STREAM) DOES NOT HELP US (WHITE FLOW)

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: RONALD A FRANKOVIC

Organization: LAKE ONEIL

Address: HC3 BOX 3644
THEODOSIA, MO
65761

OVER

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

My Concern is that I am worried about the Marina Owners on Bull Shoals Lake.
~~Black~~ - Cook Marina
He will loose half of his parking lot -
Where will I park when I go get my boat
Who will pay ~~to~~ extend his parking lot.
who will pay to build up the bridges in the area - ex Haskins/Ford - CR 639 - CR 614 - 2861
only to name a few.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Jim & Sandy Mathews

Organization:

Address: Lot 5 Peter Cave Hollow
Theodosia

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

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Do not set a precedent by catering to a special interest group (trout fishing?) Once you enter into that political arena, you will be vulnerable to others. The Corps has an obligation to pursue the interests for which it was created and formed. Tourism and the revenues generated thru, are not the function of the Corps. Do not demenish your power and become another useless bureaucratic body.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Marian Campbell

Organization:
Tax payer / citizen

Address:
2324 Jordan Landing Rd
Jordan AR 72519

additional space on the back →

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

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There are several roads that utilize low-water bridges which are flooding with a 3 or 4 inch rain. If the creeks are backed up from a 5 ft acre rise in the lake they will flood more often. This causes anyone having to cross them to detour 20 to 30 miles to go to work. With gasoline prices going up every day, it will cost a larger percent of their income just to get to work. Also, school buses use these roads and will cost more to get students to school.

It appears that to furnish 5 ft-acres at regular pool, when the lake is low it will need more than 5 ft of surface level

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
JAY E. MARIK

Organization:

Address:
P.O. BOX 44
THEODOSIA MO 65761

additional space on the back ⟶

to meet the needs of minimum flow.

This will create problems for Marina Owners as well as private dock owners.

The best I can remember, there was a promise made by the Corps of Engineers to provide and maintain a given number of access ramps to be used without charge to the public. a 5 foot rise in lake level will cover some of these.

Marina owners will lose much of their parking lots.

also, I understand that alterations will have to be made to the Dam.

No one seems to know how much this all will cost. Or just as important, who will pay for it.

Creating these problems seems like a lot to trade for more water in a trout stream that is already considered a top fishing area.

White River Minimum Flow Study DEIS

From: Jim Wood, Member
Executive Board
AR Wildlife Federation
56 Delaware Bay Road
Dardanelle, AR 72834

August 12, 2006

To: Mike Biggs
White River Minimum Flow Project
Planning, Environment and Regulatory Division
CESWL-PM
PO Box 867
Little Rock, AR 72203-0867

Ref: Solicitation of comments regarding White River Minimum Flow Study Draft EIS.

AR Wildlife Federation is a non-profit, statewide, 70 year old, resource conservation organization and state affiliate of National Wildlife Federation, with a particular interest in White River fish, wildlife, forest and water related issues. It is commonly recognized throughout AR/MO White River basin that this areas regional economy derives great benefit from protecting WR aquatic tail-water resources, the 5 Study reservoirs, and how System authorized purposes are best managed when they maximize net public benefits.

AWF believes protecting WR trout constitutes compensatory mitigation for adverse impacts resulting from flow regimes directly related to power generation scheduling. Mitigation is in the public interest, and the aquatic resource produces a vast range of annual NED and other un-quantifiable benefits and amenities, and is essential to the overall economy throughout WR basin and the region. Gen. Strock's letter Report to Congress seems to constitute arbitrary findings on a Study while the NEPA Process is still on-going, which is notably contrary to COE's six step Planning Process guidance at ER 1105-2-100, and "before decisions are made" NEPA mandate.

1. EXISTING SITUATION:

(a) Corps traditionally manages rivers under a fragmented, less than basin-wide approach, and the oversubscribed WR is an example. It is fragmented between Little Rock/ Memphis Districts and US Dept. of Energy. Like other river systems, it continues to suffer from a history of multi purpose/favor one output over the other management policy, instead of a strategy that maximizes net public benefits from a mix that best considers all authorized purposes, an approach that is actually required by ER 1105-2-100. Gen. Strock's 7-30-04 letter Report seems to noticeably view sharing WR cost/benefits as some sort of COE/SWPA/State contest between Agencies?

(b) Unlike other federal agencies such as US Forest Service, who modernized long range planning 30 years ago with the National Forest Management Act, and which mandated resource outputs be modified from time to time in response to changing public demand, these 5 projects demonstrate how Corps continues under 50 year old outdated project

White River Minimum Flow Study DEIS

allocation formulas. COE struggles largely under a Congressional "earmark" micro-management political interference system without a long-range national water policy. COE often fail to follow their own policy guidelines, which is supporting evidence that instead of a resolute policy they have one they change whenever the notion strikes. Although a fragmented approach, this Study is a good start to identify better ways to manage WR flow regimes and tail-water fisherie components at the five projects.

(c) Gen. Strock's letter Report limits protecting tail-water trout fishery to local sponsor cost sharing arrangements, likely to be AR Game & Fish Commission and MO Dept. of Conservation. Both states enjoy a Conservation Sales Tax to help fund their Wildlife Agencies. This results in passing cost along to both sportsmen who purchase license and general resident population of both states. Gen. Strock's proposal could cost both States millions of $ annually to mitigate adverse impacts resulting from changing power sales/seasonal flow management decisions exclusively left to federal agencies, over which States saddled with cost have no control.

(d) What measure minimum flows depend upon flood or conservation pools, is irrelevant though, for producing a flow "bench" to protect tail-water aquatic resources, whether bottomland hardwoods below Clearwater Dam/Petit Jean WMA below Blue Mtn. Dam, shallow water habitat along AR River Navigation System, or WR trout, is simply "compensating for the impact", an action NEPA calls "mitigation." At Truman Dam in MO, Corps modified turbine operation to eliminate pump-back all together and forego power generation benefits from this feature to protect tailrace fish. We were informed that Power Benefits Foregone at Truman is considered mitigation at total federal cost?

(e) Following Corps notice of DEIS availability and comment solicitation, we timely requested by letter a printed hard copy of the DEIS. COE never responded nor provided us with the document. For people with computers, your pdf double page small print screen display is impossible to read. Also, absent DEIS printed copies, it is unreasonable to expect members without computers to meet 40 CFR 1503.3 (Specificity of comments).

(f) COE limits public viewing of the DEIS to 5 Project Offices along WR and Little Rock District Office, and public meetings/workshops to Mt. Home and Bentonville, a long way from many affected folks in two states who may have to pay for reallocation . There is a broader MO/AR regional interest in WR that COE public involvement plan fails to include.1502.19 (Circulation of the environmental impact statement) provides,

> "Agencies shall circulate the entire draft---however the agency may circulate the summary instead, except that the entire statement shall be furnished to: (c) Any person, organization, or agency requesting the entire environmental impact statement."

Power sales, exchanges, peak vs firm rates, dump power at market bid price, etc., is a complex array of options that determine hydropower generation and sale schedules managed by SWPA's interconnected system. Minus printed DEIS copies, essential for us to review total system power data, and review accounting methods

White River Minimum Flow Study DEIS

and Appendix formulas, we can not reasonably review "power benefits foregone" and thus get an understanding as to why COE/SWPA calculated values differ? Moreover, COE accounting contradicts reservoir storage/power benefits foregone cost values for providing "bench" flows in AR River Study vs WR Study, while both are part of the same SWPA integrated grid and power marketing system? COE Policy seems to be little more than arbitrary notions that change from time to time?

Absent a hard copy we're forced to limit comments to information in the summary, Gen. Strock's Report and some file information. While some of the following concerns may overlap with our numbered additional issues, we will try to be specific as possible.

2. NARRATIVE/ACCOUNTING ISSUES AND CONCERNS:

(a) We conclude that tail-water aquatic resource impacts result exclusively from flow regime options Corps/SWPA employs in Operating the environmentally connected WR system's flow regime, and not from the concrete structure sitting in the stream. This position is supported by fact that all COE proposed solutions are based upon modified flow regimes. Gen. Strock's report, par 8, states, "Corps position is that the five authorized reservoir projects were fully mitigated when constructed and reallocation for purpose of sustaining tail water trout fisheries represent project modification for the purpose of recreation." COE past decisions have found habitat impacts from O&M flow regimes qualify for "mitigation."

(b) The General inappropriately associates mitigation with structures instead of their flow regime/scheduling operation, a contradictory situation for solutions involve modifying flows. Is COE now required to secure water certification from ADEQ? And does the State now have a role in how water is discharged from the 5 hydropower facilities based upon a recent US Supreme Court decision?

US Supreme Court held (S.D Warren Co. V. Main Board of Environmental Protection, 5-15-06) that turbine operation at Dams "result in a discharge" and fall under Clean Water Act Sec. 401.

(c) Regardless that COE/SWPA disagree in power benefits foregone accounting, a hard look must be taken on Corps past interpretation as to whether impacts to aquatic habitats resulting from flow regime modification is assessed either mitigation, recreation, or environmental restoration? Moreover, COE seems to rely on less than a transparent formula in valuing flood storage at other SWPA projects?

3. METHODOLOGY/FLOW BENCH ANALYSIS AR RIVER VS WHITE RIVER:

(a) COE uses flood storage at twenty-nine AR River Basin reservoirs to produce a controlled flow "bench" based upon their Van Buren gauge controlling point. Eleven of these larger reservoirs provide 7,680,200 acre-feet of storage upon which COE largely depends to produce their flow "bench". Some include hydropower. COE considered cost of storage on these 11 projects, solely to enhance navigation at expense of other authorized purposes including hydropower marketed by SWPA, to

White River Minimum Flow Study DEIS

be "0"? Regardless who pays, Ex Summary, Calculating Storage Cost, pg 23, states, "The cost of storage and proportional share of O&M costs make up the total storage cost." COE analysis produces a convoluted storage cost between the two systems? How can trading off hydropower marketed by the same Agency (SWPA), transmitted over the same grid, have enormous cost on WR and "0" on AR?

(b) Last year COE found compensating for flow regime impacts to aquatic resources for AR River Navigation System qualifies as "mitigation." Agency's interpretation of flow regime mitigation/cost for completed AR River Study (ROD 9-27-05) vs WR presents a notable contradiction using the same Model, while claiming both complied with COE Policy? COE Policy seems to be a moving target. Creating "bench" flows on AR River calls for "mitigation" at federal cost, while on WR, creating a similar flow "bench" solution becomes either "restoration or recreation"?

(c) Moreover, on similar AR River flow regime modification, hydropower benefits foregone from flood/conservation pool storage that trade-off power generation to enhance navigation, is not charged to barge companies or some other local sponsor, but again is totally absorbed by federal government. COE reverses themselves on WR though by charging the State where flood/conservation pools/flow regimes are modified to protect or enhance tail-water fisheries. This AR/WR double standard, while using the same multi-system flow regime MODEL, fails to meet Data Quality Act's transparency mandate? Policy interpretation of what constitutes "mitigation", questions whether COE analysis is objective, accurate and unbiased? Policy is interpreted as a "guiding principle or procedure" and don't change to fit a Study.

We propose that COE institute external Independent Peer Review to evaluate cost accounting accuracy to produce "bench" flow regimes to protect aquatic resources, and whether Corps interpretations for requiring local cost sharing WR Minimum Flow to recoup hydropower benefits foregone is uniformly applied among other SWPA/COE projects? We are informed that, power benefits foregone, to protect fish at Truman Dam through modifying/eliminating turbine pump-back operation is absorbed as federal cost? Is this true? IPR would be in addition to Nature Conservancy Technical Review.

4. ADDITIONAL ISSUES:

(a) Data Quality Act (PL 106-554): DQA mandates maximizing the quality, objectivity, utility and integrity of information. Information must be presented in an accurate, clear, complete and unbiased manner. And scientific, financial or statistical standards require the information to be sufficiently transparent in terms of data and methods of analysis, that it would be feasible for a replication to be conducted by a third party.

(b) COE and SWPA are both required to comply with DQA, yet Executive Summary, Table 1 show calculated annual benefits foregone vary enormously between some of COE vs SWPA methods of analyzing Alternatives. Quality of Data being relied upon by Gen. Strock's Report is obviously based upon statistical standards used by one or both

White River Minimum Flow Study DEIS

Agencies that is inaccurate, biased, or can not be replicated by the two parties, much less a third party. Either Dept. of Energy or COE is inaccurate.

(c) Gen. Strock found in his Report that "the alternatives are technically sound". COE vs SWPA accounting deviations seem sufficient evidence that there is major disagreement between the two Agencies as to whether "financial or statistical standards" used in the study are in fact technically sound? Both agencies analyze the same statistical data, but arrive at different findings? Both Agencies question which accounting formula is technically sound? And where COE runs the same Model on AR River System and finds impacts resulting from flow regimes qualify as "mitigation", how could a qualified third party arrive at less than the same finding on WR?

(d) SUPER model simulates regulation of a system of multipurpose reservoirs based on a specified plan of regulation: It is useful to review how COE Model is used to quantify aquatic impacts? It is useful to COE's policy compliance claim to compare how SUPER was also used on the 5 year AR River Navigation System Study to formulate and analyze managed flow regimes using upstream reservoir flood and conservation pools to create "bench" flows. On WR study SUPER is also used to evaluate flow regime impacts to the aquatic resource. Creating a flow "bench" depends entirely upon reservoir storage.

(e) Authorized purposes Congress assigned these 5 WR projects are also part of the multipurpose mix for which AR River Navigation System and tributary project reservoir flood/conservation pools are managed to produce flow/elevation "bench" targets. Tail-water trout needs are likewise quantified for WR projects with a flow "bench" varying from 136 cfs/Beaver to 800 cfs/Bull Shoals (Study background d. SUPER model, pg 15).

(f) On WR your target is cfs flow/wetted perimeter tail-waters, which is the same created situation called a "bench" on AR River Navigation System. Whether named a flow "bench" or "wetted perimeter", both are the same, and does not change fact that reservoir storage must be allocated up or down in some measure to produce either.

(g) WR Storage cost accounting obviously fails DQA "accurate, clear, accepted scientific, financial and statistical standard". And lacks "transparency in terms of data and methods of analysis". COE contradicts cost methods to produce bench flows on AR vs WR. Using AR River System reservoir storage is "0", then why is it more on WR?

5. CONPENSATORY MITIGATION VS RESTORATION OR RECREATION:

(a) Compensatory Mitigation is conducted at total federal cost, while Restoration or Recreation must be cost shared with a local sponsor. Adverse aquatic resource impacts result from a WR flow regime tailored to maximize hydropower sales during highest price/peak demand times, a flow strategy solely developed and managed by the federal government under a unnatural regime that daily goes from bank full flow to complete zero flow shutdown. Thus, minimum flow problems result from ever changing incremental power generation schedules built around peak demand. Mitigation compensates, not for hydro plants themselves, but for the manner in which COE/SWPA

White River Minimum Flow Study DEIS

choose power operations at each facility to either trade off or enhance tail-water fisheries. Consequence of the flow regime is totally created and controlled by federal agencies.

(b) NEPA (1508.20(e) declares "mitigation" is "compensating for the impact by replacing or providing substitute resources or environments." AWF agrees that protecting WR tail-water aquatic resources require minimum flows. Water is monitored and flow adapted to control water temperature. Whether a created flow "bench" on AR River, wetted area flow "bench" on WR, or eliminating pump-back at Truman Dam, if one qualifies for mitigation at federal cost then so does the other. COE also interprets "monitoring and adaptive management" on AR River System qualifies as mitigation. So protecting trout likewise constitutes monitoring water temperature/flow, and when a pre determined threshold is reached, flow is then adapted to compensate for this impact.

(c) The disagreement is whether WR flow regime modification, like AR River projects where both depend upon how water is allocated between conservation/flood pools, gets called Mitigation, Restoration or Recreation? It seems COE settles this question of who pays on WR through their AR River Study, where they interpret a similar "monitoring and adaptive management" method as constituting "mitigation" of adverse impacts upon aquatic habitat. And using flood pools to produce a "bench" cost "0".

(d) Thus, we question whether the Corps can be meeting DQA's "objectivity/ transparency" test by declaring "monitoring and adaptive management" to be mitigation on AR River System, while changing interpretation of the same process when applied to WR as being recreation/restoration or anything other than mitigation? WR Study lacks COE Policy consistency in their convoluted interpretation of mitigation and fails DQA, "to be sufficiently transparent in terms of data and methods of analysis that it would be feasible for a replication to be conducted. " Moreover, it fails DQA "accurate, reliable and unbiased" test. If impacts from establishing a flow "bench" constitutes "mitigation" under NEPA for AR River, then the same process is likewise "mitigation" when applied to a WR flow "bench". COE needs to clarify their accounting Policy and why they differ?

IN SUMMARY:

The oversubscribed WR, managed by both Little Rock/Memphis Districts and with power marketed by Dept. of Energy, has a history of numerous fragmented studies that regularly pit competing upstream/downstream interests against each other. Grand Prairie Irrigation Project will draw 243,900 acre feet and dredging a 9'navigation channel 250 miles to Newport, where depth depends upon flow, is currently undergoing NEPA study. COE declares they have existing authority to draw down below minimum conservation pool levels to support navigation, which raises the question as to whether WR lakes may be Reallocated later to support a 250 mile 9'navigation channel?

The Corps convolutes their past interpretation of what constitutes mitigation when compared to similar situations on AR River System. COE relies upon a "bench" cfs flow management regime to protect WR tail-water aquatic resources through a common process called "monitoring and adaptive management", and which COE declares to be "mitigation" on AR River System, but not on WR. Why? Managing reservoir storage

White River Minimum Flow Study DEIS

capacity to trade off hydropower in providing a "bench" on AR River Navigation System, to support barge traffic, is not charged to ports, barge companies, nor other navigation users, but totally absorbed as federal cost. If maintaining a flow regime "bench" to favor navigation users cost "0" on AR River System, then COE's accounting methods fail DQA's "transparency" mandate to clarify why it is not likewise "0" for allocating a measure of flood pools to establish a tail-water flow "bench" at these 5 WR projects?

DQA requires a high degree of transparency of data be ensured. And further describes transparency as, "The practice of describing the data and methods of developing an information product in a way that it would be possible for an independent individual or organization to reproduce the results."

Gen. Strock seems to present a "take it or leave it" attitude towards States of MO/AR, a position that also seems to say, "if you don't like it, sue us." Being realistic causes us to suspect military commanders have little interest in resolving interpretation of "mitigation", as it applies to WR, and prefer leaving the matter up to federal courts.

AWF continues our position that establishing a flow "bench", or any other compensatory approach whether through revising generation schedules, reservoir reallocation. or other alternatives. the action is brought about totally in response to federal flow regime operating decisions. Thus, mitigating flow regime impacts from these operations should be considered Mitigation and absorbed totally at federal cost between SWPA and Corps of Engineers. AWF appreciates this opportunity to comment on WR Minimum Flow Study. Should you have questions, please call me at 479-229-4449.

Respectfully Submitted,

Jim Wood, Member
Executive Board
AR Wildlife Federation
cc Sen. Blanche Lincoln
Sen. Mark Pryor
Sen. Christopher Bond
Sen. James Talent
Rep. Roy Blunt
Rep. John Boozman
Rep. Marion Berry
Rep. Vic Snyder
Rep. Mike Ross
AR Game & Fish Commission
MO Dept. of Conservation
US Fish & Wildlife Service

RESOLUTION---ARKANSAS WILDLIFE FEDERATION

WHITE RIVER MINIMUM FLOW MITIGATION

WHEREAS, Arkansas Wildlife Federation (AWF) functions under the principle that fish, wildlife, and the habitat upon which they depend are valuable assets to the State of Arkansas and should be protected for benefit of present as well as future generations, and

WHEREAS, tail-water trout resources provides great economic and other community benefits throughout a broad two state region, and

WHEREAS, at US Army Corps of Engineer Dams, (COE) studies show cubic feet per second flows needed to protect tail-water trout and aquatic resources are established for Beaver-136; Table Rock-400; Bull Shoals-800; Norfork-300; Greers Ferry-200, and

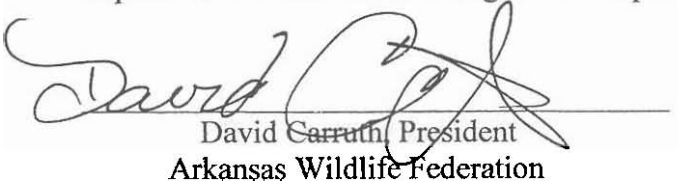
WHEREAS, hydropower scheduling decisions at these five projects are left exclusively to COE and Southwest Power Administration, both federal agencies, and

WHEREAS, adverse impacts flow regime schedules present to tail-water fisheries result solely from federal operating decisions and in no measure by State governments, and

WHEREAS, Arkansas Game & Fish Commission support that providing minimum flows to protect aquatic resources is mitigation and should be funded at full federal expense.

THEREFORE, BE IT RESOLVED that Arkansas Wildlife Federation Executive Board at their August 12, 2006 meeting fully supports maintaining tail-water minimum flows at projects identified in July 29, 2004 White River Minimum Flow Study, and

BE IT FURTHER RESOLVED that AWF concludes modifying flows to avoid adverse impacts to trout constitutes mitigation and qualifies for funding at full federal expense.



David Carruth, President
Arkansas Wildlife Federation

Aug.12,2006

U.S. Army Corps of Engineers
Little Rock District

Mr. M. Biggs,

White River Minimum Flow Questions

1. What % of the trout kills were due to :
   A. Low PPM of oxygen?
   B. High water temperature?
   C. Poor handling of released trout by the public?
2. What temp can trout survive in?
3. We have been led to believe Rainbow trout will spawn with a higher rate of water flow, as now the water depth fluctuates from no generation to high levels of generation. How will min. flow help as there will always be periods of high generation?
4. Will the increase of flows at min. flow level affect the Brown trout spawning?
5. When the generation has been halted in the past due to the low levels of oxygen, how is min. flow going put more O2 in the river or is it going to make a bad situation worse ?

Respectfully,

Warren Matz

Warren Matz
3350 Rocky Ridge Rd.
Mountain Home, AR 72653

8-12-2006

Attention Mr Mike Biggs

Dear Mike,

Concerning the extra 5 feet of water that will affect the tract Map # 84-100-202 T-23 ; 24R

also the tract Map # 82-100-187/188 T 24 ; R 20
also The tract Map # 84-100-185

This area starts below Power Site - Dam and continues down to Barker Rd, approxema 250 achers of Crop land. This is the area of land that will be affected by the Proposed 5 extra feet of water - this land is fr lensted from Conservation Department by the following people:

Jim B. Russell - Father
Rick Turner - Son
Rocky Turner - Grandson

Thank you for your cooperation and intrest in this Matter.

Sincerely,

Jim B. Russell

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I REALIZE THAT THIS IS A WASTE OF TIME. AFTER YOU ALL HAVE A BIG LAUGH, THIS WILL END UP IN THE TRASH. IT'S VERY SIMPLE, THE RICH WIN & THE POOR LOSE. ANYONE WITH AN I.Q. OVER 70 KNOWS THIS, BUT FOR WHAT IT'S WORTH HERE IS MY STORY.

I STARTED FISHING BULL SHOALS LAKE IN 1967. I'VE HAD GOOD YEARS & NOT SO GOOD YEARS, IT ALL DEPENDED ON THE WEATHER; AND I'M NOT TALKING ABOUT A THREE DAY FORE-CAST, I'M TALKING ABOUT WEATHER PATTERNS. BUT I TOOK IT ALL IN STRIDE, AFTER ALL, THERE WAS ALWAYS NEXT YEAR. HOWEVER, AROUND

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: David E. Chumm

Organization: ME - MYSELF & I.

Address: HCR 2, BOX 86
GAINESVILLE, MO.
65655

additional space on the back ⟶

(2)

1996 THINGS STARTED GETTING BAD. FISH SIZE WAS DOWN, NUMBERS WERE DOWN. MATTER OF FACT BULL SHOALS GOT BILLED AS ONE OF THE BEST WAT SKI LAKES AROUND. FISHING WAS OUT & WATER SKI WAS IN. SOME ARE SAYING THAT BULL SHOALS IS BACK. MOSTLY FISHING TOURNAMENT PROMOTERS TRYING TO MAKE A BUCK. BUT BULL SHOALS IS NOT BACK.

WHAT HAS THE CORPS OF ENGINEERS DONE TO HELP OUT. YOU PEOPLE HAVE DONE NOTHING. BUT SIN NO BIG MONEY IS WAS THROWN AT YOU, WHO CARES. WHEN WE DID ASK YOU FOR HELP WE WERE TOLD THAT THE LAKE WAS BUILT FOR FLOOD CONTROL & TO GENERATE ELECTRICI

LETS CUT TO THE CHASE, THE WHOLE THING DEPENDS ON THE WEA I KNOW OF ONLY ONE MAN THAT CO COULD PREDICT THE WEATHER, AND TH MAN IS DEAD. HIS NAME WAS JESUS. ALL OF YOU NEED TO GET DOWN ON YOUR KNEES & ASK GOD FOR FORGIVENESS.

C/OU ALL HAVE LIES TO US, C/OU ~~HAVE~~ HAVE DISTORTIES THE TRUTH. C/O HAVE NOT TOLD THE WHOLE STORY. C/O ARE GAMBLING!, ANY TWO BEAUTIFU LAKES ARE AT STAKE.

IN CONCLUSION, THIS WHOLE THING DEPENDS ON THE WEATHER & NO ONE CAN PREDICT IT WELL ENOUG TO GAMBLE WITH TWO LAKES AT STA IF THE RICH PEOPLE WANT TROUT FISHING, CONSTRUCT A DAM DOWN BELOW THE RIVER.

SINCERELY,

David R Chum

Attn: Mike Biggs

It came to our attention several weeks ago that there is legislation that has been passed to raise Bull Shoal Dam and Lake five feet. The Corps of Engineers said that the issue was raised two years ago and that public input was sought. Excuse me, I don't read the Federal Register every day and I'm here to tell you that two weeks ago was the first I had seen such published in local papers.

Supposedly, this is an effort to improve the State of Arkansas's trout fishing industry. Does the name Gaston Resort jump out? Big political contributor and operator of Gaston's Resort just below the dam. What about Missouri's fishing and tourist industry? Not to mention all the local residents that live here because of the lake and it accessibility.

President Truman in his dedication of the dam in 1952 said. . ."the lakes belong to the people and we are here to dedicate them to the service of the people." Now due to some legislative slight of hand, Bull Shoals Lake is dedicated to the service of Arkansas tourist industry aka Gaston"s Resort.

The Corps of Engineers said feasibility studies were done taking into account all detrimental effects this change would bring. Empire District Electric, who generates local electric supply via Powersite Dam, is saying that the significant rise in Bullshoals Lake level will drastically effect their production of hydroelectricity and will impact the capacity to generate enough power to satisfy user demand without seeking other sources. The chief engineer at Taneycomo's Powersite Dam believes that VV Highway may be closed much of the time, effectively cutting access to the Empire Park and Dam site. ***Since the Corps does not control Powersite Dam, the impact of these changes were not included in their study.***

In a time of escalating energy costs, that means all of the Missouri residents who rely on Empire for their electricity will undoubtedly see increased electric costs. How many Arkansas residents will feel a detrimental effect if this change does not take place? After all, it has been this way for 50 some years?

You notice there has been no joint efforts to raise Taneycomo Powersite Dam or Tablerock Dam to accommodate this effort, only Bull Shoals. The powers that be (and huge political contributors) wouldn't dare mess with the other two Missouri lakes in order to help Gaston's Resort (I mean Arkansas!) improve their trout fishing. It would drastically, negatively affect Missouri tourism.

Even Shadow Rock Park in Forsyth, home of the county fair and numerous other local events will be in jeopardy. Farmers who lease flood easement lands may lose the cash crops from those leases.

And, has anyone checked with the Arkansas residents and businesses that will be detrimentally effected by this change. There is a beautiful park at Lead Hill that will undoubtedly see adverse effects as well as the marina at Tucker Hollow.

On another scale, all of us who use the lake for fishing and recreation, wonder what is going to happen to all of the existing boat launch ramps, roads and public access parks now in existence. Will all the boat ramps disappear? Will the lake be accessible with the roads flooded? And what of the wild fluctuations the Corps says to expect? (At least they've admitted that much!) Local dock owners will find it difficult to keep their docks useable and keep their

boats useable. Fluctuating water levels will also ruin any fishing on Bull Shoals Lake, let alone predictable recreational use. A junk lake will make our property values decline along with local tax bases. The same will hold true for the Arkansas residents upstream of the dam.

Even Taney Commissioner Ron Herschend brought up to Mike Biggs, Corps of Engineers Project Manager, Little Rock District, about the detrimental effect this will have on Shadow Rock Park in Forsyth. ***According to the Minimum Flow Study the Corps did, impact on the park—and lots of other aspects—were not calculated because it is not controlled by the Corps.***

I question the extent to which the Corps made a "good faith" effort at publicizing and fully explaining the effects of the proposed rule making at the time and even of the true impact this change will bring about. According to a 2004 Army Corp of Engineer study to determine the impact on the lake and surrounding lands, the impact will be minimal. BULL!!!! For 50 years, since Bull Shoals Lake was built, access roads ,concrete boat launch ramps, private & public docks & their moorings, recreational parks were built to an expected plus or minus lake level. All of that will be adversely affected! No one is considering the effect on the quality of fishing. Mike Biggs, Corp manager, admitted at an Aug 3 meeting in Taney county that the lake level will have to fluctuate outside of the proposed 659 level so water can be captured during the rainy season so there will be enough for a minimum release during the dry season. So the lake level will have to fluctuate wildly, adversely effecting the fish spawns in the spring. The quality of fishing in Bull Shoals Lake will deteriorate affecting thousands of local residents and tourists who fish this lake. As a Corp of Engineer employee said off record, this is being done so Gaston's Resort can make more money!

How can an impact study be taken seriously when there were so many elements left out? How could legislators with such poor information make a wise vote when the subject was raised? Who would have raised a concern anyway when supposedly it was tacked onto an appropriations bill.

I hope your office will look into this matter and make sure things are done correctly. Perhaps you can first-hand speak to the residents of Missouri who will be affected when you attend local listening sessions.

Sincerely,
Sydney Buff & Terry Howe
5359 Moores Bend Rd
Cedarcreek, MO 65627

560 Sleepy Hollow Rd
Mountain Home, AR 72653

U.S. Army Corps Of Engineers,
Little Rock District,
P.O. Box 867,
Little Rock, AR 72203-0867

Attention: Mike Biggs

Dear Sir:

This letter is in response to a request by the U.S. Army Corps of Engineers for comments on the proposed White River Minimum Flow Reallocation plan.

First let me set the stage for what I think is the real intent here.

Some time ago there was a huge effort to impose a city tax (reportedly) to pay for advertising, etc., to bring more tourism (and money) into the Mountain Home area. This effort was soundly defeated. In my opinion it was nothing more than a scheme to get everyone to pay for lining the pockets of a few.

Now we have another group that wants us (the tax payer) to pay for lining the pockets of another few – businesses along the White River.

Lets talk about the negative aspect of this proposal – as I see them:

In dry years this proposal, if put into effect, lower the lake levels far lower than what we have recently seen.

As I see it, if this were to occur, there would be two choices: cut back on minimum flow or shut down the power generation. In the greater scheme of things cutting back on the flow would defeat the (supposed) intent of the proposal and the other will mean buying more expensive power elsewhere. Now we, the tax paying public, not only pay for installing this change but we will have also have higher power bills.

How will the increased flow affect the true "sport fisherman"? The one that wades out into the river and pits his ability against a wary trout. A substantial increase in the river flow would all but eliminate this type of fishing.

I am against the Minimum Flow proposal because it really promotes only one group – those that want to run up and down the river in motor- boats, be they private boats or those that are in it only for the money it brings them.

Yes, there are those that go on and on about the health of the river and fish under low flow condition and there is no doubt it does have some affect. But I have not read of any proponent of this proposal address the affect that all the outboard motors (pollution) and boats, have on the trout NOW. It would only get worse as the number of boats on the river increases. It does not take a scientist to realize the effect of all the boat motors churning the river bottom and performing the well-known practice of anchor dragging has on the trout habitat.
It is my feeling that boat use on this river has more negative effect on the trout's well being than low water flow.

The quality of fishing on the lakes and the river is a by-product of the dam and not its intended purpose. Like huge housing developments have ruined many nice areas, if business (money) is what is motivating this proposed change then both the lakes and the river will suffer the same fate.

In conclusion: if we are REALLY concerned about the fish and their environment I would propose a somewhat lowered Minimum Flow (from what is now proposed), or leave it as it is, but BAN boats on the White River (they should never have been allowed in the first place). Then we can make the White River a true environment friendly sport fishing river and there will be no negative affect on the lakes.

After all – we profess to be proud that we are the Natural State. Let us make our decisions where they need to be to prove this.

Sincerely, Robert Fern

Revised: 8-14-2006

Cc: U.S. Senator, Mark Pryor
U.S. Senator, Blanche Lincoln
Congressman Marion Berry
Congressman John Boozman
Senator Shawn Womack
Representative Johnny Key

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

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See the attached sheets for the cost estimate of the impact on county roads in Ozark County.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: David Morrison - Presiding Commissioner

Organization: Ozark County

Address: P.O. Box 247
Gainesville, MO 65655

GRE
GREAT RIVER ENGINEERING

1598 Imperial Center, Suite 2010
West Plains, Missouri 65775
Phone: 417-256-8180
Fax: 417-256-8187

FAX

To:	Dave Morrison	**From:**	Rusty Doss
Fax:		**Pages:**	2
Phone:		**Date:**	8/16/06
Re:		**CC:**	

NOTES:

Dave-

I want to give you the information that I have to date. We are having some difficulty getting our surveys tied in with GPS. We are supposed to be getting the GPS data on the two remaining crossings today. The following is what I have:

County Road 863 – The low point at this crossing is at elevation 660.0. This is slightly above the new anticipated power pool elevation of 659.0. Given expected fluctuations in lake stage plus the backwater effect upon the crossing at power pool stage, the crossing needs to be raised to prevent more frequent overtopping.

The proposed improvement would include raising the roadway approximately 3.5' and installing a 30' long precast concrete slab bridge. The new bridge opening would be 30' long and about 7' high. The project would involve reconstruction of about 250' of the concrete slab approaching the new bridge. Total project cost (by contractor) is estimated at $200,000. This figure includes 10% construction contingency and 10% for engineering and surveying.

County Road 639 – The low point on this road is at elevation 669.0. As I understand it, this elevation is 10' above the new power pool elevation of 659.0. I don't anticipate the new power pool elevation to impact this crossing.

It is worth noting that this crossing drains almost 3,200 acres and is certainly in need of an upgrade. Based on the size of the watershed and our survey, an upgrade would include raising the crossing about 6' and installing eight, 48" diameter metal pipes. The total project cost (by contractor) is estimated at $60,000. If county forces are available to provide labor and equipment, I estimate material costs at about $35,000.

I will follow up with more information when I receive it. I will also send you a more detailed formal letter when our work is complete.

3215 Zion Road
Jefferson City, MO 65109

August 17, 2006

Mr. Mike Biggs, Project Manager
U.S. Army Corps of Engineers
Planning, Environmental and Regulatory Division
P.O. Box 867
Little Rock, Arkansas 72203-0867

Dear Mr. Biggs:

RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT, WHITE RIVER MINIMUM FLOW STUDY

Bass Pro Shops appreciates this opportunity to comment on the May 2006 Draft Environmental Impact Statement (DEIS), White River Minimum Flow Study.

Our company has been an active participant in the White River Fisheries Partnership since its formation in 2001. The mission of this interagency partnership is to enhance fisheries and aquatic resources in the White River Basin for the use and enjoyment of present and future generations. Consistent with this mission, implementation of the proposed minimum flow plan at Table Rock Lake would have a significant positive impact on fishery habitat in downstream Lake Taneycomo.

We strongly support the TR-5, National Economic Development alternative presented in the Draft Environmental Impact Statement, White River Minimum Flow Study. We commend the Corps of Engineers for developing this positive benefit/cost alternative which results in the least cost and impact to hydropower, flood control and in-lake recreation.

If you have questions regarding our position, please do not hesitate to contact me at the above address or via telephone at 573/635-6750.

Sincerely,

Norm Stucky
Fisheries Conservation Consultant
Bass Pro Shops

cc: Mr. John L. Morris, Bass Pro Shops
Mr. Martin MacDonald, Bass Pro Shops
Mr. John Hoskins, Missouri Department of Conservation
Mr. Chris Vitello, Missouri Department of Conservation

have fished the White River all my life. In my opion the minimum Flow Project is a big wast of money

Hank Tilley

7/18/05

U.S. Army Corp of Engineers
Little Rock District
ATTENTION : Mike Biggs CESWL- PM
PO Box 867
Little Rock, AR 72203-0867

Dear Mike:

Since we are property owners on the White River and will be building a permanent residence within the next 12 months on Riverside Drive – Flippin, AR to spend our retirement at, we figure we should voice our opinion and are definitely in favor of Minimum Flow on the White River.

It is as clear as the noses on our faces that the benefits by far outway any (If there are really any) down sides to Minimum Flow.

We are looking forward to some fairly quick positive moves toward removing any obstacles standing in the way of proceeding with the completion of the Minimum Flow proposal.

Cordially,

Ronald T. Mikrut

and

Kathryn D. Mikrut

Ronald T. Mikrut • 715 N. Stone Ave • La Grange Park, IL 60526

[H] 708-579-1399 • rtmikrut@ameritech.net • [C] 708-466-4980

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY 8-16-06
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Mr Biggs,

The Min. flow issue is about Trout Fishing & Big outfitters lobbying for more water so they can have continuous boat Traffic. I come up to the North Fork Lk and appx 2 times a month from the end of April till Late Sept. My self & others spend a great deal of money in recreational scuba diving in the Lakes. Very High & very low Lake levels adversly affect visability. Good visability means good diving. If the lake starts to radically change levels this will create headaches amongst marina owners, divers, & Fishermen on the Lakes. In one weekend the Bass Cat Tourny on North Fork brought in a million dollars →

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Brock Owens

Organization:

Address: 1727 Alta Vista
Memphis TN.

additional space on the back →

In Reverse. No one would ever be able to dispute the Min. Flow issue if it were based on the Truth, which is "The river level need to be kept up for Boat Traffic". NOT the issue being "presented" it's better for "Trout habitat." It is the Environmental shell game, end run. Trout fishing in Ark. is world renown. This is a case of Lobbyist & Govt. discovering something that works & wanting to fix it till it's broke.

I am against Min Flow.

Thank you.

Barb Dan

Daniel Weber
3291 Jordan Landing Rd.
Jordan, AR 72519

US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
Mr. Mike Biggs
P.O. Box 867
Little Rock, AR 72203

August 17, 2006

To Army Corps of Engineers,

I am writing you to oppose the White River Minimum Flow Study. I have been coming to the Lake Norfork area for about 33 years and I have owned Jordan Marina for over 6 years. As a business owner and Mechanical Engineer, I understand the complexities of the Minimum Flow study. After reading the Environmental Impact Study, I can say that my opposition has only increased.

I am concerned about the effects of higher water in the spring, lower water in the fall, what happens in flood years, and with the benefit to cost calculations in the study.

I believe the lake interests have not been adequately researched. Since a study was only done on Bull Shoals Lake, the unique features of Norfork were not taken into account. Natural white sand beaches exist only on Norfork Lake. As I am writing this letter, the State of Arkansas is doing a photo shoot over at the beaches to be used in the 2007 State advertising campaign. Higher highs under Minimum Flow will result in the white sand beaches being under water for longer periods of time. Many of my customers come here specifically for the beaches and if the beaches are under water, they go somewhere else. It has taken about 30 years to establish the beaches and most people do not want to wait another 30 years. Nowhere in the EIS does it take into account the loss of the white sand beaches.

The study does not adequately take into account the additional expenses incurred because of lower water levels. This last winter our lake was around 538 as a low. My Marina is lucky in that it can handle a lot of low water; however, had the lake dropped 2 more feet, I would have been in trouble. Expenses to handle that additional drop would have cost us about $30,000. Besides my Marina, there are 9 others on the lake and 1000 private docks with over 5000 boats on the lake in stalls. Most every dock will have problems with lower levels.

Page 150 of the study states, "The in lake recreation activities at each lake will continue to be available. The impacts are to facilities such as camp sites and day use areas." The study calculates the negative impact on the lake at $25,000/year due to a loss of camp sites and day uses areas. This number does not take into account docks, beaches, Marinas, Fire Departments or other lake interests.

Our local fire department is unable to get water from the lake when water is too low. At 543, the level is too low and the trucks must go to the Quarry Marina to pump which is 7 miles farther from Jordan Marina. When level goes lower, water can not be

/

/aken from the Quarry. Every minute is important in fire fighting. Since Minimum Flow /will produce more lows, this problem will occur more often. This negative impact is not considered in the study.

Studies by the Corps state that Norfork Lake would reach the top of the flood control pool about every 45 years and Bull Shoals Lake would reach the top every 25 years. In 1973 Norfork was less than 1 foot from overflowing the spillway and in 2002 levels were about 1.5 feet from overflowing. If levels are raised 5 feet in Bull Shoals and 1.75 in Norfork these high levels will be reached more often. The study only uses the 100 years flood as its flood evaluation. This is not the real worry. Reaching the top of the flood pool is. The reality is that flooding is our country's #1 natural disaster. If down stream flooding will happen more often, how many millions or billions in damage might be at risk? Will flood premiums go up? The study used a value of $14,000/year as the negative impact. This seems extremely low.

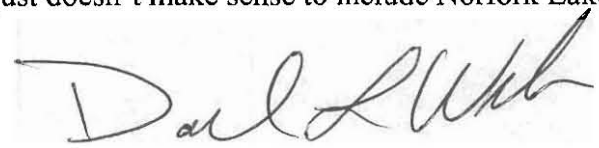
The study assumes that every mile of river will produce a benefit of $45,438. This is not accurate since the farther down river the water goes, the less of an impact it has on the river. Temperature advantage is lost upon reaching Calico Rock (mile 359); however, the study claims full benefits down to mile 329 (another 30 miles downstream). That is an extra $1,363,140 in questionable benefits.

Also, Norfork benefits include ½ of the miles downstream of the North Fork and White connection (mile 379). Since Bull Shoals puts out three times the water increase as Norfork (590 cfs versus 185 cfs) Norfork should, at most, get 25% of the full benefit downstream. This would put the Norfork benefit at $749,727, adjusting the benefit / cost ratio to 1.96. If only North Fork miles are used then the b/c is a negative 0.37. The bottom line is that Lake Norfork does not provide enough economic benefit to be included in the minimum flow plan.

The study constantly reports a benefit of $7,043,400 which assumes all five lakes are involved. Since only two were chosen, the report should state the benefit as $4,316,677. Why are five lakes included in calculating the benefits numbers when only two are selected?

I believe the lake interests need to be reexamined before any changes to the system are made. Considering the unique features of Norfork Lake, the added costs of lower water levels in the lake, the potential problems in flood years and corrected benefit to cost ratios, it just doesn't make sense to include Norfork Lake into Minimum Flow.

Sincerely,



Daniel Weber

CC: U.S. Senator, Mark Pryor
U.S. Senator, Blanche Lincoln
Congressman Marion Berry
Congressman John Boozman
Senator Shawn Womack
Representative Johnny Key
Representative Monty Davenport
Representative Curren Everett

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

COMMENTS

When the containment areas were built 40-60 years ago allocation of waters was set. Recreation wasn't given much importance and didn't receive waters in this process. It is now important to consider and protect recreation which is the major tax base that has built on and around the lakes; a major source of income and growth for the area. Reallocation needs to be addressed. Low water simply puts people out of business – not just the ones that depend on water to float; the impact is on the entire area. Now comes minimum flow and others will follow that want water – bad choice. Sometimes you can't make things better. For every problem you can point out below the damn, (in the river), we have the same problem for the fish in the lakes. The EIS, the "super model", doesn't address low water, but they want water to make the river fishing better. The cost of such action hasn't been determined except for the $50,000.00 that lake businesses should come up with to complete an EIS to study minimum flow and it's affect on the lake. So, I do not support minimum flow as it is set up at this time.

I will stop here on educating the educated. Let's try something different. I understand this is a complicated problem with lots of moving parts. The need to review 40-60 year old plans is a must. For Norfork Lake reallocate lake levels of 547-545 for recreation. Please remember the lake looses 2'-3' per month to evaporation during the warm weather. The dollars necessary to implement minimum flow should go instead to SWPA to repair their river run generators. Repair infrastructure before you make a new playground for the "Big Kids". Increase fund that the SWPA is privileged to for the replacement of lost power due to the reallocation of new water levels for the lake. This fund was set up in the 1970's when a fully dressed Cadillac cost $12,000.00- $15,000.00; now it's $40,000.00-$50,000.00+. Let's step up! The government has land next to existing power grid infrastructure – build a nuclear power plant. At this time there is only a 3%-5% cushion for power. Where is the leadership to look down the road? Corps & SWPA needs to run all the lakes with a different understanding towards recreation and protect the states #2 industry. My hope is that all the powers involved, Congress, Corps, G & F, Parks & Tourism, SWPA, Chambers of Commerce can come to an understanding and protect what is already in place. This may seem like mission impossible, but not when there are so many great minds working in one direction. Set the egos aside; remember that greed kills all good things.

Attention Mike Biggs:

1. Would you help with reallocation of water levels to protect businesses that depend on lake tourism?
2. Can you show from 2003-2006 water levels in Norfork Lake with minimum flow in place, just like the graph you did on the 60 year run?
3. I am hopeful you understand minimum flow can work with lake levels on Norfork Lake being protected at 547-545. Anything below that has adverse effects on area tourism.
4. Sorry, just have to ask, (I'll understand if you don't answer this one) – Can you look at this from my perspective – would you put your financial welfare on the line for minimum flow for trout fishing that's already proven to be world class as it now stands?
5. Please understand – I think there is a solution we can all be happy with if we work together as stated above, but low water puts me out of business.

Sincerely,

Glenn T. Cox

Glenn T. Cox
Fout Boat Dock, Inc.
P.O. Box 60
2932 Fout Rd.
Gamaliel, AR 72537
870-467-5341

Denise Weber
3291 Jordan Landing Rd.
Jordan, AR 72519

US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
Mr. Mike Biggs
P.O. Box 867
Little Rock, AR 72203

August 15, 2006

Dear Mr. Mike Biggs,

As an owner of Jordan Marina, my livelihood depends on Norfork Lake. In the last five years I have seen the lake reach its second highest water level ever. I have also seen the lake reach a 30-year low. Minimum Flow would have adversely affected both of these situations even more, as well as how the lake functions in a "normal" year.

Natural sand beaches exist in our area of the lake, but only at "normal" water levels (554) and below. Customers call the marina and have been known to cancel whole vacations based on whether the beaches are out of the water. Raising the normal lake level would delay how long into the season it is before the beaches are visible, affecting my business.

In a flood year (such as 2002) how would the lake have been affected if water levels had started out nearly two feet higher?

At low water levels, there is only a certain amount of cold water in the lake. Who can say how pulling that water out will affect the lake habitat?

We already have "Blue Ribbon Trout Streams" and "World Class Fishing" on our rivers. I do not see a reason to jeopardize the lake habitat and tax revenue from lake recreation.

Sincerely,

Denise Weber

Denise Weber

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I would like to Comment on the Minimum Flow Study. My husband and I started coming to the Jordan area of Lake Norfork in 1960. We have enjoyed the Lake for many years and have seen the level go to very low to being up to the roof of the pavillion at Jordan. The beautiful sands around this area are a great draw for tourist and for the locals. I would hate to see anything destroy this. We have lived here permanently for 14 years Please consider the impact on the locals and the tourist if this plan is put in place

Thank you

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Melissa J Rogers

Organization:

Address: 2784 Jordan Landing Rd.
Jordan, Ar.
72519

August 15, 2006

U.S. Army Corps of Engineers
Little Rock District
Attn: Mike Biggs
CESWL-PM
P.O. Box 867
Little Rock, AR 72203-0867

Subject: Minimum Flow issue

As a person who lives near Mountain Home and enjoys both lakes, I wish things would be left alone. We have enjoyed both the lakes and rivers as others have and why would anyone want to change it. There are those that want to change it to put more money in their pocket for various reasons and then there are others who get wrapped up in the issue without really looking at the big picture. The big picture is that we need the water stored in the lakes for drinking, and generation purposes as needed. We don't need to flush it down the river to the Mississippi.

Please, just leave things alone and people can get on with their lives.

Thank you,

John Williamson

John Williamson
831 Marquis Dr.
Mountain Home. Ar. 72653

Frank S. Root
Box 12412 , Hwy –5
Norfork AR, 72658

8/18/06

U.S. Army Corps Of Engineers
Little Rock District
P.O. Box 867
Little Rock, AR 72203-0867

Attn.: Mike Biggs – CESWLPM

Dear Mr. Biggs,

Minimum flow on the North Fork river will prevent wade fishing.

Currently, high and low water levels permit fly-fishing and power-boat fishing at alternate times.

Power-boats can use the nearby White river at Norfork, AR when the North Fork river is low.

Sincerely yours,

Frank S Root

Frank S. Root

Mike Biggs 8-15-06

The more I find out about minimum flow the more I am against it.

Minimum flow is bad for Norfork lake, we don't need to be letting extra water out of lake Norfork.

J. P. McGuire
235 Windsong Place
Mountain Home Ar.
72653

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I truly believe you should leave the lakes + rivers as they are. Why mess up a good thing? People come from all around to visit the lakes + rivers as they are, to change them would cause a loss of revenue for the great state of Ar. I've lived in Baxter Co. 30 years next spring. We moved here from Chicago because of the beautiful + clean lakes, Rivers + neighborhoods. Keep in mind whatever you do will be your legacy. It's my high hope + sincere prayer, that the Good Lord will guide you in your decisions.

Thank you,
Mary Edwards

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
MARY EDWARDS

Organization:

Address: 40 FLINT ROCK TRL.
JORDAN, AR 72519

additional space on the back →

August 11, 2006

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY DRAFT
ENVIRONMENTAL IMPACT STATEMENT (DEIS)

COMMENT SHEET

Lost Revenues when flooding occurs in Shadow Rock Park

Camping fees	$35,000.00
General use	10,000.00
Cleanup cost	$4,000.00 to $10,000.00

It takes between 1 to 3 years to normalize camping fees after each flood event.

Consideration would need to be given to fewer people coming to area for activities during flood years, therefore would also effect other revenues of City of Forsyth and area, general sales taxes and lost merchant revenues.

Loss of use of Shadow Rock Park during flood years for residents of the City and surrounding area is a major concern.

If flooding occurs on an ongoing basis because area is subject to flooding with less rainfall because water level is kept 5' higher each and every day of year more lost revenues than above would be felt.

I have attached camping fees collected from 1967 to 2005, also shows years when water is in Shadow Rock Park.

I have attached lake levels as they effect the area when flooding occurs.

If Park is relocated value of structures (3 shelters, 2 showers, 3 bathrooms, large enclosed barn with open end and kitchen, small barn, plus many small shelters along with playground, 3 tennis courts, 1 basketball court, 1 sand volley ball court, horse shoe pits, old Settlers cabin and smokehouse, along with an estimated 117 camp sites) and cost to reconstruct would have to be considered.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

John T. Elliott, Mayor

Attest:
City of Forsyth, Shadow Rock Park
15405 U. S. Highway 160
P. O. Box 545
Forsyth, MO 65653

CAMPGROUND RECEIPTS

YEAR	TOTAL	
1967	$2,732.50	
1968	$4,124.50	
1969	$4,684.00	
1970	$6,359.00	
1971	$7,886.00	
1972	$8,951.00	
1973	$2,325.00	had 4 months of water
1974	$6,776.38	
1975	$12,058.00	
1976	$16,969.00	
1977	$12,886.27	
1978	$15,651.80	
1979	$10,854.50	had 2 months of water
1980	$17,185.00	
1981	$15,522.20	
1982	$20,056.00	
1983	$20,288.00	
1984	$27,688.50	
1985	$11,277.00	had 4 months of water
1986	$30,600.00	
1987	$36,794.00	
1988	$37,513.00	
1989	$37,756.00	
1990	$17,103.00	had 3 months water
1991	$35,130.00	
1992	$30,994.00	
1993	$47,589.00	
1994	$43,426.00	
1995	$31,613.00	
1996	$22,065.00	
1997	$29,328.00	
1998	$35,109.00	
1999	$37,032.00	
2000	$31,572.00	
2001	$20,428.00	
2002	$10,287.00	had water 4 months
2003	$23,218.00	
2004	$26,912.00	had water 2 months
2005	$30,161.00	

CAMPGROUND FLOOD LEVELS

Lake level 667.40 – water into lake side of River Run park, water close to campground # 2
City Park

Lake level 672.00 – Closed Campground # 2

Lake level 675.32 – water into drainage ditch and close to small barn in arena area

Lake level 675.98 – water almost into barn and over area between barn and arena
water almost into playground, water into ditch toward shelter # 5

Lake level 676.20 – closed barn and locked gate water into open end of barn

Lake level 676.36 – water almost to tent area of campground # 1

Lake level 686.00 – water 5 foot into shelter # 4 in campground # 2, into smoke house
in playground side of park, over all of arena area

Lake level 687.80 – water almost to peak of roof on barn
water at hoop level of basketball ring on playground side of park

COMPUTATION SHEET Page ____ of ____

SUBJECT _____

COMPUTATION _____ FILE NO. _____

COMPUTED BY _____ DATE _____ CHECKED BY _____ DATE _____

TO: US Army Corps of Engineers (Mike Biggs)

DATE 8-18-06

First of all we would like to thank you for allowing us to comment on the project to raise conservation pool to 659 elevation at Bull Shoals Lake.

We would appreciate being kept informed during the P.E.D. phase of this project

We would like to make sure our dock is checked because of accessibility and parking. We do have two people who are handicapped.

We are: Dennis A. and Cathy A. Gaschler
196 Matherly Rd
Protem MO. 65733

Thank you Dennis A Gaschler 8-18-06
Cathy Gaschler

SWD FORM 521

White River Minimum Flow Reallocation Study
Draft Environmental Impact Statement (DEIS)

Comment Sheet

45 – Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

Roads that the Taney County Commission feels will be impacted over the next 20 years

Chuck Pennel, Presiding Commissioner

Danny Strahan, Eastern District Commissioner

Ron Herschend, Western District Commissioner

Send Comments To:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

Roads within 1500 ft of Bull Shoals

ROAD_NAME	COUNTY_NUM
A B FINE	OO-10
BADGER	O-30A
BAKER	76-154A
BAKER	76-160
BARBS	160-130
BARKER HOLE	160-140
BARTON	OO-15
BEAVER CREEK	O-30C
BLACKWELL FERRY	MM-40
BRACE HILL	M-30
BRASS LANTERN	KK-10A
BRASS LANTERN	KK-10A-1
BRIGHT ELBOW	OO-20
BRIGHTWELL	125-220B
BROOK	76-156A
BURMINGHAM	76-140
CAMELOT	KK-20C
CARL MOORE	KK-10C
CATFISH	160-149A
CIRCLE	VV-100
CLARKSON	125-220A
CLIFF HOUSE	VV-85
CLIFF HOUSE	VV-50
COLLIER	O-24
COON HILL	M-90B
COPPERHEAD	KK-20A
COTTON ROCK	KK-20

ROAD_NAME	COUNTY_NUM
COULTER	160-127
COX	KK-10E
CRAWLEY	160-147
CREED	KK-10F
DALLAS	KK-10
DAVIDSON	160-170
DEER	MM-30
DIXIE HTS	MM-30B
DRUM	
ELBOW	125-180
ELIM	76-156A-1
EMPIRE	
FIELD	VV-90
FIVE BROTHERS	125-200B
FORSYTH-TANEYVILLE	76-170
FOXGLOVE	O-30
FRISCO HILLS	O-40
GEORGIA	KK-10G
GILLIS	VV-80A
GREGORY	
HEDGEPETH	
HILLSIDE	
HWY K MARINA	
JOHNSON	VV-100A
JOURNEYS END	O-40B
JUDY	
KAVON KOVE	55-20B
KISSEE	160-160
LAKE	
LAKE POINT	160-149P

ROAD_NAME	COUNTY_NUM
LAKEVIEW	
LAKEWAY	160-149
LOOKOUT	VV-100
MARLIN	
MATHERLY	125-220B-1
MCCANN	VV-80
MCKEE	OO-10A
MEACHAM	KK-10D
MEADOW LANE	O-30B
MELODY MOUNTAIN	M-90A
MICA	K-10
MINNOW	
MISSION	MM-30A
MO/ARK	M-90
MOORE BEND	KK-10
NAVE FERRY	125-180D
NICHOLAS	160-125
OREMUS	76-150
PERCH	
PERSINGER	KK-10B
PIKE	
PLANTATION	160-138
PRESCOTT	O-25
RICHMOND	VV-100B
RIVER RUN	
ROGERS	KK-10H
SALMON	
SANDERS	O-20
SAVAGE	J-20
SCENIC	76-156

ROAD_NAME	COUNTY_NUM
SECLUDED ACRES	76-752/ 76-752A
SHAD	
SILVER CREEK	76-130/ VV-70
SLOUGH HOLLOW	160-180/ M-30A
SMITH	Y-40
SPOONBILL	
STACHLING	VV-100C
STONEY RIDGE HOOK	
STURGEON	
SWAN	76-156A-2
TROUT	
VELMA	125-220A
WALTON	J-40A
WAYLAND	76-154
WELL	W-60A
WOLF CREEK	KK-30
YANDELL COVE	MM-20
YOCUM CREEK	M-80

ROAD_NAME	COUNTY_NUM
SECLUDED ACRES	76-752/ 76-752A
SHAD	
SILVER CREEK	76-130/ VV-70
SLOUGH HOLLOW	160-180/ M-30A
SMITH	Y-40
SPOONBILL	
STACHLING	VV-100C
STONEY RIDGE HOOK	
STURGEON	
SWAN	76-156A-2
TROUT	
VELMA	125-220A
WALTON	J-40A
WAYLAND	76-154
WELL	W-60A
WOLF CREEK	KK-30
YANDELL COVE	MM-20
YOCUM CREEK	M-80

RICHARD H. MAYS LAW FIRM

RICHARD H. MAYS
rhmays@ix.netcom.com

Cornerstone Square - Suite A-2
2000 Highway 25B North
Heber Springs, AR 72543
Phone: 501-362-0055
Fax: 501-362-0059

VALLIE J. WILKERSON
valliwilkerson@alltel.net

LORI SIVLEY
Office Manager
Paralegal

August 18, 2006

Mr. Mike Biggs CESWL-PM
U.S. Army Corps of Engineers
Little Rock District
P.O. Box 867
Little Rock, AR 72203 - 0867

Re: Proposed White River Minimum Flow Study EIS

Dear Mr. Biggs:

I have reviewed the Draft Environmental Impact Statement ("DEIS") prepared by the U.S. Army Corps of Engineers on the proposed White River Minimum Flow project, and have the following comments:

1. Congressional Authority for Minimum Flows from Lakes Other Than Bull Shoals and Norfork

The Congressional authority for the proposed project is stated to be the Water Resources Development Acts (WRDA) of 1999 and 2000, which authorized the Corps to reallocate specific quantities of storage from each of the five White River basin reservoirs, including Greers Ferry Lake. However, at page 4 of the DEIS, the Conference Report for the FY 2006 Energy and Water Resources Development Act, §132, provides regarding Minimum Flows that:

> The Secretary is authorized and directed to implement alternatives BS-3 and NF-7, as described in the White River Minimum Flows Reallocation Study Report, Arkansas and Missouri, dated July, 2004.

The July, 2004 Report referenced in the 2006 Act quoted from above provides alternative BS-3 as being a Flood Pool Reallocation from Bull Shoals Lake, and alternative NF-7 as being a Split Pool Reallocation from Norfork Lake. The 2006 Act does not authorize and direct the implementation of any alternatives from any lakes in the White River system other than Bull Shoals and Norfork.

It would seem to be the intent of Congress that minimum flows be developed only on those two lakes, and not the others in the White River system. This is further evidenced by Section 132 (4) - OFFSET, which specifically allows losses to the Federal hydropower purpose of the Bull Shoals and Norfork projects to be offset by a reduction in costs allocated to the Federal hydropower purpose. Had Congressional authorization for minimum flow from the other lakes been intended, the loss of Federal hydropower purpose from those lakes would have also been offset by reduction in costs allocated to that purpose on those lakes.

Because of the limitation of the Congressional authority in the 2006 Act to Bull Shoals and Norfork Lakes, it does not appear that the Corps was given authority to allocate waters in the other three lakes in the White River system for minimum flows. If such authority exists, it should be clearly explained in the EIS.

2. Lack of Need For Minimum Flow From Greers Ferry Lake for Maintenance of Fishery

Aside from the issue of Congressional authority for minimum flows from lakes in the White River system other than Bull Shoals and Norfork, there is the issue of whether the fishery in the Little Red River tailwaters below Greers Ferry Lake dam would benefit from a minimum flow. The DEIS treats all of the tailwaters of the dams on the White River system as the same, but they are not.

The White River below Bull Shoals and Norfork dams is considerably wider than the Little Red River; there are numerous riffles and shallow pools, and less cover is provided over the White River by vegetation and the topography than is provided over the Little Red River. Consequently, during period of low flow and high temperatures, the water in the White River gains temperature more rapidly than the water in the Little Red River, which, I understand, causes stress upon trout. If there has been any long-standing problem with stress upon trout in the Little Red River during the summer months, it has not been publicized nor is this issue addressed in the DEIS.

Assuming that conditions existing at the White River cause stress to trout minimum flow on the White River may relieve that problem, although the DEIS couches the benefits of minimum flow in terms of increased food supply to trout. However, the Little Red River presents different conditions that may not benefit – and, in fact, may be harmed – from a minimum flow.

As noted above, the DEIS analyzes the effect of minimum flows at each of the lakes in the White River system in a "cookie-cutter" fashion, as if the ecosystems of each tailwater were the same. The Little Red River ecosystem is different from those below Bull Shoals, Norfork and the other lakes, and should be given a more detailed, individualized assessment as to the effects of minimum flow on that ecosystem.

3. "Wadeability" Is Threatened By Minimum Flows In The White River Below Bull Shoals and Norfork Lakes

Much of the fishing that is currently done in the White and Little Red Rivers is by persons who enter the rivers using waders during periods of low or no flow. Under current conditions (and a "no action" alternative), there is little if any danger to such waders of being swept off their feet by water flow.

Under a minimum flow scenario, the DEIS (p. 138, §4.6.3.1) states that "800 cfs" (cubic feet per second) flow "is about the highest flow that could be considered safely wadeable at all locations using the conservative VD<4 criterion." However, the proposed minimum flow for the White River below Bull Shoals and Norfork dams is 800 cfs.

Considering that much of the fishing that is done in the White and Little Red River tailwaters is by wading, and that each person who engages in such fishing has varying capabilities and tolerances to water flows, depending on factors such as age, height, weight, strength, etc., it would seem reckless to set a minimum flow at a flow that is on the margin for safety, notwithstanding the DEIS claim that the VD<4 model is conservative. Consideration should be given to a minimum flow that is less than 800 cfs.

Again, on the issue of wadeability, the DEIS does not specifically address the Little Red River tailwater, focusing instead on the Bull Shoals – Norfork – Table Rock Lake tailwaters. I would estimate that most of the fishing on the Little Red River tailwater is by wading. While the proposed minimum flow from Greers Ferry Lake is proposed to be lower than 800 cfs, the channel in the Little Red River is also considerably more narrow than in the White, which would increase the depth and rate of flow of the water through the channel.

As in other issues addressed by the DEIS, the Little Red River tailwater, and its differences from the other tailwaters, is seldom specifically or separately analyzed or discussed. The DEIS should be supplemented to analyze and discuss the specific characteristics of the Little Red River tailwater, and the effect of minimum flows upon it.

4. Effect Of Lower Tailwater Temperatures On Downstream Environments Not Sufficiently Analyzed

The DEIS (p. 140, §4.6.4) discusses to some extent the effect of lower water temperatures on the river systems, stating that it will cause colder water to reach further downstream in the White River and the Little Red River than under current conditions. However, there is very little discussion of the potential effects of these lower water temperatures on the native fish populations, on other life forms in the rivers, and on the vegetation in and around the rivers.

It is also not clear what, if any, effect the further reach of colder water to or near the confluence of the Buffalo River with the White River will have upon the migration of fish from the White into the Buffalo, and assuming there is such migration, the effect upon the natural restoration and regeneration of native fish in the Buffalo.

5. Incomplete Discussion of Cumulative Impacts

The section of the DEIS on Cumulative Impacts (p. 157, §4.10) states that "Past, present and reasonably foreseeable future actions are diverse and too numerous to list each individual activity ... " However, the Corps attempts to establish categories of such projects and their general impacts.

This approach is not in compliance with the requirement of the National Environmental Policy Act to address those past, present and reasonably foreseeable actions of both government agencies and private entities. While the diversity and number of those actions may be formidable in a wide area such as the White River basin, the summarization of those actions by categories tends to distort and minimize the number of actions and their potential cumulative impacts with the proposed minimum flow project, and prevents a detailed discussion of those impacts.

One example of the fallacy of using a "categorization" approach is the potential cumulative effect of the proposed minimum flow project upon the current Grand Prairie Irrigation Project ("GPIP"). The EIS in the GPIP justified the withdrawal of approximately 150 billion gallons of water from the White River by stating that reducing water levels in the White River would replicate the conditions that existed prior to the construction of the upstream dams (*e.g.*, Bull Shoals, Norfork, Greers Ferry).

However, the institution of a minimum flow into the White and Little Red Rivers would add considerable volume to the White River flow, defeating the rationale for the withdrawal of water from the White by the GPIP. While I am not defending the Corps' rationale for the withdrawal of water from the White River for the GPIP, I simply point out that these two projects seem to be in opposition. This issue is not addressed in the DEIS, and cannot be addressed by a "category" approach.

Other issues, such as the increased use of the lakes in the White River system for drinking water for the rapidly expanding populations in central and northwest Arkansas, and the future reallocation of water in those lakes for that purpose, have not been adequately addressed by the "category" approach to cumulative impacts.

If you have any questions regarding these comments, please give me a call.

Sincerely,

RICHARD H. MAYS LAW FIRM

By: Richard H. Mays

Richard H. Mays

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

As Marina Owners on Norfork Lake since 2000 we have repeatedly asked "exactly how much water is being asked for." The variation of 3.5' of water out of flood pool and 3.5' of water out of the power pool is a huge difference. We did not find out until 11-14-06 at the Missouri Arkansas Marina Assn that 1/2 would be out of the power pool and 1/2 from the flood pool. We had been told to wait for the EIS before making comments. Now that the study has come out (June 1, 2006) we are expected to complete our comments in the busiest part of our season. We do appreciate the additional month we were allowed, but we are still too busy to dedicate enough time for such a complicated issue. I have enclosed the original comment letter we sent on April 17, 2001 (it has not changed). We also enclosed a copy of the News Release in the Baxter Bulletin (7-29-06). If there is any errors in that article please let us know what they are. We also enclosed a copy of the Corps e-mail about the lake level of Norfork going down 6 feet by August 31, 2006. We can not help but be concerned after the 13.5' low water level in January 2006.

additional space on the back →

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Kathryn + Robert Grace

Organization: Cranfield Boat Dock

Address: 2028 Cranfield Road
Mtn. Home, AR 72653-6756

1-800-485-1767

Cranfield Boat Dock, Inc. Norfork Lake
2028 Cranfield Road
Mountain Home, AR 72653-6756
(870) 492-5191
DACW03-1-93-406
Robert and Kathryn Grace - owners/operators
Email - kathygracegrace@hotmail.com

April 17, 2001

Re: Impact of Minimum flow on Norfork of 3 ½ ft. reallocation of water

To: Brenda Puloma
Anthony Ragar - Ron Hudson
Game and Fish Assn.
White River Outfitters
Jim Gaston
Missouri Arkansas Marina Assn.

July 15, 2001 will start our thirty-second (32nd) year at Cranfield. We know that the first priority of the White River Chain of Lakes is flood control and the second priority is generation. We all know how drastically the demands on our lakes have changed. We have always said that we can handle a 10 ft. fluxuation plus or minus 10 ft. of our normal of 552. Because of the demand for more and more boat storage it is not as easy to handle this 10 ft. fluxuation. However, we understand that is our job.

Lake level:

552 - everything operable

554 - 1/3 of parking lot underwater

556 - 3/4 of parking lot underwater
Park road from Dock 4 to launch and main park underwater and launch ramp underwater.

558 - Marina road to 96 boat stalls underwater.
Main parking lot, Dock 1,2,3,4 & 10, parking area and road and Dock 5,6,7,8 & 9 parking are all underwater.

562 - This used to be the level that our old causeway would start going underwater.
We have a beautiful new causeway that is 6 ft. higher than the old causeway.
We would lose over ½ of that flood protection if we are storing 3 ½ ft. of extra water.
At this level we are very susceptible to wind and wave damage. We have invested $200,000.00 in water break docks that has helped immensely. Still that much water is very difficult to control.
Beavers cut down all trees close to the water's edge.

PAGE TWO April 17, 2001
Cranfield Boat Dock, Inc. Norfork Lake

Re: Impact of Minimum flow on Norfork of 3 ½ ft. reallocation of water

Lake level:

546 - All docks are very close together making it difficult for renters to maneuver in and out of stalls.
Wintertime docks freeze in and ice and must be broken up everyday.

542 - All docks moved as far out in lake as possible.
Launch ramp is out of the water.

540 - Need new anchors - new steps - ½ of our docking facilities are off of our lease area. The back ½ of our cove is dry.
½ of our renters cannot use their boats.
Parking is about ½ mile for some of our renters to their stalls.

530 - Entire cove almost empty. Not able to continue operating.

525 - Mountain Home Water intake out of the water.

Lake Norfork was the first of the White River reservoirs built by the Corp of Engineers. The campers like to be as close to the water's edge as possible. Therefore, the Corp of Engineers built Norfork's facilities closest to the water. Learning how much fluxuation takes place, the other lakes' facilities are located at higher levels. We have been told that when Norfork is in flood pool, 80% of our facilities are not accessible.

All of the tourism industry must work together to survive. Perhaps a smaller amount of designated waters are needed. The amount of water varies greatly depending on the level of the lake. If we are asked to store 3 ½ ft. of water at 556 or asked to give up 3 ½ ft. of water at 542, it would be devastating to all the marinas on Lake Norfork.

All of the marinas on Lake Norfork would need additional high water parking, roads, steps, anchors, launching ramps and camping facilities. The Corp of Engineers has informed us that they do not have the funds to do any of this. In all fairness, this should be considered a part of the expense of providing a minimum flow downstream.

If we can be of any further assistance in conducting this study, please let us know.

Sincerely,

Robert L Grace
Kathryn Grace

The Graces
Bob and Kathy

08/10/2006 13:29

August 10, 2006

Kathy Grace
Cranfield Boat and Dock

Kathy,

I spoke with some of the hydrologists at Southwestern Power Administration and they explained that the emergency water releases at Norfork Lake made for trout have been in existence in one form or another since the mid-1970s. No changes have been made in this policy in the last 20 years. Apparently, these releases are prompted by daily air temperatures. There are different ranges of releases made for four categories of air temperatures. These temperatures are forecast by the Corps at Calico Rock

90 degrees Fahrenheit
91-95 degrees
96-104 degrees
105 and above

These releases are seasonal and are implemented from May 1 – October 15 for Norfork Lake. They are extended to December 31 for Bull Shoals.

There is another water release requirement for the combination of Bull Shoals and Norfork. This one is put into place anytime air temperatures reach 85 degrees and above. Once this air temperature is reached, the releases are for a minimum of 3 days and can be achieved from a combination of both projects and are controlled by the Corps of Engineers. These releases are more than the daily releases.

There was a Minimum Flows law that was recently passed that will impact Norfork and Bull Shoals in the future. The Corps is still conducting an environmental impact study and an implementation date is not certain.

Hope this answered some of your questions.

Barbara DelGrosso
Director of Member Services
Southwestern Power Resources Association
918/622-7800
bdg18@sbcglobal.net

Bob & Kathy Grace
2028 Cranfield Rd.
Mountain Home, AR 72653-6756

July 28, 2006

Northeast Arkansas Fly Fishers (NEAFF)
Box 270
State University, AR 72467-0271

U.S. Army Corps of Engineers
Little Rock District
Mike Biggs CESWL-PM
P.O. Box 867
Little Rock, AR 72203-0867

Re: White River Minimum Flow Draft EIS comments

Dear Mr. Biggs:

Please accept these comments on behalf of our 40 members regarding the draft EIS for the White and Norfork rivers' minimum flow. We have long supported the minimum flow proposal for these streams and we are encouraged it may actually come to fruition. It's unfortunate that the mitigated fishery's optimum conditions were ignored while the native fishery disappeared from the altered habitat.

The NEAFF support the draft EIS findings and recommendations for solutions BS3 and NF7. We see no reason for further study of the options and support immediate funding followed by rapid implementation.

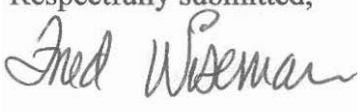
We would like to raise an issue that is not adequately addressed in the draft EIS and that is the low dissolved oxygen levels experienced seasonally in the Norfork tailwater. The Corps has been aware of this issue many years. During the 2004 water quality review the state of Arkansas Department of Environmental Quality placed the Norfork tailwaters on their impaired waters list for low dissolved oxygen. The ADEQ also placed the Bull Shoals tailwaters on the impaired list, but it is our understanding the minimum flow adjustments will largely correct the Bull Shoals DO impairment. However, there is no adequate description outlined in NF7 for specifically resolving the seasonal low DO levels in the Norfork tailwaters.

A recent May 15, 2006 Supreme Court ruling, *SD Warren v Maine*, sided with the state in a dispute over hydroelectric dam discharges into the Presumpscot River. The court held that Warren's argument, *"And because the release of water from the dams adds nothing to the river that was not there above the dams, Warren concludes that water flowing out of the turbines cannot be a discharge into the river"*, was problematic and incorrect. Thus the court agreed the state was within its authority for regulating those discharges. The ruling continues, *"The record in this case demonstrates that Warren's dams have caused long stretches of the natural river bed to be essentially dry and thus unavailable*

as habitat for indigenous populations of fish and other aquatic organisms; that the dams have blocked the passage of eels and sea-run fish to their natural spawning and nursery waters; that the dams have eliminated the opportunity for fishing in long stretches of river, and that the dams have prevented recreational access to and use of the river. Changes like these fall within a State's legitimate legislative business, and the Clean Water Act provides for a system that respects the States' concerns."

Based on this recent ruling, the seasonal low dissolved oxygen levels experienced in the Norfork tailwaters should be fully corrected as soon as possible by the Corps to bring the DO levels into state water quality compliance.

Respectfully submitted,



Fred Wiseman
Conservation Chair

Enclosure:
May 15, 2006 Supreme Court ruling, *SD Warren v Maine*

NO !! to minimum Flow!

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I take my grandchildren to the AREA Beaches on Lake NorFork. When the water is high some of these beaches ARE unusable & very hard or Impossible to get to! How ARE you going to make these AREAS on the Lake more Accessible during high water times? The proposed minimum Flow is going to make the water even higher in the summer months. than it is now!!

Higher water with no plan to make Improvements to All AREAS is not Acceptable to me or Anyone Else who uses the NorFork Lake.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Keith Lerka

Organization:
ME

Address:
P.O. Box 895
Mountain Home AR 72654

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I do not like the Minimum flow Because All the Boat Docks & every Boat Ramp would Be under water.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
KIETH Rhymer

Organization:
ME

Address:
893 CR 261
MTN Home AR 72653

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I am a wade fisherman and can only fish when the river is low. 3 to 4 inches extra water is the difference between being able to fish and not. I think the main question I need an answer to is if the river level increases there will be more opportunities for boat & men. This is good (though I don't fish this way!) More fisherman being able to fish more areas means more fish caught and less fish in the river. Is there a plan in place to increase stocking and increase the size of stocked fish! If there is not this idea is very bad!

Also I think there are concerns for the lake. To maintain the minimum flow in the river the lake levels will have to be kept higher which will entail building new ramps, roads and cause businesses and individuals to relocate/rebuild docks.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
MATT SEXAUER Matt Sexauer

Organization:
Eaton Corp.

Address:
32 ABBY LANE
COTTER AR 72626

additional space on the back →

David B. and Jane T. Comue
106 Scarlet Oaks Circle
Cotter, AR 72626

August 8, 2006

Mr. Mike Biggs
CESWL-PM
US Army Corps of Engineers, Little Rock District
PO Box 867
Little Rock, AR 72203-0867

Subject: In Favor of White River Minimum Flow

Dear Mr. Biggs:

As Cotter, AR property owners and tax payers on the White River we strongly support the Minimum Flow proposal recommended in the Army Corps of Engineers' Draft Environmental Impact Statement (EIS).

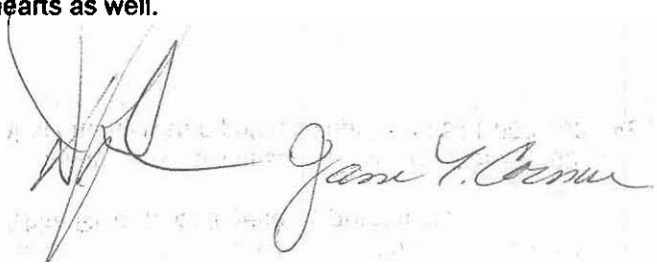
Minimum flow will both increase and stabilize habitat and forage that in turn will strongly benefit the quality of the White River trout fishery. Some have argued that the White River is already a world class fishery – it was 20 years ago, and it is still advertised so today in order to draw economic benefit. (Perhaps those same individuals are satisfied with their child as just a "C", or passing, student.) In fact, the abundance of trophy-quality, large trout has been drastically reduced over the years due to a complex set of issues. Minimum flow will provide a significant step towards returning the White River to its legendary greatness.

The EIS has demonstrated minimum flow will conservatively create a $7,000,000 annual economic benefit to the local economy with a potential upside of $21,000,000. As stated in the EIS there will be a "Benefit to local area growth potential because of an increase in area recreation opportunities."

Contrary to the objections publicly advertised by some Norfork Lake business owners, there are no practical downsides to minimum flow. The increased lake level is well within the existing flood pool designated by the Army Corps of Engineers. It will not add one inch to maximum high water (from the EIS: "No additional lands will be flooded that is not currently flooded annually"). In fact, we submit that it will benefit the lake businesses as it will require the lake be maintained at a more stable level in order to store water for the minimum flow releases. These same business owners were crying this spring over the record low lake levels resulting from draught. Had minimum flow been in place, the low lake levels would have had to have been maintained at a higher level for storage which in turn would have benefited those very same lake businesses.

Again, we strongly support minimum flow. It will have a definite, beneficial impact on the White River trout fishery which in turn will add to the local economy. It's not just about the lake; THE RIVER has a place in our hearts as well.

Respectfully submitted,
David B. Comue
Jane T. Comue



COMMENT SHEET-White River Minimum Flow Reallocation Study

August 3, 2006

US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, AR 72203

Dear Mr. Biggs:

I am a resident of Jordan, Arkansas. My wife and I had been coming to Lake Norfork since the early 1970's and built a home in the Jordan area in 1986. We were attracted to this area due to its excellent bass fishing, clarity of the water, numerous scuba diving sites and **the only natural white sand beaches** on the lake. After many years traveling here on weekends and vacations, we became permanent residents in 2000. While the lake is our primary source of recreation, we do trout fish on both the North Fork and White Rivers.

Over the years we have witnessed first hand the growth in the area as well as the increased use of the lake and rivers as a vacation destination for people from all over the United States.

After reading the on-line version of the Draft Environmental Impact Statement (EIS) White River Minimum Flow Reallocation Study, I have some **real concerns** about the Lake Norfork results and how they were presented in the study. The supposed benefits of the plan are to aid fishing on the river by improving:

a. oxygen content
b. food sources for fish
c. temperature of water
d. navigation

is by the plan itself flawed due to no controls over the results of power generation.

Power generation can spill up to 30,000 cfs into the rivers shocking fish with under oxygenated, colder water as well as scouring the vegetation, all of which will be negating the benefits of minimum flow. The minimum flow will largely benefit a few short miles of both the White and North Fork Rivers below each dam, with much of the White River temperature and oxygen content little affected.

The plan's effect on Lake Norfork has not accurately addressed the economic impact to the businesses on the lake. Consideration of the loss of revenues by the greater lake level fluctuations needs to be studied. I know the lakes weren't built with fishing and recreation as a reason for their construction. I think it is time to consider this aspect, as fishing, recreation as well as development around the lakes brings millions of dollars to the economy of the region. This has as much impact as revenues produced through power generation at the dams or the increased fishing

minimum flow will produce. The study does very little to address the true economic effect on the lakes beyond the impact to Corps of Engineer properties.

Development on the White River could become a bigger issue and negate any benefit minimum flow could produce. The past 5 to 10 years has seen a very rapid sale of shoreline property along both sides of the rivers, along with homes being built on many of these properties. The developments will lead to lawns producing run-off of chemicals, fertilizers, septic fields, etc into the river, causing pollution from the dams to Sylamore Creek. This impact is not considered in the conversations I have had dealing with the river issue. Corps of Engineers personnel say that it is not in their realm of jurisdiction and Arkansas Game and Fish isn't addressing it at this point. The impact of runoff on water quality over a much greater part of the trout fishery negates much of the benefits listed for increased minimum flow.

I know there are other issues associated with the proposal and hopefully others will be bringing them to your attention. You **cannot** go forward with implementing the proposed changes to the river basin and the lakes. You **must** take into consideration all of the costs associated with the project, the revenues the lakes bring into the area, the recreation the lake provides both residents and tourists as well as the runoff issue. Once you gather these figures, I **seriously doubt** there will be justification to proceed with the reallocation.

If you have any questions on my comments, please call me at 870-499-7315. I look forward to hearing your response(s) to the questions and issues I have raised.

Sincerely,

James R. Korbelik
78 Lake Point Vista
Jordan, AR 72519

cc Congressman Marion Berry
US Senator Blanche Lincoln
US Senator Mark Pryor
AR Senator Shawn Womack
AR Representative Curren Everett
Baxter County Judge Dan Hall

CAPITOL OFFICE
State Capitol – Room 410A
201 West Capitol Avenue
Jefferson City, MO 65101-6806
573-751-2042
FAX: 573-526-0575
E-Mail:
maynard.wallace@house.mo.gov

HOME ADDRESS
HCR 77, BOX 75
THORNFIELD, MO 65762
417-265-1303

MAYNARD WALLACE
State Representative
District 143

COMMITTEES

Appropriations-Education
Vice-Chair

Education

Higher Education

Agri-Business

Local Government

Tourism Commission

August 7, 2006

Mike Biggs
Corps of Engineers
P.O. Box 867
Little Rock, AR 72203

This letter is to protest the decision of the Corps of Engineers to raise the power pool of Bull Shoals Lake to 659 feet. This will cause more frequent and extended flooding of agricultural land along the lake.

This flooding will result in loss of production of hundreds of acres of the best farmland in Taney County, MO.

I feel the studies done prior to this decision are inadequate and in error. This led to errors in the decision making process and grossly under estimated the negative impact on the economy of the lake area.

Sincerely,

Maynard Wallace

Maynard Wallace

July 27, 2006

US Army Corps of Engineers
Little Rock District
Attn: CESWL-PM
(Mr. Mike Biggs)
P O Box 897
Little Rock, AR. 72203

Dear Mr. Biggs:

We wish to discuss our feelings regarding the White River Minimum Flow Reallocation Study that is under consideration.

We came to this area 10 years ago and saw the Norfork Lake and hills from atop a wooded hill in Koso Pointe and decided to purchase land and build our retirement home which we were able to do three years ago. We were under the impression that our backyard view would remain picture perfect. We were asked to attend a community meeting and listened to the plan's requirements and now realize that the ecological balance that is and has been in place for many years is not as stable as one would wish.

Therefore, listed below is our interpretation of the cons:

1. No longer a pristine view.
2. Beaches where friends meet, gossip, eat and swim, will be gone.
3. Pontoons lodged in slips that cost $1,000 to $1,500 a year will not be useable because there will be no access to parking. We cannot keep my boat stored on my property because of the covenants of the development. We would have too purchase a trailer for the boat so it could be moved to a storage facility and pay a monthly rental charge. How do we begin to enjoy a lake environment that would place all these obstacles in our path?
4. Sand Island, which is the best sandy island on the lake, is gone.
5. The high level allowed will be 572 feet which is 1.5 feet below the spill level of the dam. We don't think that leaves a good safety zone
6. The low level allowed will be 510 feet which is below the level of the older intake valves and will be below the level of the new intake valves being constructed so that Mtn. Home will not have a constant water supply. This means that barges will have to come in and pump water and the cost of water for residents and consumers shopping in Mtn. Home will skyrocket.
7. The vegetation on the bottom of the rivers will not come back to life because there will be no oxygen coming from the spill waters from the lake which also has low or no oxygen currently begin supplied to the bottom vegetation in the lake.
8. The temperature of the lake water is approximately 15 degrees cooler and will probably shock the fish for a couple of miles beyond the dam when dispersed into the river and probably kill most of the trout located in that area with this proposed method.

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

We have enjoyed fishing + boating on Lake Norfork for 40 years.
Also our friends and family have enjoyed this lake and spent lots of money here. Granted we love the river also + have caught our limit everytime we went out with family + friends.
Please keep our lake as is so everyone can enjoy it + not be so low that we can't get our boats out of the marinas.
Please take this into consideration.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Robert + Yvonne Kilpatrick
Organization:

Address:
4180 Jordan Rd.
Norfork, Ar. 72658

additional space on the back →

7-27-06

U.S. Army Corps
P.O. Box 867
Little Rock, AR 72203

Dear Mr Mike Biggs

We are very worried about the lake level drop. We have seen many years with no rain in spring and they have to leave water out for Power. It is almost impossible to find a place to put your boat in, because the ramps are out of the water.

If you leave water out all the time to keep river level up, you will hurt tourism and the people that live here, because of trying to find a ramp with deep enough water to put our boat in and out.

It has happened to us and a lot of our friends that come visit is in the summer & bring their boat, no place to put it in with low lake water.

Thank you

M & Mrs Ron Dent

COMMENT SHEET-White River Minimum Flow Reallocation Study

August , 2006

US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, AR 72203

Dear Mr. Biggs:

I am a resident of Jordan, Arkansas. I first came to Lake Norfork in 1962, purchased property in 1974 and retired here to live full time in 1985. We chose this location because of the excellent bass/crappie fishing on the lake and the nearby white sand beaches to use for swimming and picnics. I keep my pontoon boat in a rented boat slip at the Jordan Marina and spend a lot of time on the lake boating, swimming and fishing. My son, an avid fisherman, travels here from Kansas City to fish as often as he can and my grandson comes here from St. Louis with his friends to boat and water ski.

In the 44 years I have been using the lake, I have seen a tremendous increase in the number of people who use the lake for their recreational activities. With larger and faster boats I have seen a huge increase in the number of boats that travel from other parts of the lake to spend the day on the beaches. Since the back of my house faces Jordan Landing Road, I see a constant stream of traffic on the weekends hauling travel trailers heading to the Jordan Park Campground and boats heading to the launch ramp.

So why is there a need for a change? There already is minimum flow below the Norfork Dam. Why do you want to spend over $5 million to change something that is already working? People are coming from all over the United States to fish both the lake and the rivers. They wouldn't continue to come if they weren't catching fish. More and more people are moving into the area. This wouldn't be happening if they weren't able to catch fish and enjoy all the recreational activities offered by both the lake and the rivers.

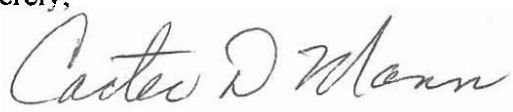
In the last few years we have had more summers where the water level was extremely high. Due to flooding south of us, you were unable to drop the lake level very quickly. What effect will the increase in fluctuation of the lake levels from a longer period of higher water levels to a longer period of lower have on the spawn? What is going to happen to the good fishing we have had in the past?

The Corps of Engineers have taken good care of Lake Norfork. We have clear water and beautiful sand beaches in the Jordan Area. Why do you want to do something that will jeopardize this natural attraction and limit the recreation the lake provides so many local residents and visitors?

There are other serious issues associated with the proposal and I know others will be bringing them to your attention. **I want to go on record stating the proposed changes to the Norfork Dam are not needed. You need to recognize the importance of Lake Norfork's recreational value and not do anything that will change it.**

If you have any questions on my comments, please call me at 870-499-7568. I look forward to hearing your response(s) to the questions and issues I have raised.

Sincerely,



Carter D. Mann
15 Mann Lane
Jordan, AR 72519

cc Congressman Marion Berry
US Senator Blanche Lincoln
US Senator Mark Pryor
AR Senator Shawn Womack
AR Representative Curren Everett
AR Attorney General Mike Beebee
Baxter County Judge Dan Hall

FROM : FAX NO. :4176752476 Aug. 03 2006 02:53PM P2

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

In Shadow Rock Park our flooding begins from a back-up drainage run-off Culvert that runs into Bull Shoals, if some type of flood-gate be put in to prevent this back-up that causes us a much longer time of Flooding (this is located below the Fair Barn)

I would like to know about the history of the Corp's beginning and it's work

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Linda Worster

Organization:
Ball-League

Address:
341 Shadow Rock Dr.
Forsyth, MO. 65653

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

On Thur 7/6/06 I attented a meeting at the Lutie school in Theodosia It was clear from the begining that the person who organized it(Bill Cook) was in it for the almighty dollar he thought he might lose.Along with the information from commissioner Morrison,they tried to paint a dire picture if the lake was raised from 654 to 659 feet.All of it was wrong.More than once Bill Cook stated he would lose Half ofhis parking and was reminded that he did not own that parking.20 or 30 times he brought up all kind of things that would happen to the Haskins Ford road (cr 863) and they were wrong.I live on Haskens ford road and I have all the correct information.They said in the last 10 yrs the lake has closed the road 19 percent.Thats wrong.The lake has come accross the road twice for a total of 7 months.Thats a little over 4 percent.The most of the time poor construction and maintainence is why the road is impassable. The lake has to reach a level of 665 before it crosses the road.

more on back side.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Thomas Gogan

Organization: none/just like to fish

Address: PO Box 343 Isabella MO 65676

417-273-5319

additional space on the back ⟶

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

I think RAISING the LAKE 5 FT to 659 is A MAINLY positive thing, But AT a MEETING July 6 called By BILL COOK AND MORRISSON ALL THEY TRIED to do WAS SCARE PEOPLE INTO BELIEVING THEIR MISINFORMA HE Did the same IN the NEWSPAPER. HE IS AN INFLUENCIAL PERSON FOR SU HE Kept TALKING ABOUT the "MARINA" losing parking AND MAYBE JOB until ONE PERSON TOLD the PEOPLE Bill Cook OWNS the MARINA and CARES just ABOUT the BUCK, But he really thinks he OWNS the LAKE. Then he GAVE out ALL this Bad INFO on HASKINS FORD Road. NONE of IT TRUE, The MAIL does NOT CROSS the RIVER an I HAVE NOT SEEN A school BUS CROSS IN ALL the years I HAVE lived on the ROAD. Most of the time the ROAD IS closed BECAUSE OF RAIN and the PIPES are too SMALL TO Handle the water. PERSONALLY, MOST PEOPLE think the COPPS is in Bed with Bill Cook and should BE INVESTIGATED, FOR the things he gets AWAY with. Like TAKING AWAY the old PEOPLES FISHING Dock

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: BETTY ANKER

Organization: NONE

Address: C/O PO Box 343

ISABELLA MO 65676

(HASKINS Ford Road)

additional space on the back ⟶

As to the school bus,it has never came across the lake(river)in the 15 years I have been here.As to his statement about the mail its the same.The mail routes do not cross the river.On my side of the river(north) or Thornfeild side as they call it,they stop and go back just 2 houses down.On the south side it comes from Isabella,and they turn around by the Donley farm. The same holds true for the fire districts,the lake(river) is the line,so whether the lake is up or down it does not matter.It makes an incoveince for some people like me who have a mail box in Isabella,but the good fishing and what it does for the lake in general makes up for it.

Most of the people like myself think it is a good idea to raise the lake and quite a few would not care if it rose 20 feet..

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

COMMENT SHEET

45-Day Public Review Period

At 652 our resort has ample parking and boats can be easily launched. We have less parking at 654 and one launching ramp is useable. Each additional foot decreases parking. When we are in "flood" stage we have a very small parking area and no launching ramp. Actually we are much better situated than most resorts on the lake. Between 659 and real flood stage, we have no parking...it is an area of ledge rock and huge boulders.

My biggest concern is Fish & Game's need for a minimum flow. They are already protected from floodwaters being released into the river. What they really want is water when we really don't have it in the lake to release. The lake was 17 feet low when we were told to find a flat spot to set our dock in the fall of 1972; long-range forecasts were for the drought to continue into the next year. As it turned out those forecasts were made null and void when December became one of the wettest on record. When we started building our resort in 1954 and 1955, the lake "went dry". There wasn't any lake water left in Missouri for a resort to use. We didn't open the resort until 1959. With the addition of Table Rock and Beaver Lake, the wide fluctuations we saw in the early years have been eased. This is 2006; we may again be in an every 50-year drought. We haven't seen flood stage for a while. My concern is that an allocation of five feet of water from Bull Shoals at the 659 level for Fish & Game might actually be eight to twelve feet or even fifteen feet if due to drought, the high for the season was only 650 feet or less. It just does not seem right to sacrifice the recreation industry on the lake in Missouri for the recreational businesses on the river in Arkansas.

Fifty years ago, there just weren't a lot of trout in the White River. Fishing on the White River was primarily fresh water fishing. Arkansas has built a "World Class Trout Fishing" industry without "minimum flow". Why do they now need it? AND why at the expense of lake recreation?

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
PO Box 867
Little Rock Arkansas 72203

YOUR NAME:
Elda Edwards, owner

Organization:
TURKEY CREEK RA

Address:
HC 3, BOX 3180
THEODOSIA, MO 65761

November 10, 2005

Letters to the Editor
The Baxter Bulletin
P.O. Box 1750
Mountain Home, AR 72654

To the Editor:

I read in the paper this morning how our congressmen Boozman and Berry have decided to enact a minimum flow on both our dams. They are going to do this without giving the people of Twin Lakes a vote on it. This would help only special interest groups like river guides and fly fisherman and not take in to account the fishing and recreational use of the Twin Lakes. There are a lot more people using the lakes for fishing and recreation than those that use the river.

The lake at this time is lower than it has been since 1977. Had this been enacted this spring, our lakes would be much lower, we would be having trouble with all, not just some of our launch ramps, and drinking water intake of Norfork Lake would have been hampered.

They also talk about how this will help to avert "an environmental crises". The White River has always had some of the best trout fishing in the United States; how is this "an environmental crises"?

Once again our congressmen have decided to take the vote from the people. I would like to hear more people speak up about this issue, whether you agree with me or not.

Harvey D. Jones
43 Saratoga Place
Mountain Home, AR 72653
(870) 508-4659

COMMENT SHEET-White River Minimum Flow Reallocation Study

August 2, 2006

US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, AR 72203

Dear Mr. Biggs:

I am a resident of Jordan, Arkansas. My husband and I had been coming to Lake Norfork since the early 1970's and built a home in the Jordan area in 1986. We were attracted to this area due to its excellent bass fishing, clarity of the water, numerous scuba diving sites and **the only natural white sand beaches** on the lake. After many years traveling here on weekends and vacations, we became permanent residents in 2000. We rent two boat slips at the Jordan Marina and spend a lot of time on the lake boating, swimming, scuba diving or fishing. While the lake is our primary source of recreation, we do trout fish on both the North Fork and White Rivers.

Over the years we have witnessed first hand the growth in the area as well as the increased use of the lake and rivers as a vacation destination for people from all over the United States. We have many relatives and friends who visit us every year and we spend most of the time they are here on the lake and beaches. Since we use both the lake and the rivers, we are concerned about what is needed to keep both the lake and the rivers viable into the future.

After attending the June 19th Mountain Home meeting and reading the on-line version of the Draft Environmental Impact Statement (EIS) White River Minimum Flow Reallocation Study, I have some **real concerns** about the Lake Norfork results and how they were presented in the study. The study states the major issue is the deterioration of the trout habitat in the rivers, and looked at nine alternatives before developing a recommendation. It didn't take long to realize the study is incomplete as it does not contain all the information necessary to make a recommendation that is both cost effective and economically feasible

My concerns with the study and the Lake Norfork Split Pool Reallocation NF7 Plan, in particular, are as follows:

1. Why is there no action to be taken at Beaver, Table Rock, and Greers Ferry Lakes?

2. The Cost to Implement slide for the Norfork Dam presented at the June 19th meeting shows the Preconstruction Engineering Design cost of $738,000 and the Construction Cost of $3,834,000.
   -Why doesn't the Norfork Lake Summary sheet in the study include the $738,000 engineering cost?

3. Where in the study are the implementation costs and recurring costs for:
   -Southwest Power Administration (in addition to the loss of $259K in generation)?
   -US Army Corps of Engineers to modify roads, campgrounds, access points?
   -Marina owners and the over 1000 private dock owners?

4. Since Arkansas Game and Fish (state agency) is the beneficiary of the 3.5 feet of reallocated (federally controlled) water, what implementation and recurring costs will the State of Arkansas incur?
   -If none are assigned to the state, shouldn't they be paying for it?

5. What effect will the increase in fluctuation of the lake levels from a longer period of higher water levels to a longer period of lower levels (during a drought) have?
   -What happens to the spawn with the shore vegetation dying off?
   -What will be the revenue loss to the area from poor fishing on the lake?
   -Will the Bass Cat tournament along with others be forced to go elsewhere?
   -When lake levels are lower, how will the Rodney Volunteer Fire Department and other area fire departments fill their tanker trucks?

6. The study states the Norfork Tailwater is defined as Norfork Dam to the confluence with the Bull Shoals Tailwater of White River, **a total of 4.7 miles** (p.72). Table 4.5.3.1 Tailwater Area Changes chart (p130) shows the Norfork Tailwaters wetted area (amount of bottom substrate that is always covered) will increase from 54 acres to 83 acres, **an increase of 29 acres**. The chart shows the current minimum flow cubic foot per second (cfs) **will increase from 115 to a Target Minimum of 340**, resulting in an increase depth of the North Fork River of **five inches**. As stated on p. 140, temperature improvement from minimum flow additions will be felt closer to the dam and **diminishes in the downstream direction.**
   -Why does Table 4.8-1 Potential Recreational Benefits from Tailwaters assign Lake Norfork 29 miles when the North Fork River is 4.7 miles long and the benefits from increased minimum flow will barely have any affect after the first mile or so?
   -Won't the change from 115 cfs to 6000 cfs or 340 cfs to 6000 cfs when generating still shock the fish and be just as stressful as it always has been?

7. As previously stated we have been in the area for over 20 years. Norfork Lake is still as clear and pristine as a result of the protection from the Corps property along the shoreline. While there is an increase in boat traffic, residents and visitors alike can always find a place to swim or fish and not interfere with others. The sand beaches in the Jordan Area are a **major attraction** to the area and are **very popular**. These beaches **would be lost** with the change in the Conservation Pool level proposed in the 50/50 Reallocation.
   -Where do families with little kids go to safely swim in the lake?
   -How much in tourism revenues will be loss when the beaches are gone?

8. We see many housing developments going up along the rivers resulting in numerous septic systems which have to drain somewhere. We watched a land developer strip the land above the North Fork River and no one was concerned the whole time he was grading. It wasn't until months later when we had a major rain that folks realized there was a problem.
   -Why isn't there any shoreline protection along the North Fork and White Rivers?
   -Whose responsibility is it to protect the river banks?
   -What is all this run-off doing to the water quality?

-Has there been any effort made to study ground water run-off and how much this is affecting the trout habitat?
-Isn't it possible the run-off is the problem as opposed to the minimum flow?

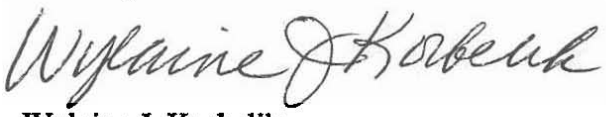
9. The increase in fishing pressure on the rivers is almost getting out of hand. We see more fishermen wading below the Norfork Dam (sometimes almost shoulder to shoulder) and a steady stream of boats lined up to access the river on the weekends. This increased pressure on the rivers is taking its toll.

-Will adding 29 more acres of wetted area on the North Fork River make that much difference?
-Will the increase in river depth of five inches make that much more of the river navigable or bring more boats in the area where fly fishermen like to wade?
-Since most trout are caught in short time period after being released into the rivers, wouldn't it be more cost effective to have Game and Fish release more trout, rather than spend millions of dollars to modify the Norfork Dam **hoping** it will improve the habitat?
-What about imposing a trout season like other states which would give the trout time to grow and possibly reproduce?

I know there are other issues associated with the proposal and hopefully others will be bringing them to your attention. You **cannot** go forward with implementing the proposed changes to the Norfork Dam. You **must** take into consideration all of the costs associated with the project, the revenues the lake brings into the area, and the recreation the lake provides both residents and tourists. Once you gather these figures, I **seriously doubt** there will be justification to proceed with the reallocation.

If you have any questions on my comments, please call me at 870-499-7315. I look forward to hearing your response(s) to the questions and issues I have raised.

Sincerely,



Wylaine J. Korbelik
78 Lake Point Vista
Jordan, AR 72519

cc Congressman Marion Berry
US Senator Blanche Lincoln
US Senator Mark Pryor
AR Senator Shawn Womack
AR Representative Curren Everett
Baxter County Judge Dan Hall

ARKANSAS' OZARK MOUNTAIN REGION
P.O. Box 194 • Lakeview, Arkansas 72642
870-445-2640
E-mail: omr@ozarkmountainregion.com
www.ozarkmountainregion.com

August 1, 2006

U[illegible] Corp of Engineers
Little Rock District
Attn: Mike Biggs CESWL-PM
PO Box 867
Little Rock, AR 72203-0867

RE: Increase Minimum Flows of White and North Fork Rivers

Mr. Mike Biggs,

Thanks very much for the ongoing detailed work committed to the White and North Fork river's water flow problems. All those involved agree that you have worked this job with passion and great effort to make available to our country's leaders thorough, most up to date, and accurate information available. Please add this letter to the list of those in support of giving our rivers a continual flow.

Here in north central Arkansas, we have had an issue regarding the water temperature and oxygen content levels of the White and North Fork rivers for over 25 years. Particularly during the hot Summer days, when the flows of the rivers are shut off, the water quality becomes unfit for trout to thrive, or even live in. The issue is of the highest importance to the economics of our community, as fishing below these two dams contributes over $160 million to the state economy. The fisheries also are highly responsible for our area's 2nd largest economic engine – retirement.

If either dam were constructed today, the engineering would be such to allow some river flow through at all times. There would never be consideration of completely stopping the flow of the river as it is now. We are not asking for any new construction. We are not asking for any special considerations. We are only asking that the dams be finished. Dam construction stopped during the 1950's without a small flow of the river to continue at all times. Let's finish the job now and get our minimal flow of river going through the bottoms of the Bull Shoals and Norfork Dams.

I am always available to provide further resources for your office's study. We also extend invitation to yourself and any staff to visit us in north central Arkansas. We will be glad to make your travel and meeting arrangements.

Sincerely,

Kelley J. Linck
Executive Director, Ozark Mountain Region Tourism Association

560 Sleepy Hollow Rd
Mountain Home, AR 72653

U.S. Army Corps Of Engineers,
Little Rock District,
P.O. Box 867,
Little Rock, AR 72203-0867

Attention: Mike Biggs

Dear Sir:

This letter is in response to a request by the U.S. Army Corps of Engineers for comments on the proposed White River Minimum Flow Reallocation plan.

First let me set the stage for what I think is the real intent here.

Some time ago there was a huge effort to impose a city tax (reportedly) to pay for advertising, etc., to bring more tourism (and money) into the Mountain Home area. This effort was soundly defeated. In my opinion it was nothing more than a scheme to get everyone to pay for lining the pockets of a few.

Now we have another group that wants us (the tax payer) to pay for lining the pockets of another few – businesses along the White River.

Lets talk about the negative aspect of this proposal – as I see them:

In dry years this proposal, if put into effect, lower the lake levels far lower than what we have recently seen.

As I see it, if this were to occur, there would be two choices: cut back on minimum flow or shut down the power generation. In the greater scheme of things cutting back on the flow would defeat the (supposed) intent of the proposal and the other will mean buying more expensive power elsewhere. Now we, the tax paying public, not only pay for installing this change but we will have also have higher power bills.

How will the increased flow affect the true "sport fisherman"? The one that wades out into the river and pits his ability against a wary trout. A substantial increase in the river flow would all but eliminate this type of fishing.

I am against the Minimum Flow proposal because it really promotes only one group – those that want to run up and down the river in motor- boats, be they private boats or those that are in it only for the money it brings them.

Yes, there are those that go on and on about the health of the river and fish under low flow condition and there is no doubt it does have some affect. But I have not read of any proponent of this proposal address the affect that all the outboard motors (pollution) have on the trout NOW. It would only get worse as the number of boats on the river increases.

The quality of fishing on the lakes and the river is a by-product of the dam and not its intended purpose. Like huge housing developments have ruined many nice areas, if business (money) is what is motivating this proposed change then both the lakes and the river will suffer the same fate.

In conclusion: if we are REALLY concerned about the fish and their environment I would propose a somewhat lowered Minimum Flow (from what is now proposed), or leave it as it is, but BAN all fuel burning boats on the White River (they should never have been allowed in the first place). Then we can make the White River a true environment friendly sport fishing river an there will be no negative affect on the lakes.

After all – we profess to be proud that we are the Natural State. Let us make our decisions where they need to be to prove this.

Sincerely, Robert Fern

Cc: U.S. Senator, Mark Pryor
U.S. Senator, Blanche Lincoln
Congressman Marion Berry
Congressman John Boozman
Senator Shawn Womack
Representative Johnny Key

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comm below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

1. Has there been a financial impact study done to determine the impact of minimum flow to businesses on Lake Norfork? If so, what are the results? If not, why not?
2. I understand the power company will receive payment from the Game & Fish to offset revenue loss due to minimum flow. If this is a correct statement, how much will the payment be, how often will payment occur, over what period of time, and is there a possibility of this payment increasing over the years?
3. From what source will the cost of the siphon tube be obtained on Lake Norfork?

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
Mike (Red) Van Scoyoc

Organization:
President-Lake Norfork Striper Club

Address:
3746 Hwy. 62 East
Mountain Home, Arkansas 72653

Home Phone: 870-492-4342

WHITE RIVER MINIMUM FLOW REALLOCATION STUD
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sh

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Reallocation Study, Draft Environmental Impact Statement (DEIS) please write yo below and send them to the address noted below or leave this form in the comme collection box at the Public Meeting.

It is not Fair for minimum flow o The People on the Rive- Knew that They got WAter when the Gates were Open And none when NOT when They built There. We Would have been over the Spillway IN 2002 And Drye- on The LAke IN 2005. We Live with It Why not Them? TAke WATer OUT of The LAKe NO MATTer how LOW it Gets And TAKe Flood CApacity AWAy for River WATer, IS ChAnging RUles in fAvor of One And CheATing The others. My BUsiness hAs been here Since 1944.

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME:
BLACKBURN'S, Report
~~Steven C. Street~~
Organization:
Norfork Lake Chamber
Address:
734 CR 989
Mtn Home, AR

CITY OF BATESVILLE

500 East Main

BATESVILLE, ARKANSAS 72501

Phone 870-698-2400

FAX 870-698-2406

JOE BIARD, MAYOR
DENISE JOHNSTON, CLERK
SCOTT STALKER, ATTORNEY

COUNCIL
R.L. CARPENTER
JOHN COOKE
FRED KRUG
DOUGLAS MATTHEWS
DANA MYNATT
JERRY PECTOL
STEPHEN K. SMART
PAULA TERRELL

June 12, 2006

White River Minimum Flow Project
C/o Mike Biggs
Planning Environmental & Regulatory Division
P. O. Box 867
Little Rock, AR 72203-0867

Dear Mr. Biggs:

The purpose of this letter is in regard to the White River Minimum Flows Environmental Impact Statement.

In brief, my question is what would be the impact to the Batesville Levee's flood protection level with the reallocation of flood storage from the White River Lakes if a 500-year event scoured.

Your reply will be greatly appreciated

Very truly yours,

Joe M. Biard

Joe M. Biard
Mayor

JMB/ss

ARKANSAS WILDLIFE FEDERATION

9700 Rodney Parham Road * Suite I-2
Little Rock, Arkansas 72227
501-224-9200 * 1-877-945-2543 * Fax 501-224-9214, awf@aristotle.net

"Your voice for conservation since 1936"

Jim Wood, Director
AR Wildlife Federation
56 Delaware Bay Road
Dardanelle, AR 72834
June 5, 2006

Mike Biggs
White River Minimum Flow Project
Planning, Environmental & Regulatory Division
PO Box 867
Little Rock, AR 72203-0867

Ref: Release of Draft EIS on the White River Minimum Flow Study dated May 2006.

Dear Mike,

We were recently informed that Little Rock District Corps of Engineers had released their Draft EIS document and solicitation of public review and comment for the White River Minimum Flow Study. On behalf of AR Wildlife Federation we are requesting that the Corps provide us with a free printed hard copy of this DEIS. Please send to Director Jim Wood at his above address. Thank You.

Sincerely,

Jim Wood, Director at Large
AR Wildlife Federation

cc file

Biggs, Mike L SWL
From: Biggs, Mike L SWL
Sent: Wednesday, June 14, 2006 2:24 PM
To: 'awf@aristotle.net'
Cc: Ellis, Jim D SWL; Rodgers, Michael R SWL
Subject: Draft EIS

Good Afternoon Jim,

In reply to your letter requesting a "free printed copy of the DEIS" we have to respectfully refuse. This project is out of funds, and is not in the FY07 Presidents budget. Printing costs for a copy of the report is $150 if you would like to purchase a copy. Charging for the documents is allowed by 40 CFR 1506.6 para. (f). "Materials to be made available to the public shall be provided to the public without charge to the extent practicable, or at a fee which is not more than the actual costs of reproducing copies required to be sent to other Federal Agencies, including the Counsel." 40 CFR 1502.19 requires that the entire statement be furnished to "Any person, organization, or agency requesting the entire environmental impact statement." We are complying with this requirement by making the Reallocation Report, Chief's Report, and Draft EIS available on a CD free of charge to anyone who asks for them.

The Corps of Engineers has made hard copies of the documents available at Beaver, Table Rock, Bull Shoals, Norfork, and Greers Ferry Project Offices. There are also copies available for public review in the Little Rock Corps' PAO office. In additions as stated above the Corps will furnish anyone who asks, a copy a free CD containing the Reallocation Report, Chief's Report, and Draft EIS. The documents are also available on the internet at http://www.swl.usace.army.mil/planning/draft_eis_wrmf_reallocation_study_may_2006.pdf

It is the Corps' intent to make the documents available to anyone interested in the Reallocation Report, Chief's Report, and Draft EIS. We believe we have fulfilled that intent by providing the documents free of charge as described above. However, due to the considerable cost of reproducing hard copies of the documents, and the lack of Minimum Flows Study funds we feel that those individual/organizations should pay reproduction costs. If we have other requests for hard copies of the documents, we will ask for reimbursement from them also.

If you have further questions or comments please contact me.

Regards
Michael L. Biggs, P.E.
Programs and Project Management Div.
Little Rock District Corps of Engineers
phone: (501) 324-5842 x 1071
mobile: (501) 749-5248

1 OF 5

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
COMMENT SHEET

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

My Bull Shoals dock permit number is 2054 and I'm concerned about a problem, which **will** exist when the lake level is at or above 659.

The area in concern is to the West of the boat-loading ramp at the A.B Fine subdivision.

The East cable that secures the first dock West of the ramp will cross the ramp making it nearly impossible to **safely** launch a boat.

The West cable of said dock will cross the dock access road serving all the docks West of said dock thus blocking this road and making **safe** access to these docks an issue.

The elevation of the road at said dock is 660.5 and increases in elevation as you go west on the road.

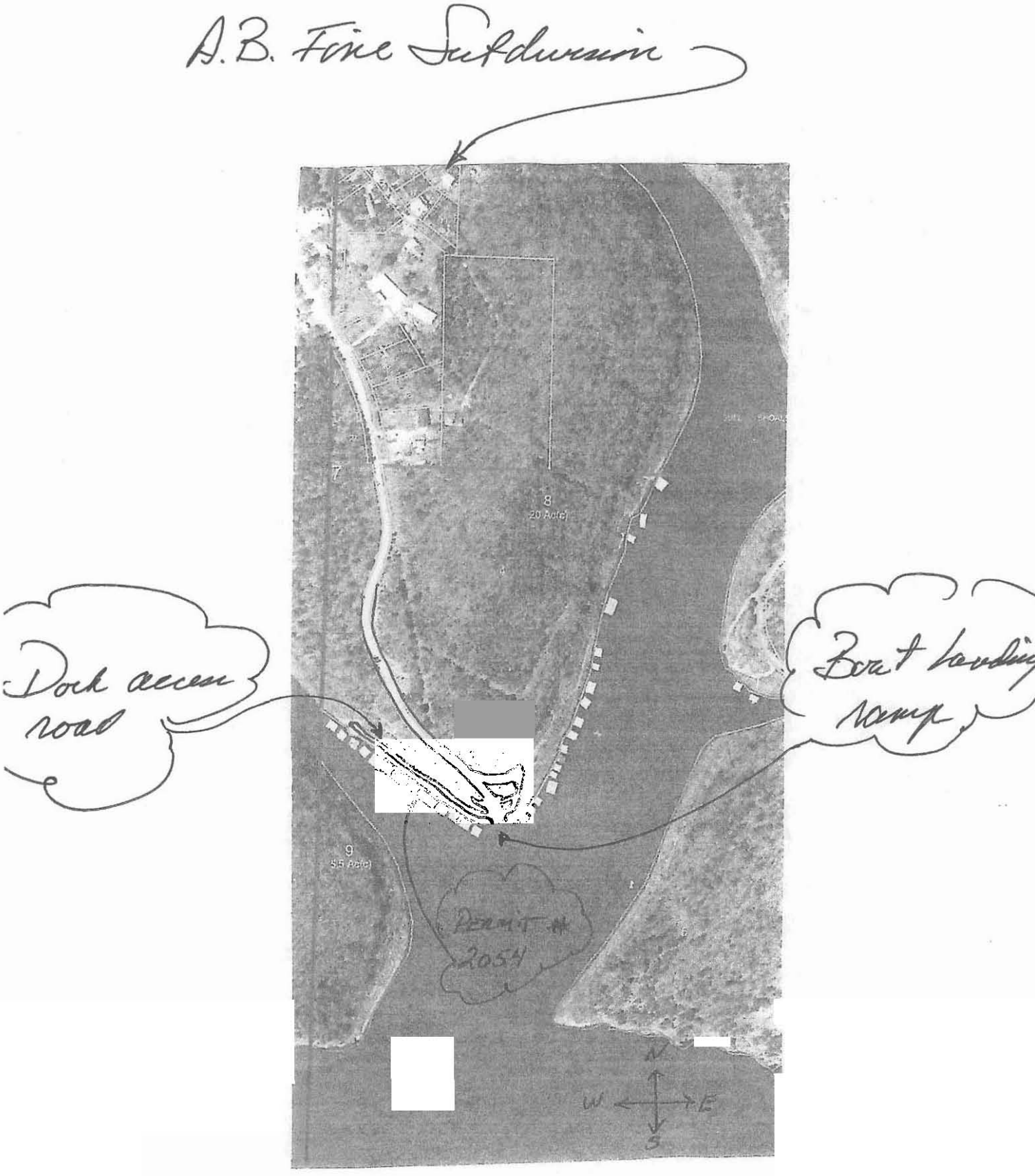
The Elevation at my dock (2054) is 661.5

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
Attn. CESWL-PM
(Mr. Mike Briggs)
P.O. Box 867
Little Rock, Arkansas 72203

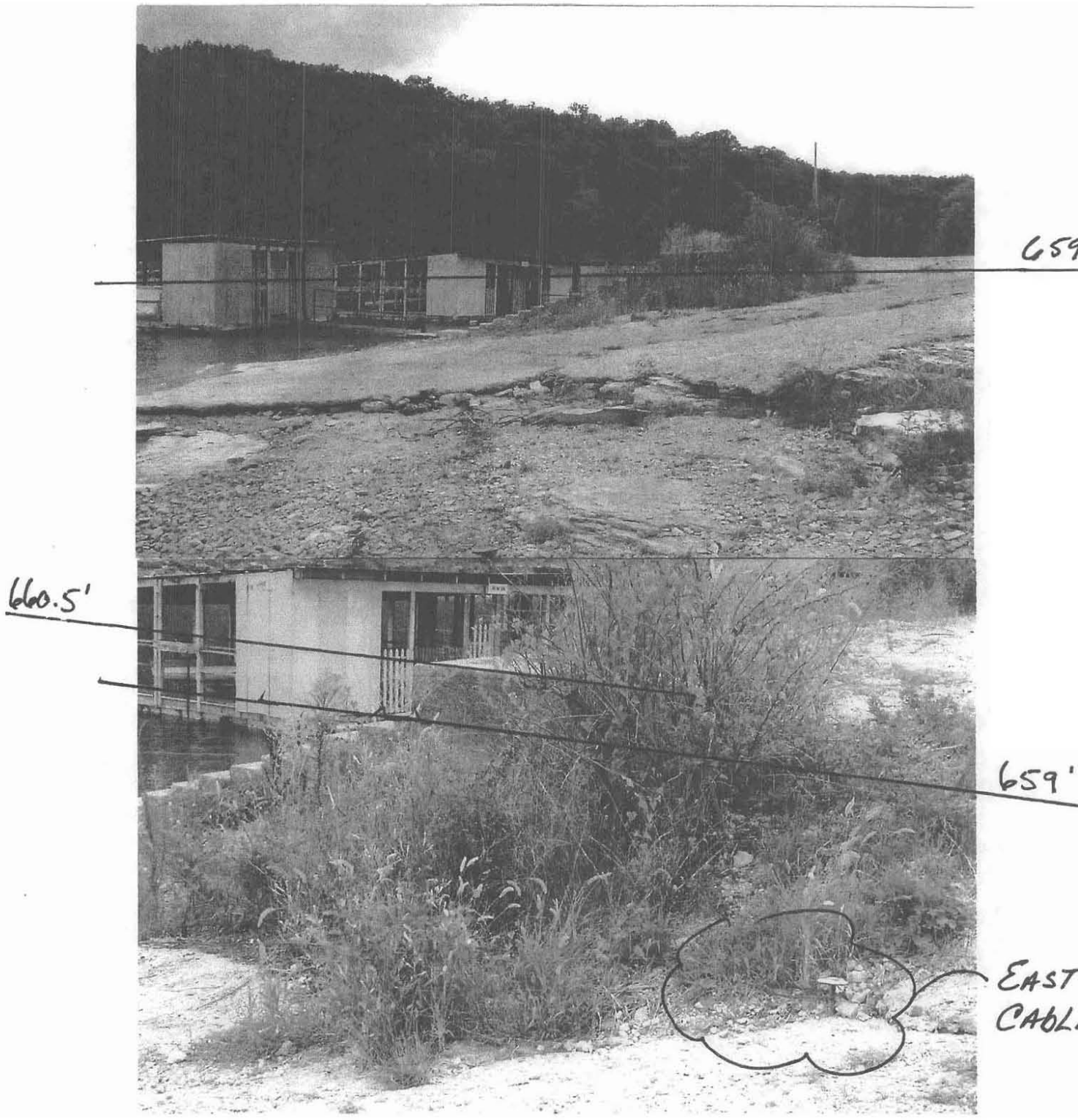
YOUR NAME:
Michael P. Gurke
~~Organization:~~
MICHAEL P. GURKE

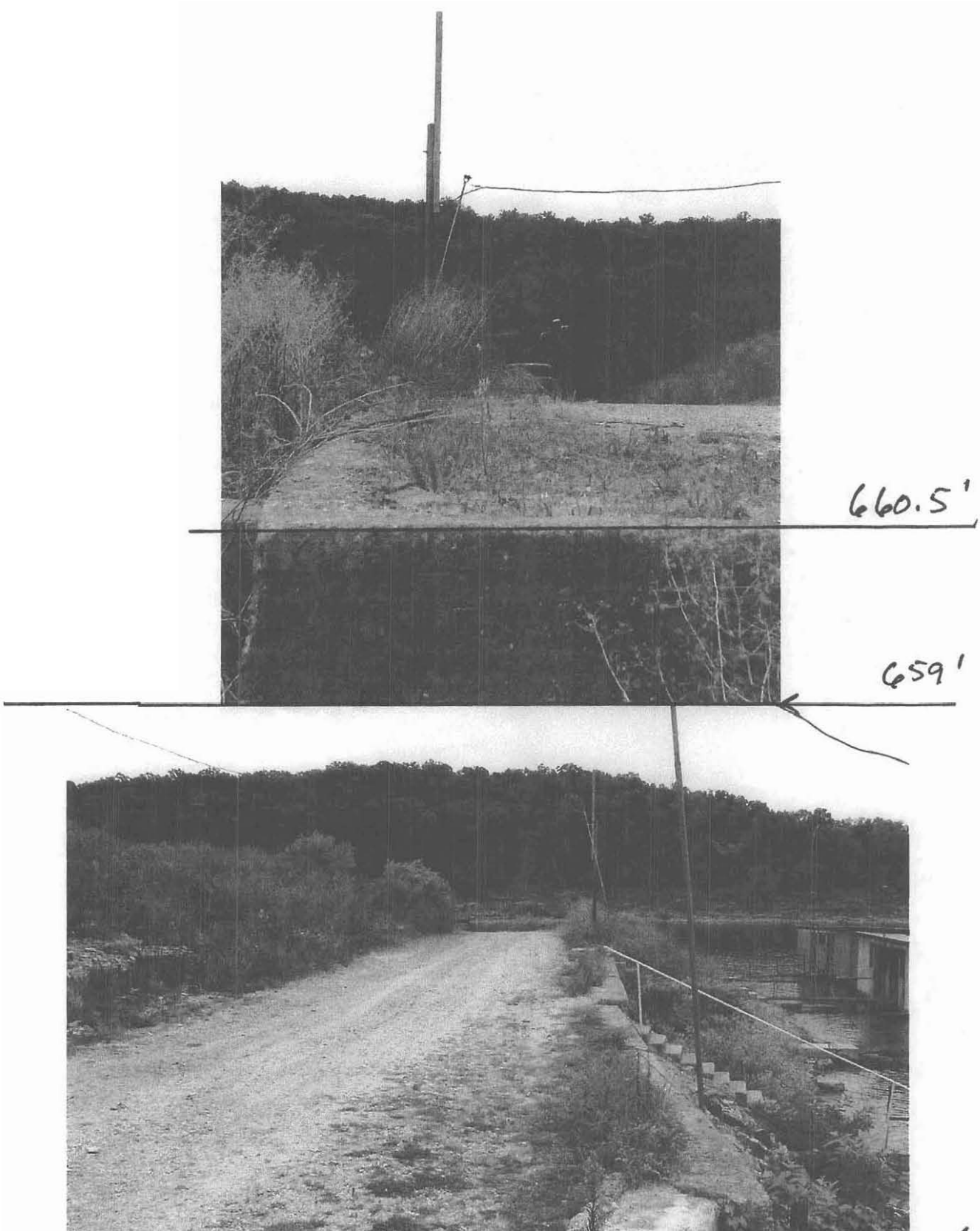
Address:
370 WHIPPOORWILL TRA
CEDARCREEK, MO., 65627

2 OF 5

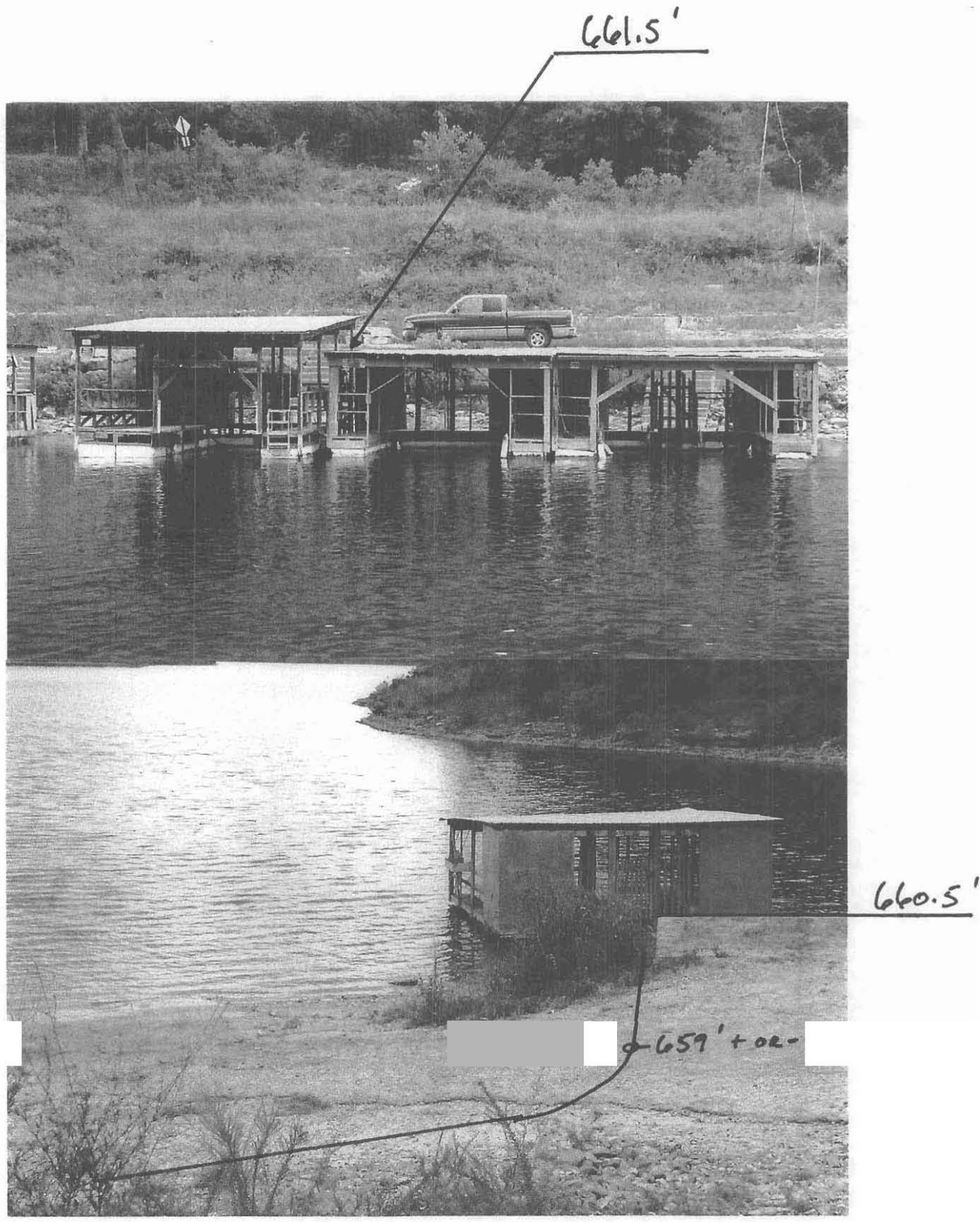

A.B. Foxe Subdivision
Dock access road
Boat landing ramp
PERMIT # 2054
7
8
20 Acre
9
5.5 Acre
N
W
E
S

3 OF 5




660.5'
659'

5 OF 5



August 10, 2006

White River Minimum Flow Reallocation Study Comment

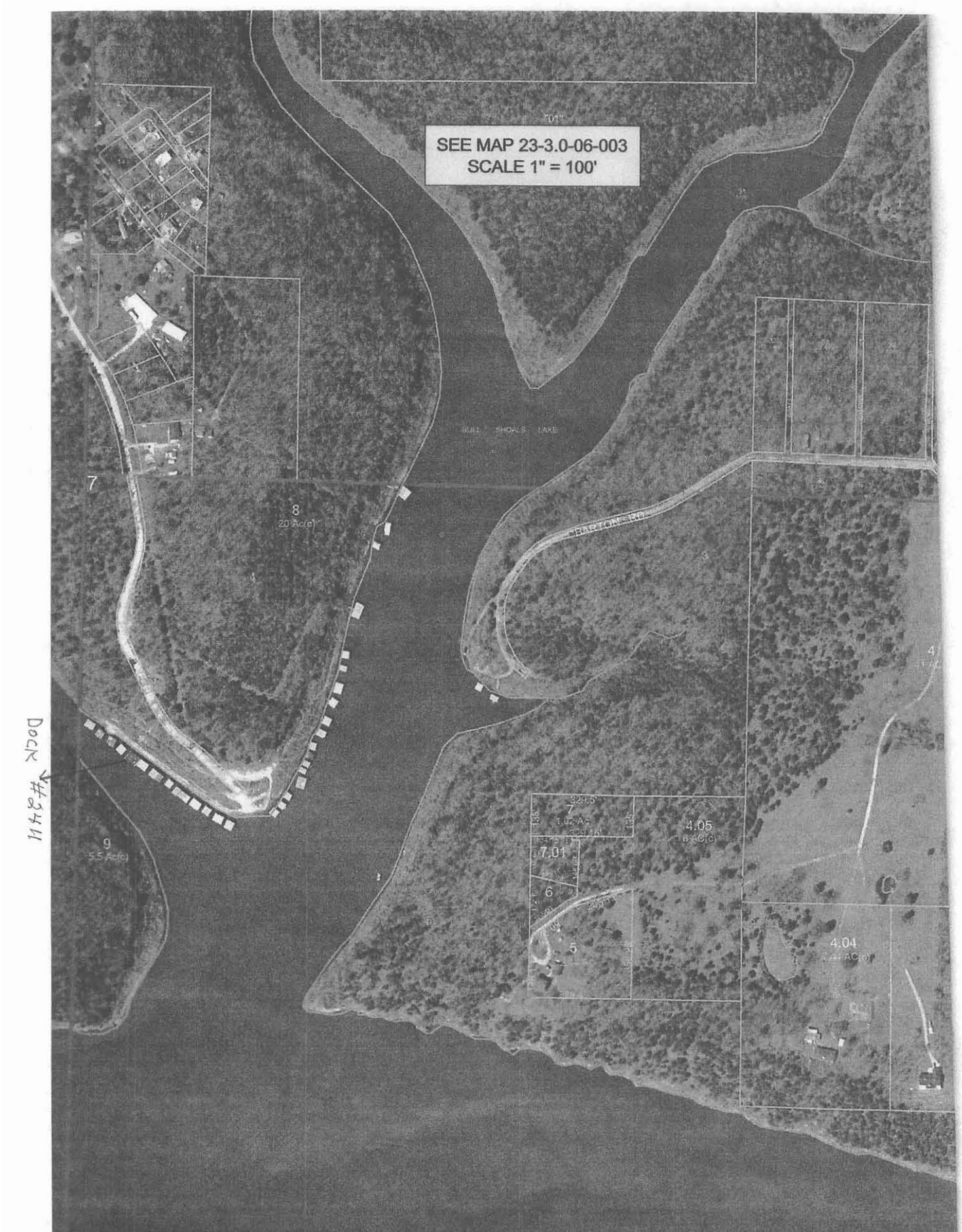
Attention:
CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

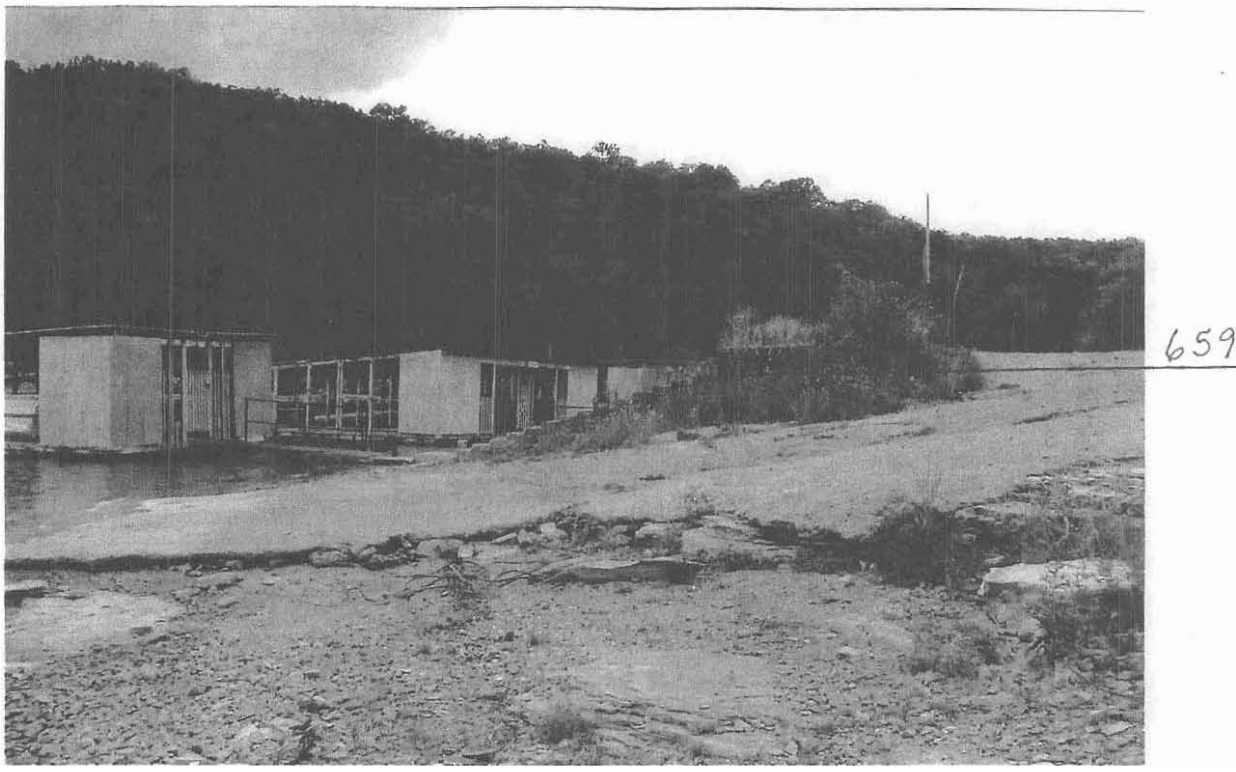
Dear Sir,

I attended the public meeting on August 3, 2006 held at the Taney Center, near Forsyth, MO. I appreciate the information that you provided and would like to state my reasons for opposition to the increased power pool level of 659 ft.
Our family has owned a boat dock permit #2411 for many years. Our dock location is in the A. B. Fine Subdivision area near point 32 near Cedar Creek, MO. Enclosed is an aerial map showing my dock and approximately 14 other docks that will be impacted with higher water levels.
The access road to said docks is an extension from the main road that acts as our boat ramp. At 659 the majority of our boat ramp and the start of our access road will be under water. After the road turns west from main road it rises to an elevation of 660.5 ft. at the start of a concrete bulkhead which is the lakeside of the road. The road rises gradually to approximately 661.5 ft. in front of my dock. (See enclosed map and pictures)
Not only the higher water level at the start of our road but the fact that mooring cables have to cross the main road at this elevation, renders our road unusable and any boat launching extremely hazardous.
We have had water over our roads many times and as you know in some years by many feet. I realize in wet years we will have higher levels but I feel that trying to maintain an extra 5 feet will greatly multiply that problem.
Because of the lack of adequate parking, tremendous safety concerns in boat launching and accessibility to boat docks, we oppose the plan for the higher water level. We would request, that if this proposal is accepted, we could be assured that the Arkansas Fish and Game, which we understand is the sponsoring agency, would relocate our road to a higher elevation. It was my understanding from the above stated meeting, that this would be a reasonable request.
I am looking forward to your response.

Sincerely yours,

Ron Robinson
583 McKee Drive
Cedar Creek, MO 65627
417-794-3377
E-mail...mammer@tablerock.net


SEE MAP 23-3.0-06-003
SCALE 1" = 100'
GULL SHOALS LAKE
BARTON
7
8
20 Ac(±)
9
5.5 Ac(±)
7
1.02 Ac±
7.01
6
5
4.05
4.04
Dock #3411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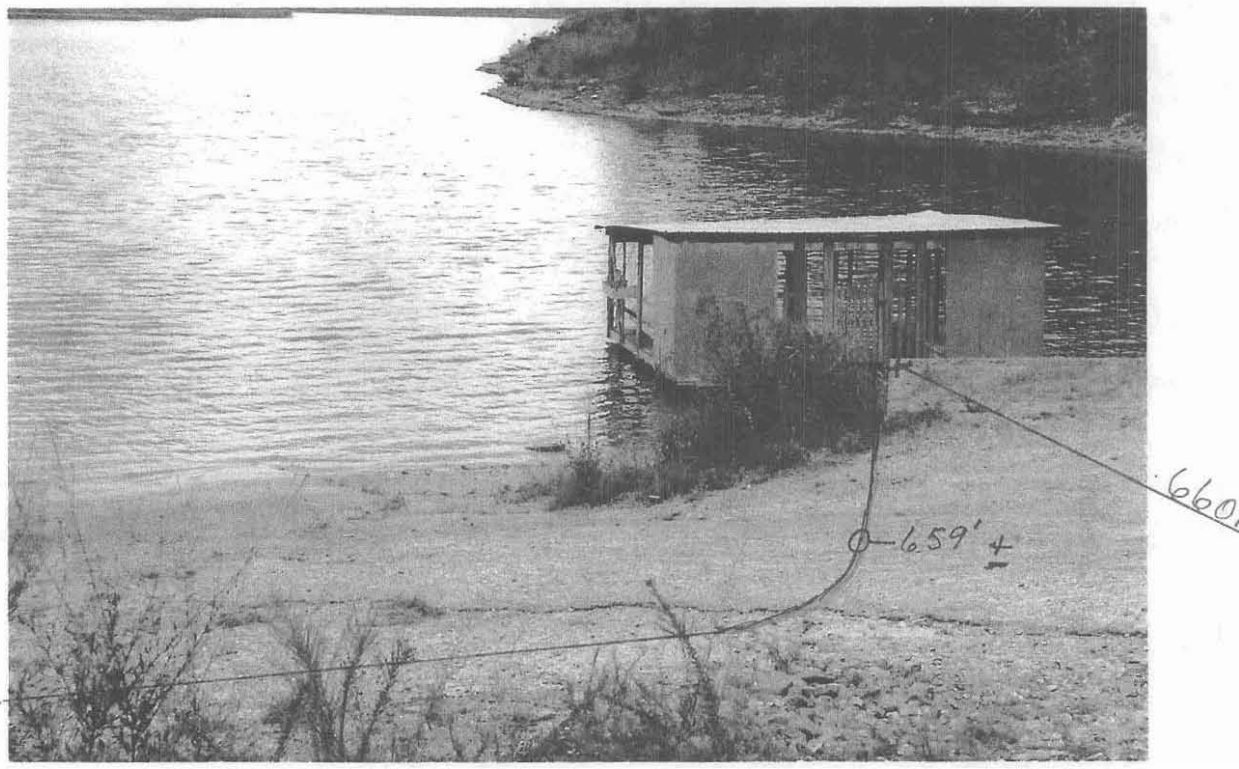

660
659' ±

FROM : FAX NO. :4176752476 Aug. 03 2006 02:53PM P2

WHITE RIVER MINIMUM FLOW REALLOCATION STUDY
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Comment Sheet

45-Day Public Review Period

If you are interested in providing comments concerning the White River Minimum Flow Reallocation Study, Draft Environmental Impact Statement (DEIS) please write your comments below and send them to the address noted below or leave this form in the comment sheet collection box at the Public Meeting.

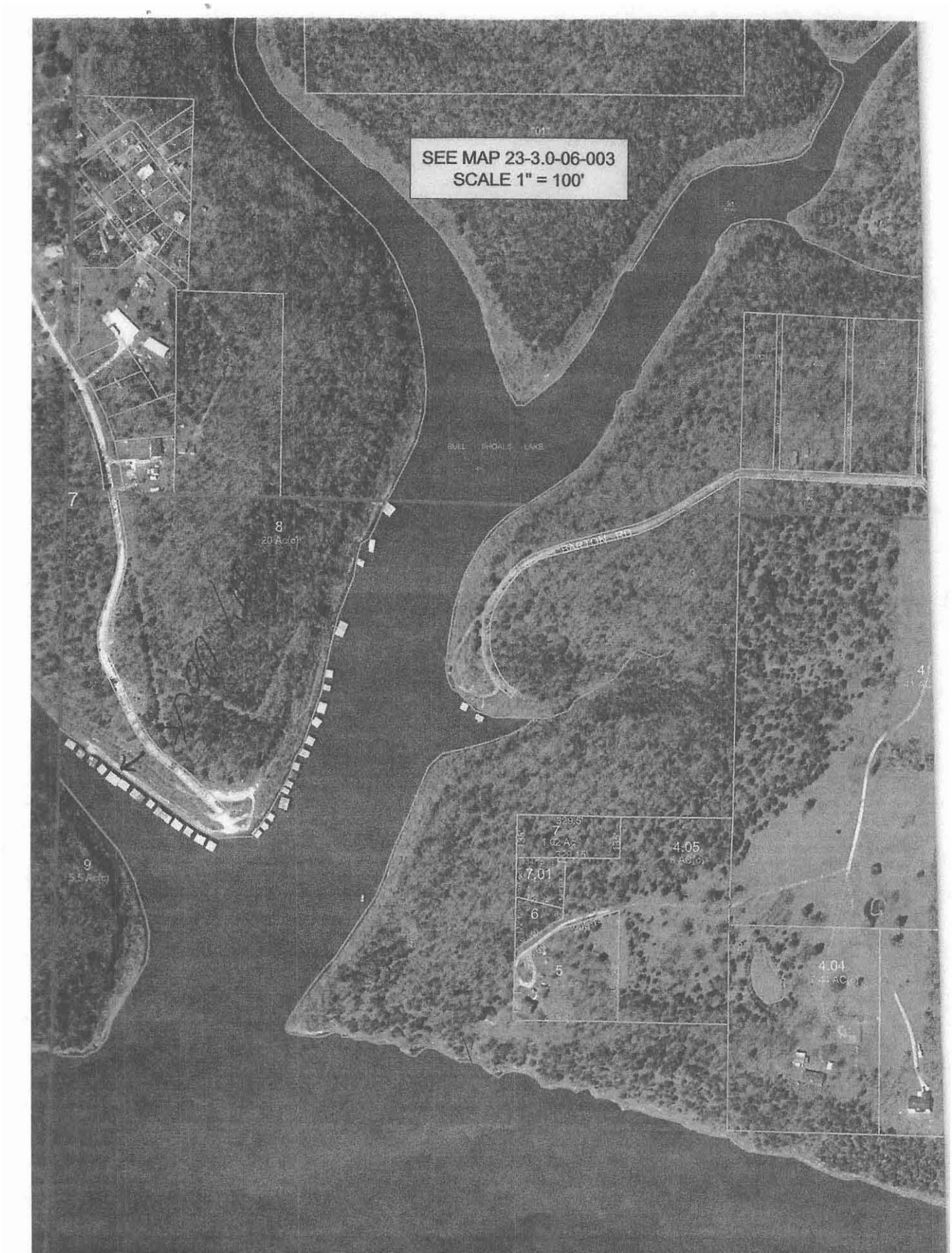
I attended the Public Meeting 8-3-06, I Wish to express my opposition to increase the power pool to 659 ft. I have had a dock at the AB Fine rd. near point 32 for over 40 yrs. The 659 level will close the road to my dock as well as several others. The 654 level floods the road part time but their are a lot of times when the 654 floods it does not get to 659. If this change comes about it will flood a lot more, The building around this lake has been build on a 654 level, if that is changed to 659 it will be bad for a lot of People. Allthough you said the Arkansas game & Fish and the corps would change the rd. at their expense I do not believe that will happen, I hope the corps will change their mind and leave the lake at the 654 level where it has been since it was build,

SEND COMMENTS TO:
US Army Corps of Engineers
Little Rock District
ATTN: CESWL-PM
(Mr. Mike Biggs)
P.O. Box 867
Little Rock, Arkansas 72203

YOUR NAME: Ray Edwards

Organization:

Address: 4273 St. Hwy M
Cedar Creek, MO. 65627


SEE MAP 23-3.0-06-003
SCALE 1" = 100'
BULL SHOALS LAKE
7
8
20 Ac(±)
9
5.5 Ac(±)
7
1.02 Ac±
4.05
7.01
6
5
4.04

I have fished the White River
all my life. In my opion
the minimum Flow Project
is a big wast of money

Hank Tilley

Email Comments from Individuals and Corresponding Responses

There were 63 email comments sent in during the public review period. 18 comments were for the project; 26 were against; and 19 simply asked questions pertaining to the project. Email Comments received by individuals on the Draft Environmental Impact Statement were in many cases similar in context. Therefore individual comments were grouped together and responded to on the following page. The actual email comments are listed following these response pages for the reviewer's information.

Comment: If the first priority of Norfork dam is flood control why are they taking away dam surge capacity to give the rivers steady flow? Keeping the level higher in the spring will cause more floods like 2002……

Response: Albeit minor, additional elevations along the lake shore will be flooded. SUPER model maximum events (historic floods) show Bull Shoals to be 0.3-feet higher and Norfork 0.1-feet higher with minimum flows. Essentially the change to flood fighting capability is not measurable.

Comment: Who is going to pay for the relocations (marinas) and park improvements that will be required due to higher water levels on the lakes?

Response: The State of Arkansas, most likely the Arkansas Game and Fish Commission. Section 132 of the FY06 Energy and Water Development Act requires the non-Federal interest (most likely Arkansas Game and Fish Commission) to provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities as determined by the Secretary in consultation with the non-Federal interests.

Comment: In brief, my question is what would be the impact to the Batesville Levee's flood protection level with the reallocation of flood storage from the White River Lakes if a 500-year event occurred?

Response: The impacts to the Batesville Levee's flood protection level, due to the reallocation of flood storage of 5-ft from Bull Shoals and 3.5-ft from Norfork, would be negligible for a 500-yr flood event. Based on the computed flow frequency at Batesville, using the HEC-STATS program, the 500-yr flood event is calculated to increase by 458 cfs (0.11%), or about 0.02 feet, due to the proposed reallocation of flood storage from Bull Shoals and Norfork. The 500-yr stage for simulation W01x01R (413,588 cfs) is 33.652 ft and for simulation W06x03 (414,046 cfs) is 33.672 ft. Essentially the change is not measurable.

From: 101 North Resort [mailto:johntimblin@centurytel.net] **Sent:** Friday, June 23, 2006 8:21 PM **To:** Minimum.Flow.Project SWL
Subject: Impact of the Minimum Flow / White River Project

Dear Sirs,

We are operators of a resort business dependant on recreational users of Norfork Lake. We are sensible that the legislation which allows for the consideration of recreation as a legitimate use of water stored in Norfork Lake is a break with the original Corp Mandate for the Norfork and Bullshoals Dams. We are gratified that some concession to this very important industry has been recognized and to some extent accommodated. Still, is it not possible to set some limit or baseline for drawing off water from the lakes? This may require some additional legislative language and a further recognition of recreation in more “blue collar” terms. This could be called Maximum Draw to facilitate Minimum Flow.

John & Mellinda Timblin
www.101norforkresort.com

From: Alex Haynes [mailto:alexh@spectrumhighspeed.com] **Sent:** Thursday, June 08, 2006 5:01 PM **To:** Minimum.Flow.Project SWL
Subject: Minimum Flow Study

Sirs:

Regarding the minimum flow study for Beaver Dam:

1 Since WRDA 1999 & 2000 have been repealed by the 2006 ERWDA, does this mean that there currently is no minimum flow reallocation at Beaver Dam?
2 Assuming the above to be true, what does this imply for the proposed trout facility below the Dam?
3 How might a minimum flow reallocation for the trout facility at Beaver Dam be re-approved at this point?

Alex Haynes

From: Bill Gambardella [mailto:jelfams@verizon.net]

Sent: Tuesday, July 18, 2006 6:21 PM
To: Minimum.Flow.Project SWL
Subject:

To Whom It May Concern,

I have been vacationing in Arkansas specifically at Lake Norfork for over thirty years. The reason I come is for your lake and beaches that Bull Shoals does not provide. Your area has so much to give that several of my friends have moved to your area to work or retire. The beaches are an asset to your area. It would be wrong to do anything that would destroy or lose them.

Please think out your plans. The beaches are a real asset to your area.

Thank you, visitor from IL

From: Bill_Jones@markivauto.com [mailto:Bill_Jones@markivauto.com]
Sent: Wednesday, July 12, 2006 10:04 PM
To: Minimum.Flow.Project SWL
Subject:

While all of the minimum flow project has pro's and con's, I think that the number one priority should be the water itself. With that I mean that serious thought should be given to the growth of the Northwest Arkansas area. I was born and raised here in the Fayetteville, Rogers area and have seen the growth first hand. I will be 37 yrs old this year, so yes I remember a time when this issue I'm talking about was not one. Everyday there are numerous new residences and new businesses turning on the faucet for the first time, more and more water is being drawn out of Beaver lake. I've not heard of any new water resources, such as another lake to be built in this area to help combat the extra usage that has been placed on Beaver,

just over the past 4 yrs of growth alone. Nobody is predicting that the growth is going to stop either.

With the recent drought conditions that this area went through, and could very possibly see again this year, I can't honestly say that I would be for minimum flow for the White River. I also believe that we could see a drought much worse than what we have just gone through. We all would be fooling our selves if we didn't think so. You see, I hunt out by St. Paul, AR, not too far from where the White River starts. I have hunted out there since I was 17 yrs old. There is a creek that flows into the White River that starts at the head of this holler, and therefore into Beaver and so on. In all of the years that I have hunted out there I have never once seen this creek dry. Until this past 05' hunting season, nobody from our camp could believe that it was dried up. I'm just trying to give you an idea that there are numerous small creeks and streams out in that area that help contribute to the White River system before it reaches Beaver Lake.

Now, I am sure that you folks are aware of the many tributaries that I have mentioned above, but when they dry up it is obvious that the White River alone cannot keep Beaver full enough for the water that is taken from it every day, along with the future growth of this area. I fully understand the money that is lost and/or could be made with the minimum flow issue, and the trout fishing industry. I am an avid fisherman myself and I enjoy going below Beaver dam and fishing. But, I feel that it is more important at this time to keep the flow levels the way they are, instead of letting water out just to keep the trout alive, and an industry of pleasure fishing making more money. Nobody is directly dependent on a trout for survival. Every one is dependent on water. With out water, you have nothing. If Beaver lake were swapped with one of the other lakes, I think would make a big difference also. The other lakes are not dependent on a single river for water replacement such as Beaver is. They have more and/or other tributaries feeding them along with the White river, and that makes a big difference as to how full or how quickly a reservoir can refill. I understand that the War Eagle, and the West Fork of the White river also run into beaver, but like I mentioned earlier, I grew up in this area and when you can see things on the lake bed that have not been seen for almost 30 years, the lake is too low. Especially for supporting a minimum flow project. So, unless another reservoir is in the works for Northwest, Arkansas some where, I think the minimum flow concept is a bad idea at this time for Beaver lake. Thank you for your time.

From: blackburnsresort@centurytel.net [mailto:blackburnsresort@centurytel.net] **Sent:** Thursday, July 13, 2006 1:02 PM **To:** Minimum.Flow.Project SWL **Subject:** Flood Control

If the first priority of Norfork dam is for flood control why are they taking away dam surge capacity to give the rivers steady flow? Keeping the level higher in the spring will cause more floods like 2002. Steven C. Street Mountain Home

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From: Bob Lassiter [mailto:boblaster47@yahoo.com] **Sent:** Monday, July 10, 2006 11:57 AM **To:** Minimum.Flow.Project SWL **Subject:** M/F

Please continue to look for possibilties for improving conditions for fish and wildlife on the White River. It is sad to see trout die because the river is too warm and lacks oxygen.

From: Boyd Goodner [mailto:bgoodner@unionequity.com] **Sent:** Thursday, December 01, 2005 2:37 PM **To:** Minimum.Flow.Project SWL **Subject:** Fishing

To whom it may concern, I have a simple question that I belive is being overlooked in the debate on whether or not this is plausable. How is the fishing going to change on both the White River and North Fork? I live in central Arkansas and enjoy traveling up to both fly-fish and float. Just through my observations of recently made trips, I have noticed the hundreds, maybe thousands of fly-fishermen that come to this area during the year. I am aware that when either dam begins to generate that the fishermen leave until the water levels have subsided. Does this mean that it will tremendously hurt the fly-fishing and attraction of trout fishing to this area and what steps will be done to insure that fly-fishing will still be a valued part of this north Arkansas area? Thanks, Boyd

---

From: Byan & Julie Houser [mailto:houserb@charter.net] **Sent:** Friday, June 09, 2006 1:43 PM **To:** Minimum.Flow.Project SWL **Subject:** This sounds really good

I have read the pros and cons about minimum flow and have concluded that it would be a good thing for all concerned. The cost is relatively small and should help out a great river asset. thank you Byan Houser

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From: cdowney [mailto:cdowney@ipa.net] **Sent:** Monday, July 17, 2006 11:48 AM **To:** Minimum.Flow.Project SWL **Subject:** comments

Since trout fisheries were established to mitigate the loss of warm water fishing due to dam construction along the White River, and healthy trout fisheries require a quality of water related to flow and temperature, it is logically appropriate to furnish the minimum flows needed to sustain these fisheries. Up until this point, it has been somewhat like planting a beautiful garden then withholding the necessary water that the garden requires to thrive.

There is however, an objection I must voice in this matter and that relates to the ***withholding of minimum flow water from the Beaver Tailwaters***. I understand that the "trade off" was made under the guise of Beaver's proposed trout hatchery. However, I find that tradeoff rather ludicrous as there is no hatchery, and no movement towards one in the foreseeable future. The trout waters at Beaver represent a significant fisheries for Northwest AR, an incredible economic investment and source of income, from local anglers and tourists, for many in western Carroll County, as well as Benton and Washington counties.

I urge the inclusion of Beaver Dam tailwaters in the minimum flow study. Should there ever be a trout hatchery built, the water from minimum flow could be taken into account when calculating the water needed for the proposed hatchery. This hatchery has been less than on the "back burner" since John Paul Hammerschmidt's bill decades ago; it has been in the back cupboard, and only within the past few years has it even been given a mite of attention by those responsible for its building and operation. There is no funding, no signed agreement by the AR Game and Fish to operate the hatchery, no construction plans and no sense of priority by the AR Game and Fish Commission to make this a reality. The hatchery may never be realized and in the meantime, Beaver suffers. Please put Beaver back on the table for inclusion in the study.

Thank you,

Charlotte Downey
P.O. Box 658 Eureka Springs, AR 72632

From: DONALDLHOWE@aol.com [mailto:DONALDLHOWE@aol.com] **Sent:** Tuesday, August 15, 2006 9:54 PM **To:** Minimum.Flow.Project SWL **Subject:** EFFECT OF PROPOSED NEW WATER LEVELS IN BULL SHOALS

MY SISTER AND I OWN TWO BOATDOCKS IN TRIGGER COVE. THEIR PERMIT NUMBERS ARE 2164 AND 2592. I HAVE A ROAD THAT I CAN USE TO ACCESS BOTH OF THEM. THIS ROAD WILL GO UNDER WATER AT A LAKE LEVEL OF 658. THESE DOCKS HAVE BEEN IN PLACE SINCE 1968 AND 1978. USE OF THE DOCKS WILL BE LOST IF THE ACCESS ROAD IS COVERED.

From: Doug Lane [mailto:lane5611@bellsouth.net] **Sent:** Monday, August 14, 2006 11:51 AM **To:** Biggs, Mike L SWL
Subject: Minimum Flow

Dear Mr. Biggs:

My name is Doug Lane and I live in Terry, MS. My family and I have been visiting the Ozark Region of Arkansas for over 25 years. We have especially enjoyed trout fishing on the White and Norfork rivers. We actually have enjoyed it so much we have purchased two pieces of property in the area, one in the town of Norfork and one just south of Norfork. We support the effort to implement minimum flow on the White River system.

Sincerely,

Doug Lane

From: ernest.schroeder@sbcglobal.net [mailto:ernest.schroeder@sbcglobal.net] **Sent:** Wednesday, August 02, 2006 4:16 PM **To:** Minimum.Flow.Project SWL **Subject:** Comments for minimum flow study

I am a property owner in Henderson Arkansas with a home that adjoins the Corps property of Lake Norfork. Low lake levels have a negative impact on our enjoyment of the lake and property value. I would not like to see the lake lowered to improve fishing in the rivers downstream of the dam.

Ernest Schroeder 82 Float
Creek Henderson, Arkansas

-----Original Message-----
From: Ethan Wright [mailto:ejwright@SWMAIL.SW.ORG] Sent: Thursday, February 24, 2005 3:59 PM To: Minimum.Flow.Project SWL Subject: RE: minimal flows in Arkansas tailwaters

To whom it may concern,

I'm not sure this will be of any assistance, but the Guadalupe River Trout Unlimited recently with the help of the Army C of E has implemented a minimal flow on the Guadalupe River in Texas (only TX river to have year-round trout fishing). Again, don't know if this will help but may be of some benefit. Some of their benefits are limited due to the high summer temps and the high winter temps and the less

capable flood capacitance. Anyway, if at all possible I'd like to support this minimal flow in any way if I could.

Thanks, Ethan J. Wright

From: Fish & Fiddle [mailto:fish-fiddle@centurytel.net] **Sent:** Wednesday, July 12, 2006 4:38 PM **To:** Minimum.Flow.Project SWL **Subject:** our feelings on the minimum flow project

After reading the studies down on the minimum flow project for the White River, we feel that there has not been any regard for the lakes. The project will affect the Rivers in a very positive way but it seems that there has been no concern for the Lakes. There would be considerable expense involved in having new parking lots, having our cables extended if need be and other very expensive items that we are not being compensated for. How can we make excellent trout fishing on the rivers better? What about the effects on the lake fishing?

Therefore, we are against the minimum flow project. If there would be a study down on the effects to our lakes, and we would be compensated for the items that would need to be changed we would re-consider.

Sincerely, Roger & Joanne Boskus Fish & Fiddle Resort 880 Fish & Fiddle Rd. Mountain Home, AR. 72653 1 870 491 5161

From: Foxpom@aol.com [mailto:Foxpom@aol.com] **Sent:** Tuesday, August 15, 2006 12:55 AM **To:** Minimum.Flow.Project SWL **Subject:** Concerns

To Whom It May Concern:

I am in the process of purchasing a home near the Norfork Lake and have just recently been informed of this minimum flow project. My family is moving to the area for the sole purpose of recreation boating in Norfork Lake. We have been coming to Norfork since the early '60's and have always enjoyed the beaches particularly in the Jordon area and Robinson Point. Putting in the boat and/or pontoon has only been a problem once during that time during an extreme drought but now I'm concerned that the water level will at times cover the normal recreation areas and at other times be so low that accessing the lake would be extremely difficult if not impossible. I fear that I have saved for over 40 years to have my dream home as close to the lake as I could afford and now we have this problem of minimum flow. What will this do to the

home values? What will this do to boat docks and boats that remain in the lake year round? Will it be a continuous battle of moving docks and boats up and down?
Another concern is what will happen to the beautiful homes on Mallard Point? Will they be flooded then marooned as the water goes up and down at the discretion of the Corps of Engineers and their minimum flow?

Not being an avid trout fisherman, I find it shocking that an entire lakeshore would be put in jeopardy for trout fishermen below the dam. Is trout fishing that bad or are they just wanting to catch more fish easier?

Also why was the original study for several lakes but now it seems to be limited to Norfork.

I feel I must object to this project as I see no particular benefit except for trout fishermen to stroke their egos.

Sincerely, Jacqueline Howell 3561 Swan Circle South Arnold, MO 63010

-----Original Message-----
From: Frank & Loretta Zortman [mailto:mockingbird@centurytel.net] Sent: Tuesday, August 08, 2006 11:16 AM To: Minimum.Flow.Project SWL Subject: Remember the Norfork Lake Businesses Too

To Whom It May Concern:

My family and I own a resort on Norfork Lake. I am not vehemently against minimum flow (as I understand it today), but my worry is for the lake, and the businesses that depend on it (including us). Will it negatively impact our dock; the parking area by the dock; the boat ramp at George's Cove?

My point is -- Please don't sell out the lake tourism businesses for the benefit of the river tourism businesses. Help protect us, too.

We appreciate all you do.

Sincerely,

Loretta Zortman Mockingbird Bay Resort 870-491-5151 www.mockingbirdbayresort.com

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From: Gary & Carol Burr [mailto:ll9burr@conwaycorp.net] **Sent:** Sunday, June 11, 2006 8:52 AM **To:** Minimum.Flow.Project SWL

Subject: Flow

Have camped numerous times at Bull Shoals State Park and was unable to launch boat account to little water flow. Im for maintaining a minimum flow. Gary Burr ll9burr@conwaycorp.net

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From: Gene Long [mailto:laelel@sbcglobal.net] **Sent:** Saturday, June 24, 2006 11:15 AM **To:** Minimum.Flow.Project SWL **Subject:** Lake Levels

Being a property owner and concerned about the low lake level, specifically Beaver Lake, the last couple of years, how would a minimum flow adversely affect an all ready major problem for dock owners and an ugly shore line? Lael Long

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From: Howell, Roger D SWL **Sent:** Friday, August 04, 2006 2:29 PM **To:** Hiser, Jonathan A SWL; Case, Mark J SWL; Fancher, Tracy N SWL **Cc:** Moore, Mark W SWL; Biggs, Mike L SWL **Subject:** Minimum Flow Public Mtg - Taney County, MO 6-3-06

All,

Mark Moore and I attended the Minimum Flow Public Meeting at the Taney Center in Forsyth last night. Forty six people were in attendance including Mike Biggs, Mark Oliver (AG&F), Taney and Ozark County commissioners, and rep. from Empire Electric. The meeting was held from 7-8:45 p.m.

Most of the concerns expressed were about the economic impact to Forsyth/Taney County due to an increase in flooded area such as Shadow Rock Park and Slough Hollow Road. Loss of revenue from Shadow Rock Park and the cost to raise existing roadways were some of the comments. Mr. Biggs encouraged everyone to give specific locations and elevations of potential locations that might be negatively impacted for specific review and that all requests would be responded to. Mike did a great job in providing the information and fielding questions from the audience.

After the meeting the Taney County commissioners expressed to Mark Moore and I their appreciation for the good working relationship with the Corps.

From: james1@jrhunterconst.com [mailto:james1@jrhunterconst.com] **Sent:** Wednesday, June 07, 2006 3:48 PM **To:** Minimum.Flow.Project SWL **Cc:** 'A. B. Davidson JR' **Subject:** MINIMUM FLOW

I strongly support minimum flow.
James R. Hunter, Sr.
Interested Trout Fisherman

From: Jody [mailto:jdemo@kc.rr.com] **Sent:** Sunday, June 04, 2006 1:04 PM **To:** Minimum.Flow.Project SWL **Subject:** Main Question

My main question's are…..

1. With the low lake levels we are experiencing today, will this negatively affect the Beaver Lake's water level going forward? With the expansion of Northwest Arkansas and it's demand for water, it seems lake home owners with docks will be paying a price going forward. Will this negatively affect our home values by decreasing our Lake Front and access to the lake? Will
   the lake consistently run lower lake level's from year to year?

2. Also, it looks as if you re-allocate water from the flood pool, that would actually increase the average water level from year to year? Is that a correct assumption, and how do we have a say in this?

Respectfully,

Thomas and Jody Demo
Clifty Area of Beaver Lake

From: JohnTWeber@eaton.com [mailto:JohnTWeber@eaton.com] **Sent:** Wednesday, July 26, 2006 2:19 PM **To:** Minimum.Flow.Project SWL **Subject:** NO to minimum flow

I have been coming down the Norfork Lake my whole life and have now moved my family here to enjoy the beautiful water and beaches. Your report on minimum flow states that the Norfork

lake water level is going to be raised. What is the impact will this have on the Norfork lake beaches, public areas, and camp grounds around the lake? Also what impact will this have on natural beaches on the Norfork Lake. I don't see this talked about in the study. This could result in huge financial losses if these areas are under water during the summer months, which is when the water is the highest.

I already have a hard time getting to my boat at the local marina in high water. I would like to know what improvements the government is going to make on the area beaches and roads within the Corps/Government Property. The access roads and parking areas need to be as easy or easier than it stands today. Where is this study at?

At times when the water is high, I can not even get to some launch ramps or beaches and now you want to raise the water higher! That make no sense, unless you have big plans to upgrade roads and parks to handle the higher water.

I am also an avid trout fisherman and don't see the benefit of minimum flow on the Norfork River. The river already has a minimum flow. The river is still going to have the same dramatic changes when the two generators are turned on. Where in the report does it state that the trout population is going to dramatically increase and the trout are going to be bigger after this is implemented.

Minimum flow is about someone on the river being able to take his boat up and down the shoals at all times.

Minimum flow has no guaranteed benefit for the community.

I SAY NO TO MINIMUM FLOW!!!!!

John Weber
Senior Manufacturing Engineer
Eaton Corporation
Hydraulics Operations Fluid Conveyance Division 1830 Highway 201 South Spur Mountain Home, AR 72653 Phone: (870) 424-9163 Fax: (870) 424-9342 Mail to: *johntweber@eaton.com*

From: jtstrick@usit.net [mailto:jtstrick@usit.net] **Sent:**

Monday, August 07, 2006 2:27 PM **To:** Minimum.Flow.Project SWL **Subject:** Minimum Flow Questions

Dear Sirs:

I have not been able to attend any meetings personally but have read extensive articles (and ads) in the Baxter Bulletin concerning Minimum Flow. I am very unsure and concerned about the project as I have been very happy with the fishery for the past 25 years and tend to take a "if it's not broke, don't fix it" approach.

With that being said, I have a selfish question. I live on the White River about 3 river miles downstream from Bull Shoals Dam and want to know exactly what minimum flow will do for me and that area that close to the dam. As I said, I have been fishing in that area for 25 years and always wade and fly fish. Since I always wade fish, I do not fish with one generator running because I cannot safely get to my favorite fishing locations. So one main question I have is how much difference will today's environment of NO generators running and the potential future environment of minimum flow. What will the increase in water be that close to the dam?

Also, I would appreciate any additional information you could provide about how the

fishery will improve in the first three miles of the White River below Bull Shoals Dam.

Thank you,

Tommy Strickland

jtstrick@usit.net

-----Original Message-----
From: Larry Vickery [mailto:lvickery@gmail.com] Sent: Monday, February 28, 2005 12:28 PM To: Minimum.Flow.Project SWL Subject: Bull Shoals Dam Minimum Water Flow

As a frequent visitor to the tailwaters of Bull Shoals Dam, I support the desire of many to see a minimum flow policy to protect downstream environmental adjustments made necessary by the building of this dam and the subsequent change in downstream water temps.

From: Larry W. Moore [mailto:lwm@grnco.net] **Sent:** Thursday, July 13, 2006 8:48 AM **To:** Minimum.Flow.Project SWL **Subject:** Personal Comment

First of all I use the lake side of the dams as well as the tail waters. I can see no reason allocation of stated water for min. flow would adversely impact the lakes. I have seen Norfork as high as 580' as well as its lows last winter. I cannot see how minimum flow would hurt the lakes or people who use the lakes including the lake marinas. On the other hand I fished the White last week and one day it was up a bit and the next day the boat was dragging bottom. This is expensive to river users considering the rocks and boulders attacking boat fishermen.

In my humble opinion, I see minimum flow as an opportunity to return the White River a little closer to the way it was before the dams. Sure it will never be anything but a cold water fishery, but at least it would have flow at a minimum reasonable level. I own property in the Piney/Mill Creeks area. When the White River goes through it's lows, it is common to find trout as far as a mile or so up Piney Creek. Trout are seeking colder water Piney and Mill offer when the White bottoms out and water temperature rises. As a sportsman and user of both ends of the Norfork Dam's water, I support the Minimum Flow Plan. I think it is a win/win situation. Better for the Trout Fishery, better for the Riverand it's users with very minimal impact to the lakes involved. I am glad to see some action being proposed to return the White River to a somewhat more normal and steady "free river like flow". It will never be a free flowing river with the dams of course, but a minimum flow will would be a good attempt to stabilize the White's levels. Thanks, LWM

From: Mark Cozzens [mailto:cozzens@lakenorfork.com] **Sent:** Friday, June 30, 2006 4:11 PM **To:** Minimum.Flow.Project SWL **Subject:** Minimum Flow at Norfork Lake **Importance:** High

To whom it may concern;

My husband and I own a small resort on Highway 101. We recently purchased our resort and have some concerns regarding minimum flow and how it will impact our business.

The lake may not have been built for the purpose of recreation, but it obviously has become a recreational area and fishing is a big draw to the lake.

It was my understanding that tourism is a #2 income for the state of Arkansas. That be the case, I don't understand why studies were not done to find out what the impact on recreation, the lake fishing, the marinas when the water is low, and just what are the positive and negative impact to the lake area businesses?
Seeing how my tax dollars go to support the Corp of Engineers and the taxes I collect support the state, why have these studies not been done?

Sincerely,

Mark and Janice Cozzens Cozzens
Country Cabins 3352 Highway 101
Gamaliel, AR 72537 870-467-5451
cozzens@lakenorfork.com

From: Michelle [mailto:mdelong28@centurytel.net] **Sent:** Tuesday, July 25, 2006 9:28 PM **To:** Minimum.Flow.Project SWL **Subject:** Attn:Mike Biggs

Mr. Biggs, I am writing to express my concerns about this minimum flow project. I am totally against this from the information that I have read and had explained to me. Why do you want to take away our lake? It is going to be either to low or to high. If it is to low there will be no need for our boats we can walk around the lake. If it is to high then our children have no beach areas. The lake is a great financial benefit to all in the area. I bought my house here for the lake. If this goes through then I will put my house up for sell and move to Heber Springs. This is crazy. There is not enough revenue from the trout fishermen to do this. They do not buy their gas from the boat dock owners, they do not care about the beauty of the lake only the fish in the river. The lake attracts people from everywhere and they love this area because the beaches are not crowded like other areas. This is going to kill those boat dock owner, diving industry, and vacation revenue. Do you even care about the people or just the damn fish? I hope that you and your research really reflect people that vacation here and live here because of the lake and not just the people at Gaston Resort that think they can buy everything and forget the poor people who make the world go around. Do Not do this to our lake! It will be the worse thing to happen in this area. Michelle DeLong

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From: Naomi and Jim Inglett [mailto:cen62047@centurytel.net] **Sent:** Tuesday, August 15, 2006 1:57 PM **To:** Minimum.Flow.Project SWL **Subject:** My comments concerning minimum flow

Dear Sirs, I usually set back here and let the good folks in our different offices of Management take care of things in the County, State, and Federal Government. But now maybe I had better speak up. My comments may or may not amount to a "hill of beans" but I need to make them.

My concern is that for thirty-nine years my family and I have owned property and lived on Lake Bull Shoals. Over this long period of time the Trout fishing has been good in the river

down below and the Bass and Crappie fishing most always excellent in Lake Bull Shoals. Seems as though the status quo has been good for the area and fish all this time.

Has anyone considered what running the water off the bottom of the lake 365 days a year, year after year may do to the fish in the lake? In the summer even warm water fish like a cool area.

Lake Bull Shoals and all the lakes in the White river Basin are now being stressed with population burden. A tremendous amount of non-source pollution has affected Table Rock Lake and from observation Lake Bull Shoals and probably all the rest in the chain. Pulling these lakes down to increase the Trout population is probably a wonderful thought. But keeping lower water levels will also help to increase the pollution density of these lakes at certain times of the year is not a good thought. Who wants to swim in a cesspool?

Does any one consider that maybe this high growth area may need virtually all the water in these lakes in the future to sustain growth? Already an area to the South has been approved to fetch water for drinking and household purposes from Lake Bull Shoals. I wonder who else may come in here and decide that they have a legal right to buy more foot/acres of our water and use it up from Lake Bull Shoals and other lakes in our Basin.

Minimum flow sounds kinda like a dream to me??

Respectfully Submitted,

James Inglett

From: NCWMW [mailto:ncwmw@yahoo.com] **Sent:** Sunday, May 22, 2005 5:00 PM **To:** Minimum.Flow.Project SWL **Subject:** minimum flow White river

I just read about the minimum flow project in the 2005 Arkansas trout fishing guide book, my question is with minimum flow how much will the height, depth of the White river or Norfork increase below the dams? The reason I ask is my son and I spend time wading the White as do thousands of other spin and fly fisherman. We do not have boats, or use a guide service. Currently for us the best and safest conditions are at low water at the various pubilc access points. Any signifcant and constant release as you are talking about would seem to have a dramatic effect on this segment of the tourist industry in this area. How will you insure the main and downstream dams are not releasing at the same time? The increased height and swiftness since I have nothing that indicates how "minimum flow" will affect these scares me.

Nick Wysocki

Jonesboro, AR. 72401

ncwmw@yahoo.com

-----Original Message-----
From: Phil Lilley [mailto:phil@lilleyslanding.com] Sent: Thursday, December 01, 2005 11:28 AM To: Minimum.Flow.Project SWL Subject: Missouri

Greetings-

I see minimum flow is moving forward in Arkansas below Bull Shoals and Norfork. Is there any progress in the other tailwaters such as Taneycomo?

Thanks

Phil Lilley Branson

-----Original Message-----
From: Rex Wilkins [mailto:xrex@comcast.net] Sent: Friday, October 21, 2005 10:09 AM To: Minimum.Flow.Project SWL Subject: Opinion

Gentlemen,

I live on The Little Red River and have flyfished that river, the White and the Norfork for over thirty years. On the Little Red, we are seeing dead and dying fish on occasions when the weather is very hot and flows are minimized due to drought--as we have experienced this summer. We are also seeing the development of the white algae in the Little Red and many people are of the opinion that the algae thrives on low warmer water conditions. There can be no doubt that minimum flow will vastly improve the habitat and overall environment of all three rivers. I support all efforts to achieve minimum flow--the White River seems to be the first of the rivers to be in serious decline but the other two are distressed.

I appreciate your work and will be hopeful that we can have minimum flow in place soon.
Thank you, Rex Wilkins Little Rock, Arkansas Heber Springs, Arkansas

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From: SKBNM@aol.com [mailto:SKBNM@aol.com] **Sent:** Wednesday, August 16, 2006 7:57 AM **To:** Minimum.Flow.Project SWL **Subject:** Proposed lake level changes/Bull Shoals

My brother-in-law and I own two boat docks in Trigger Cove in the upper end of Bull Shoals lake, permit numbers 2164 and 2592. They are accessed by a road that goes under water at a lake level of 658. Even though there have been short periods of time over the years when this road has been under water (making the docks inaccessible) raising the power pool level from 654 to 659 would make the docks inaccessible on an almost continuous basis making both of these docks almost totally unusable. Ken Stoll 274 Lafayette Lane Branson, Mo.

From: Steven Wessel [mailto:swessel@mfa-inc.com] **Sent:** Wednesday, July 05, 2006 3:40 PM **To:** Minimum.Flow.Project SWL **Subject:** Minimum Flow

After visiting the area this past weekend and fishing on the White below Bull Shoals and also talking to some local residents, I have a couple of comments. First, I do not believe that the minimum flows are needed for the health of the fishery. I have fished these waters on and off for 14 years now and do not see any fall off. If the real reason were to improve the fisheries, I feel more catch and release areas, along with stepped up patrol of these waters would be much more beneficial. Secondly, how are the minimum flows going to work when the lakes are experiencing a drought. As of this past weekend, Bull Shoals was around the 652 level, which is close to 2 feet below the current power pool. From the studies I read, the new pool levels would be anywhere from 656 to 659. Also, I heard on local radio that the area's rainfall was a little ahead of normal. On top of all of this, for 4 days I observed that nothing more than 3 generators ran at any one time. What is going to happen when the lake is already low and the need for 8 generators arise. Finally, I feel that the main drivers for this are all of the boat driven guide services and resorts on the river to make the entire river assessable for the guide boats even in times of low water. My evidence for this is that I saw that Forrest Wood is one of the ramrods for this. Mr. Wood has been an enemy to the catch and release areas on these rivers and I feel that he, along with others are looking for more access to the river.

Sincerely, Steven Wessel email: swessel@mfa-inc.com

From: Sue Skinner [mailto:sues@swbell.net] **Sent:** Tuesday, June 13, 2006 8:46 AM **To:** Minimum.Flow.Project SWL **Subject:** June 12.docWhite River.doc

June 12, 2006
White River Minimum Flow Project

C/o Mike Biggs Planning Environmental & Regulatory Division
P. O. Box 867 Little Rock, AR 72203-0867

Dear Mr. Biggs:

The purpose of this letter is in regard to the White River Minimum Flows Environmental Impact Statement.

In brief, my question is what would be the impact to the Batesville Levee's flood protection level with the reallocation of flood storage from the White River Lakes if a 500-year event scoured.

Your reply will be greatly appreciated.

Very truly yours,

Joe M. Biard Mayor

JMB/ss

-----Original Message-----
From: Sunrise Point Resort [mailto:sunrisepoint@centurytel.net] Sent: Tuesday, July 11, 2006 7:20 PM
To: Minimum.Flow.Project SWL Subject: Minimum Flow Comment

As a resort owner on Norfork Lake, I would like to express my concern over the White River Minimum Flow Reallocation Project. I have reviewed the Environmental Impact Statement and from what I understand this will create lower lows and higher highs for longer durations of time and therefore the lake will fluctuate even more than it already does. It sounds to me like the minimum flow solution is designed to benefit river fishing and businesses at the expense of lake fishing and businesses. Additionally, I understand that the minimum flow reallocation solution doesn't even fix the problem of low levels of dissolved oxygen caused by large volume cold water releases during power generation. Having just gone through a low water year when Norfork Lake reached a pool of 538 feet, I believe that going much lower would be devastating to many lake businesses. I think it's time that the Corps of Engineers reviewed the financial impact of the lake businesses as well as the river businesses and try to come up with a better solution for both sides of the dam. We all work together and we all have the same goals so it would seem to me that we could find a better solution that would address the root of the problem which seems to be massive power generation. I realize that things were much different 50 years ago when the Norfork Lake dam was built and I do believe that while flood control continues to be a critical role for the reservoir, I also believe that recreation has moved into second place surpassing power generation in the order of importance and I believe that with a financial impact study on both the lakes and rivers we should be able to prove our point.

Sincerely,

Denise Hill Sunrise Point Resort 88 Sunrise Point Lane Mountain Home, AR 72653 phone: 870-491-5188, toll-free 888-887-7878 fax: 870-491-5569 e-mail: sunrisepoint@centurytel.net website: www.sunrisepointresort.com

Michael L. Biggs, P.E. Programs and Project Management Div. Little Rock District Corps of Engineers phone: (501) 324-5842 x 1071 mobile: (501) 749-5248

-----Original Message-----
From: TERRY SHARP [mailto:weefey@yahoo.com] Sent: Saturday, August 12, 2006 11:56 AM To: Minimum.Flow.Project SWL Subject: Concerns on minimum flow on the white river

My biggest concern being in part of the tourist economy. We have to go to the lake to do training for scuba diving. If the lowest low is any lower than it is now most of the launch ramps for the lake will be totally out of the water. I feel that you have grossly underestimated the effect this would have on the local economy around the lake not to mention the buisnesses that depend on the the lake in other areas.
Dive shops, boat sales, water ski stores and such.

Thank you Keith Sharp 870-926-5656

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From: THEBADFROG@aol.com [mailto:THEBADFROG@aol.com] **Sent:** Monday, August 14, 2006 11:37 PM **To:** Minimum.Flow.Project SWL
Subject: Lake Norfork

It may be good for the river but what about the lake? If you drop the lake lower in the winter and raise it higher in the summer, then what are we, the lake goers, going to do? All the beaches will be under during the summer. The diving community will have a hard time finding good dive sites. And the people that have docks that don't live at the lake will have a hard time keeping their docks in the water.

thanks Allen Howell

-----Original Message-----
From: Thomas Grubbe [mailto:TAGrubbe@centurytel.net] Sent: Wednesday, June 14, 2006 9:59 AM
To: Minimum.Flow.Project SWL Subject: Lake Norfork

If all the storage water in the lakes are already allocated to existing purposes and the amount authorized to provide minimum flow for Lake Norfork is 3.5 feet what will happen when Baxter County needs to remove more water because of growth?

From: Tom Koob [mailto:tkoob@centurytel.net] **Sent:** Friday, June 09, 2006 5:38 PM **To:** Minimum.Flow.Project SWL
Subject: Kings River

In the EIS, it is mentioned that the Kings River is designated a National Scenic River. Where can I find more information on what this means.

From: Tom Snyder [mailto:TSnyder@empiredistrict.com] **Sent:** Tuesday, July 18, 2006 2:19 PM **To:** Minimum.Flow.Project SWL **Cc:** William Howell; george.robbins@swpa.gov **Subject:** White River Minimum Flow Study Environmental Impact Statement (EIS)-Comments

The Empire District Electric Company("Empire") in a June 20, 2006 letter to SWPA, copy attached, provided its initial comments and thoughts regarding : 1)the White River Reallocation Study, 2)the impacts it would have on Empire's Ozark Beach Project, FERC #2221, 3) FY2006 Energy and Water Resources Development Act, 4) and the draft evaluation, prepared by the United States Army Corps of Engineers of the losses Empire and its customers would have to suffer as a result of the reallocation.

Additionally, Empire notes that the cost benefit summaries included in the EIS appear not to include even these draft costs in the cost benefit analysis.

Tom Snyder Empire District Electric Co. Ozark Beach 417-546-2111

From: Tom Snyder [mailto:TSnyder@empiredistrict.com] **Sent:** Friday, August 04, 2006 10:21 AM **To:** Minimum.Flow.Project SWL **Cc:** Brad Beecher; Harold Colgin; William Howell **Subject:** Road Below Ozark Beach (Powersite) Dam

Empire District Electric Co. would like to have the following included in the Arkansas Fish and Game Commission mitigation plan that is tied to the White River Minimum Flow changes:

Increasing the elevation of the dam access road and fishing area that is below the Ozark Beach Dam to above the 659 MSL mark.

Tom Snyder Plant Manager Ozark Beach 417-546-2111 417-339-7702 Cell

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From: Web Freeman [mailto:web@webfreeman.com] **Sent:** Wednesday, August 09, 2006 10:54 AM **To:** Biggs, Mike L SWL
Subject: re: dredging/gravel mining on Taneycomo

Sorry, got the wrong contact info on gravel, though I would like to encourage minimum flow discussions for Table Rock Dam. I think it would improve the fishery all the way to Forsythe. If I need to write my Congressmen to encourage their participation, I'd be glad to. Thanks for your time and sorry to clog the InBox.

Web Freeman

From: "Web Freeman" <web@webfreeman.com> **Sent**: Wednesday, August 09, 2006 6:34 AM **To**: Mike.L.Biggs@swl02.usace.army.mil **Subject**: dredging/gravel mining on Taneycomo

Mr. Biggs: I'm writing to express my opposition to gravel mining and dredging on lake Taneycomo, especially up lake towards the trophy fishing/ Fall Creek area. Much has been done to improve the fishery in the last 5 or so years, and I fear this would have devastating environmental and economic impact to the resorts in the area. Thank you for your time

Web Freeman 409 S. Michelle
Ave. Republic, MO 65738

-----Original Message-----
From: Scott Branyan [mailto:scott@flyflinger.com] Sent: Wednesday, June 21, 2006 9:16 AM To: Biggs, Mike L SWL Subject: RE: White River Minimum Flows EIS

Good morning Mike:

Enjoyed talking with you last night. It was a very good presentation.

Question: who must sign the ROD?

Thanks, Scott

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Scott Branyan
Ozark Fly Flinger
PO Box 2551
Rogers, AR 72757
888-99-FLING
www.flyflinger.com

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From: Poirot, Mike [mailto:Mike.Poirot@videojet.com] **Sent:** Thursday, June 08, 2006 2:43 PM **To:** Biggs, Mike L SWL
Subject: RE: White River Minimum Flows EIS

Hello Mr. Biggs

Thanks for keeping my name on the distribution list. I have had a love affair with the White River for over 25 years when I started trout fishing and am very happy to say that this has culminated with my wife and I purchasing property on Bull Shoals with Corp line frontage and a boat dock in the Protem area. As a person with real interest in both environments I am happy that the plan may soon come to fruition. Consider me a proponent of the plan and I will look forward to future reports. Please tell Brack Perser hello if he is in your area. Regards

Mike Poirot Videojet Technologies #1 Marsh Drive Bellevalley Industrial Park Belleville, Illinois 62220-3457 618-239-8222 618-239-8511 fax 618-799-9250 cell mike.poirot@videojet.com

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From: Biggs, Mike L SWL [mailto:Mike.L.Biggs@swl02.usace.army.mil] **Sent:** Friday, June 02, 2006 3:48 PM **To:** scott@flyflinger.com; troutlimit@yahoo.com; mrose@bscn.com; Jhoelsc661@aol.com; ruffntuff2@hotmail.com; qbarber@ipa.net; sparsley@ipa.net;

rparsl@aol.com; LEVCO2@aol.com; greysmith@futura.net; kittyp@missconet.com; sbjordan@cswnet.com; calico@peoplepc.com; merritt@arkansasgraphics.com; edwingray@email.msn.com; whanna@littlerock.state.ar.us; sandra.booth@dfa.state. ar.us; skiburd@gte.net; LEVDR@AOL.COM; fishhurst@centurytel.net; petecor@monet.com; Cutbow300@aol.com; Charlie.Chandler@intrustbank.com; tucker_mark@yahoo.com; mccarney@mtnhome.com; colt8@juno.com; arky2k@wholedamarea.com; hankark@cotterweb.com; buzzardroost@centurytel. net; Shamrock.pr@centurytel.net; wcame@flippin.net; Howe@southshore.com; chilcott@mo-net.com; petecor@mo-net.com; acarter@agfc.state.ar.us; marmstrong@agfc.state.ar.us; CMhorton@agfc.state.ar.us; hankark@cotterweb. com; tucker_mark@yahoo.com; belllaw@arkansas.net; jdh50@arkansas.net; sdivinia@askpioneer.com; kdpeery@arkansas.net; alexh@ipa.net; Kdcrutch@ipa. com; vedam@ipa.net; bryant@symbol.com; kelly@rivercliff.com; jami@rivercliff. com; rfourt@agfc.state.ar.us; b_y_w@hotmail.com; cdowney@ipa.net; sunhawkar@hotmail.com; PPabst@aol.com; Diribarren@macark.com; dtimmons@ozarkaircraftsystems.com; bvlake@aol.com; brosenthal@roselawfirm. com; nrduchc@mail.dnr.state.mo.us; RobertEly@associates.PZLQS.com; jvmounts@ipa.net; blackjack@arkmola.net; jshowe@cox-internet.com; jgboston@bellsouth.net; bob101bd@mtnhome.com; DDAUGHE@entergy.com; sdivinia@askpioneer.com; tucker_mark@yahoo.com; jrmiajim@arkwest.com; lshoman@hgpw.com; dmcgaha@pb.rec.ray.com; trout16@attglobal.net; colt8@alltel.net; lajones@aristotle.net; elissa_m@SWBELL.NET; David. Schroeder@ci.austin.tx.us; catfisher@webtv.net; vipkt@aol.com; 9792289250@my2way.com; rossfordtoyota@msn.com; skibumBill@aol.com; wpdegraw@aol.com; rfisher@audubon.org; lkiper@arkansas.net; DebraRynders812@msn.com; sanderes@home.com; dhyslip@msn.com; blackburnsresort@centurytel.net; shaase@tnc.org; JimOz@prodigy.net; Lferse@mo-net.com; JACKMacINNES@aol.com; lkiper@arkansas.net; julie@hisplaceresort.net; flw@flippinweb.com; gmanry@yahoo.com; Quarry Marina; nrduchc@mail.dnr.state.mo.us; stan whisman; Tracy Tabor; Nathan Blair; Gena T.; Gerry Conley; portofkimberling@tri-lakes.net; James Hoelscher; SUPERBASS Webmaster; bpope12345@aol.com; Mubarak Hamed; Jhoelscher@bwdh2o.org; bengstrom@engstromcpa.com; aubreyshepherd@hotmail.com; McNabb, David; rherion@aeci.org; ddunlap@grnco.net; Vaughn Coomer; wyandbar@centurytel.net; dsuitor@cityofarkadelphia.com; snoland@cristengineers.com; phil@lilleyslanding. com; Doug White; jolida@hotmail.com; Doug Jackson; Robert; Jim Watson; Gene L. Cartwright; pinkerton; KSchuer672@aol.com; dwolski@excite.com; alrolfe@hbeark. com; Craig Moon; Bob Britzke; robertinglett@sbcglobal.net; jpaul91952@aol.com; Jon Anderson; Joyce Hambleton Whitten; Donald J. Roufa; Anne & Karl; sdeyoung@cswnet.com; sdeyoun@entergy.com; pdoyle54@cox-internet.com; BouchnVic@aol.com; Anita M. Wright; N5SQV@juno.com; cbridgers@rogersinsurance.com; Sharon; jgoldsmi@cswnet.com; Kathy.good@roarkgroup.com; broom5@juno.com; billee411@earthlink.net; gardsacre@earthlink.net; Frank; dsteele@mo-net.com; tim_steele@admworld.com; Gary Fraelich; Norma Ross; jcaves@cox.net; Drew Albright; norrisc34@yahoo.com; Pete Wells;

ccnfaith@mynewroads.com; gwdupy@mynewroads.com; Argrandma@aol.com; OzarkStrafer@aol.com; syount@aecc.com; swaldrup@arkansas.net; Lady Mary; pj2u@centurytel.net; nita@pgtc.com; G Hixon; ram@centurytel.net; s2welch@centurytel.net; rmwilkey@centurytel.net; dasari@cox-internet.com; lindbergac@earthlink.net; circl8r2003@yahoo.com; shavr@mymtnhome.com; Nathan Blair; ralph w weber; lhdock@tri-lakes.net; opseth@ozarkisp.net; marla@midwaynet.com; Paul Coords; flyer@grnco.net; Ken Good; Richard Opseth; flyer@grnco.net; bbarrett@pgtc.com; Mike Marsh; jpstites@centurytel.net; Bonnie Hansler; dgc@ftn-assoc.com; Sells, Michelle; Jeanette Ellis; jlayson@cox-internet. com; TEBSEB@cs.com; Jackdogooder@aol.com; elkop@sbcglobal.net; Steve & Cynthia Ecton; arthur heavener; hollylanderson@prodigy.net; rickk@nwark.com; slogle@cox-internet.com; AMBAJA@AOL.COM; Lawrence Muhs; Tlkueck52@aol. com; STrent8457@aol.com; jmhb@cox-internet.com; scain@aecc.com; tealpt@coxinternet.com; Phil Burns; flw@flippinweb.com; jdemo@kc.rr.com; tdemo@cisco. com; STORMY MILLS; Willa@Mo-Net.Com; ccruse@artelco.com; Donna Brown; M.
L. Alcaraz; Bethene Palmer; Fgrillot1@aol.com; Phillip Depriest; nrollo@comcast. net; rhawkin1@midsouth.rr.com; fred.wiseman@bms.com; The Cecils; fish-fiddle@centurytel.net; Robert E. Lovett; info@shellknob.com; jpfable@northarkansas.net; Joe Rath; bjnbusch@mymtnhome.com; jmsouth@arkansas.net; Jim Szpicki; Tdjatice@aol.com; donkathb@cox-internet. com; howeclock@interlinc.net; Bruce Darr; LeVern DeVries; Wayne Clift; Judy Powell; wsitton@cox-internet.com; Carol Martin; Hutson007@aol.com; Anita Chouinard; Suzie French; Dave or Rosa; GORDON WALLIS; terryjfortner@wmconnect.com; Joanne Spalinger; Al & Anita Knack; Chris Barré; Scott Borman; cee@dluxlink.com; terryjfortner@wmconnect.com; Danny; GARY82952@wmconnect.com; daslawsky; shamrock@ozarkisp.net; bearhunter@ips.net; marydrass@coxinet.net; Sandy Grafe; Anuh@aol.com; Cargocontrolinc@aol.com; Jhoelscher@BWDH2o.org; srccorley@hotmail.com; Taylor, Steve; Allen Crise; Ron Hern; hustler1@centurytel.net; John Swift; wmtklysmith@wmconnect.com; Bryce Craig; EdPatHeyer@wmconnect.com; Rex Purselley; richard turner; jamesmpaul; Phippjs@cs.com; crookedhook@centurytel. net; Susan Wimberly; James Fliss; Ed Clayton; pearson8@valuelinx.net; Ron Lacy; rkilby@cswnet.com; lwatral@webtv.net; Scott_Hoffeld@URSCorp.com; Elizabeth Nielsen; Joel W Helmer; jlarsen@mymtnhome.com; lclau@craftull.com; Bob Britzke; The Meiers; bheine@ix.netcom.com; tom.gebhard@gdsassociates.com; GEORGE EBY; Richard Komar; clarkr@mo-net.com; jfwilliams@agfc.state.ar.us; Bernard Zakuta; ccnfaith@mynewroads.com; Joel W Helmer; drjthomps@centurytel. net; skeith@mays-envirolegal.com; nledbetter@agfc.state.ar.us; baiocchi@psln. com; alvrazorback@msn.com; John Bell; DMacdon152@aol.com; dickiea@cswnet. com; Jim Arnold; nfiorilloj@aol.com; masxjs@hotmail.com; Luthergator@aol.com; jwrathke@hotmail.com; hmwater@valuelinx.net; Midkiff; kim m. fene; dpowell@hess.com; Meredith Phillips; james1@jrhunterconst.com; Mike Penprase; Richard & Madeline Tucker; pdixon51@comcast.net; rickbtex@cableone.net; Lee Murchison; mailto:jim.lumpe@agedwards.com; Terry Earp; Richard Mays; rsmith3@kraft.com; len@conservation-associates.com; jfwilliams@agfc.state.ar.us; Poirot, Mike;

sparks.steve@comcast.net; ssparks@1800arkansas.com; Don Macdonald; Kirkpatrick, Dallas; Dan Edmonds; Rosa, Van; jwrathke@hotmail.com; bcfeck@cox-internet.com; tandm@cox-internet.com; Jennifer Carpenter; Cynthia Morgan; sheila@awards-net.com; Kim Moody; RREngle@CenturyTel.Net; Herb Newbury; drjthomps@centurytel.net; Mark Washburn; Keith.garrison@arkansas. gov; dougt@villageinsurance.net; Ryan Hamilton **Cc:** Ellis, Jim D SWL; Rodgers, Michael R SWL **Subject:** FW: White River Minimum Flows EIS

Good afternoon all,

The Notice of Availability (NOA) for the White River Minimum Flow Reallocation Study Draft EIS was published in the Federal Register today. The clock is now officially ticking on the 45-day Public Review Period. A copy of the DEIS is available on the District's Web Page under the White River Minimum Flow Study page. Also on this page are the Reallocation Report and the Chief's Report that have been there for a couple of years now (http://www.swl.usace.army.mil/planning/wrminflow.html). CD's containing the DEIS have been sent to interested agencies for review. I have attached a copy of the News Release that gives specifics on public meetings, and where the public can view copies of the DEIS.

Regards

Michael L. Biggs, P.E.

Programs and Project Management Div.

Little Rock District Corps of Engineers

phone: (501) 324-5842 x 1071

mobile: (501) 749-5248

<<newsrelease.doc>>

recipient, please notify the sender immediately by responding to this e-mail, and delete the message from your system. If you have any questions about this e-mail please notify the sender immediately.

From: Kielczewski, John K SWL **Sent:** Friday, July 14, 2006 2:33 PM **To:** Biggs, Mike L SWL; Holman, Kristina SWD **Subject:** FW: Norfork Lake Chamber of Commerce Position on White River Minimum Flow Reallocation Study Draft EIS

FYI

From: Sunrise Point Resort [mailto:sunrisepoint@centurytel.net] **Sent:** Thursday, July 13, 2006 6:16 PM **To:** Arkansas Democrat Gazette; Brett Morgan; Carie Bartholomew; Carmie Henry; Cynthia Edwards; Daily Quill; Eddie Majeste; Frank Kaye; Freddie Black; George Robbins; Harrison Daily Times; Jones, Jan R SWL; Jerry Blanton; Jerry Estes; Joe Dillard; John Benjamin; Kielczewski, John K SWL; Johnny Key; Jonesboro Sun; Judge Dan Hall; Kelley Atchley; Kimberly Smith; Kyla Hawkins; Martine Downs; Mayor Ed House; Mel Coleman; Nick Coleman; Ozark County Times; Shawn Womack; Sheffield Nelson; Sonny Varnell; Ted Coombes; Fancher, Tracy N SWL **Cc:** Bayou Resort; Jordan Marina; Red's Guide Service; Rock House Liquor; STR Outfitters; Sunrise Point Resort; Tracy Boat & Motor **Subject:** Norfork Lake Chamber of Commerce Position on White River Minimum Flow Reallocation Study Draft EIS

To whom it may concern: I would like to make you aware of the Norfork Lake Chamber of Commerce's position on the White River Minimum Flow Reallocation Study Draft Environmental Impact Statement (EIS). Attached is a press release as well as a position paper which outlines our concerns with this plan.

The chamber has been working to get the word out about the public review period, which the deadline has now been extended until August 18, 2006, so that concerned citizens can make an informed decision and submit their comments.

Please feel free to contact me or Dan Weber, the chamber's vice president, at 870-499-7348 or dlweber2@aol.com, with your questions or comments.

Sincerely,

Denise Hill, President

From: Hiser, Jonathan A SWL **Sent:** Monday, July 24, 2006 11:53 AM **To:** 'jamsmith46@hotmail.com' **Cc:** Biggs, Mike L SWL **Subject:** RE: minimum flow perspective

Mr. and Mrs.Smith,

Thank you for your detailed and well thought out comments regarding minimum flow. I'm forwarding your email to Mike Biggs, who is coordinating the study and environmental impact statement review presently underway for our Little Rock District office. Please contact him or me if we can provide further information or you have additional questions or comments.
Jon Hiser Natural Resources Manager Bull Shoals and Norfork Lakes 870-425-2700, ext. 132

From: Jim Smith [mailto:jamsmith46@hotmail.com] **Sent:** Thursday, July 20, 2006 3:32 PM **To:** CESWL-MH SWL **Subject:** minimum flow perspective

Sirs, my wife and I own a resort on the North Fork River. We have owned it for 5 years and have put our life savings into making it a premier resort that caters to fly fishermen. We have supported the AGFC, the Corp., ADEQ and any and all organizations that try to protect the pristine river system. We have had numerous conversations with our thousands of guests over the last 5 years. More recently the topic of minimum flow has dominated the conversations. I would like to share with you some of the pros and cons of what we have been presented with as it relates to minimum flow.

On the surface, the program would seem to be just what our cold water species need. Maybe so, if, they were left alone and not interfered with. This of course is not the case. The White River is very long and wide for a tail water river. I do not see any negative effects that minimum flow could have on it. The cooling of the White River water would be a big contributor to the health and welfare of the trout and their food sources. The added flow and distribution would not have an effect on the means of fishing, either by boat or wading.
Now let's turn to the North Fork. It is 4.5 miles long and very narrow. It would seem that any tail water that had more flow would aid in a greater fish habitat, but, please take the following into consideration:

The North Fork already has continuous flow, The hatchery pours, I believe, 22,000 gallons / min into the upper end of the stream.

Minimum flow will NOT add more oxygen to the river. It solely depends on the oxygen content at the lake intake.

Currently boat traffic from the upper end (Charlie's and Gene's) travel down to McClellans and then go back up. If they continue down the river they run a big chance of not getting back up if the generation stops or is decreased. If we start "minimum" flow (I have been told by the biologist it will be 9") then that is enough water to make the inexperienced boaters try to navigate all the way down the North Fork.and back up, repeating the process all day long. This would not only be hazardous, but destructive to the shallow areas and boulders that they will bottom out on and end up destroying all vegetation and life forms..

The same is true for the confluence end of the river (4.5 miles down stream). The boats at the River Resort, Rose's, and the Trout Dock can not navigate past the first island (at River Ridge Inn) right now. Give them 9" of water, and every swinging one will try to get all the way to the dam to float the length of the river -- ALL DAY LONG. How many times do you think each boat can go up and down the North Fork in a day? Probably 20 times. Now multiply that by the number of boats at the dam and at the confluence (200?). Our estimate is about 180, plus privately owned boats. Increasing the boat traffic will end up causing many more accidents on a river already known for loosing 20 - 30 boats a year. Are we ready to accept that level of risk?

Now, IF the boat traffic increases, as it surely will, the area that is now the catch and release area will be a mass of wave action and result in many confrontations will arise between waders and boater. I can show you where the river bottom has been destroyed and voided of vegetation because the boaters "try" to get up the shoals. You can kiss the underwater environment good bye and, along with it, the fish and

fly fishermen who contribute greatly to the river. The fly fishermen will not support the river or the businesses along the river. One of largest supporters is the Mid South Fly Fishing Club in Memphis. It has 800 members. They are divided between supporting the minimum flow or opposing it. The division among them is determined by where one fishes, on the White or the North Fork. Again, the White will benefit, the North Fork will be destroyed.

Think about it. The North Fork River 4 1/2 miles long!! Only 50 yards wide!! If you make the wrong decision on this river, you will ruin it for ever. Just look at what the water run off from Overlook Estates (if not familiar, contact the ADEQ) has done to the river!! We can not do anything to this resource that has not been tested and studied in great detail prior to making any changes. To do so would be inviting disaster economically, endanger lives and destroy our natural resources.

A smarter solution to improving or controlling the conditions of the habitat and the fishery is to let the AGFC control the 2 or 3 feet of lake water given to the project. Let the Game and Fish decide, and be accountable for, the control of conditions in the river that will enhance the health of the fish, the food source and the ecosystem of the North Fork River. They can use it only when they need it. It will also help to conserve the lake levels that are needed by businesses on the lake for recreational purposes; and, will protect the city of Mountain Home's water source.

Thank you for listening to us.

Captain James A Smith and Elizabeth Smith River Ridge Inn/ Arkansas Properties, LLC 57 Rive Ridge Road Norfork, AR 72658 870-499-7775

James is a Norfork City Councilman and Chairman of the Norfork Planning

Commission

From: Heather Crunkleton [mailto:heather@mtnhome.com] **Sent:** Saturday, July 15, 2006 12:11 PM **To:** Biggs, Mike L SWL **Subject:** Minimum flow public comment

Mr. Biggs,

On behalf of the White and North Fork Rivers Outfitters Association, we would like to urge you to begin minimum flows on the White River as soon as possible and begin construction on the Norfork Dam so water flows can begin there as well.

As your study shows, the economic benefits of minimum flow will far outweigh the costs and the environmental benefits enormous and overdue. I see minimum flow as being a completion of the construction project that began 50 years ago when dam construction began. Had these dams been constructed as FERC dams, minimum flows would have been part of the construction design.

One of the most important benefits of minimum flow is the aid of improved disolved oxygen while minimum flows are occuring. In local hearings, state officials have told us that dissolved oxygen levels are far below federal Clean Water Act standards. Low dissolved oxygen levels have worsened over the years and continue to cause wide-spread fish kills (if the hot water temperatures do not kill them first).

I understand that a payoff to Empire Electric is in order before minimum flows can begin. I would like to suggest that the payoff be structured where by they receive annualized payments over a 10 or 20 year period.

In closing, I would like to offer our sincerest compliments for doing such a complete and thorough evaluation of this project.

Most Respectfully,

Heather Crunkleton, President White and North Fork Rivers Outfitters Association PO Box 50 Cotter, AR 72626

Owner: Rainbow Drive Resort 669 Rainbow Landing Drive Cotter, AR 72626

From: Alex Haynes [mailto:alexh@spectrumhighspeed.com] **Sent:**

Monday, June 19, 2006 11:53 AM **To:** mike.l.biggs@swl02.usace.army.mi
Subject: Comments on Minimum Flow EIS

To: Mike Biggs, Project Manager, Programs and Project Management Division,
P.O. Box 867, Little Rock, Arkansas 72203-0867, tel. 501-324-5842, x1071, e-mail: mike.l.biggs@swl02.usace.army.mil.

QUESTIONS REGARDING COE DRAFT WHITE RIVER MINIMUM FLOW EIS

QUESTION 1:

As I understand the current situation, there is no minimum flow allocation for the proposed Beaver Dam trout facility.
This is because WRDA 1999/2000 which provided minimum flow authorizations necessary to sustain a tailwater trout facility at Beaver Lake by reallocating 1.5 feet of the lake storage pool, were subsequently repealed the FY 2006 Energy and Water Resources Development Act. Thus, all previous minimum flow allocations were eliminated, and only minimum flows at Bull Shoals and Norfolk Dams were reauthorized.

Would you please explain how the already authorized trout facility at Beaver Dam would have enough water to operate since the current station service flow is only 27 CFS, and the recommended minimum flow to support the trout facility is 136 CFS? Further, is the current 27 CFS even usable for a trout facility since it comes from a deep oxygen reduced zone in Beaver Lake?

QUESTION 2:

For several of the Beaver Lake EIS scenarios, costs of almost $6 million are estimated for relocating park roads, campsites, restrooms, etc. due to increasing lake level from 1120 to 1121.5, in order to accommodate minimum flow needs. Since many park facilities routinely have been many feet underwater at various times during past years when the lake levels ranged 1120 to 1130 feet, why should the cost of relocating park features be totally allocated to the 1.5 foot minimum flow requirement?

Shouldn't most of these facility relocation problems have been corrected long ago as part of routine park operations by the COE?

Question 3:

Since outdated water storage allocations, authorized decades ago, give the most space to the least valuable use of lake water (see table), wouldn't it make sense to reallocate a very small amount of storage from hydroelectric generation to minimum flow for a trout facility, rather than increase lake levels by 1.5 feet and spend an additional $6 million for park facilities modifications?
BEAVER LAKE

Authorized Purpose	Storage Allocation Acre-Feet	2005 Value Dollars
Hydroelectric	808,100	7,000,000
Flood Control	287,343	?
Water Supply	129,207	25,000,000
Recreation/Fish	0	90,000,000

Submitted by:
Alex Haynes
86 North Bayshore Dr.
Eureka Springs, AR 72631

-----Original Message-----
From: TANYA MANIS [mailto:tdmanis@msn.com] Sent: Thursday, August 17, 2006 6:27 PM To: Minimum.Flow.Project SWL Subject: White River Minimum Flow Reallocation Study,Draft Environmental Impact Statement

(DEIS)

My concern as a property owner of Moores Bend community(accross from K-Dock) is the impact the increase in the water level will have on our launcing ramps. If this is going to happen, the ramps will definitly have to be raised as well. We use these ramps not only for recreation, but also as a way to get to medical facilicites if necessary quicker than having to drive all the way around. I hope that if the change in the lake level is going to be implemented our concern will be addressed. I would like to have it documented that this mater will be taken care of before the increase in the lake level occurs.

Sincerely,

Danny & Tanya Manis 184
Sedgewick Rd.
Cedar Creek, Mo. 65627

From: Sharp [mailto:sharp@m34u.net] **Sent:** Thursday, August 17, 2006 10:17 PM **To:** Minimum.Flow.Project SWL **Subject:** flow project

Dear Sir;

I hope you will not change the flow from Norfork Lake. I teach scuba diving in that lake and I am worried it might hurt the clarity of the water. Changing the level of the lake will also hurt some of the dive sites. Low water will break up some of the wrecks and other sites we dive. I have a scuba shop in Jonesboro and this will most likely hurt my business since we do 90% of our diving there. Any tourist money to come below the damn will surely be lost on the lake side of the damn. The boat dock owners have already spent money to have their business and to improve them. I believe this action would be unfair to them.

Please do not change the lake level anymore than we already have.

Terry Sharp, Owner J & T
Dive Shop

From: Quarry Marina [mailto:hanson@quarrymarina.com] **Sent:** Friday, August 18, 2006 3:47 PM **To:** Minimum.Flow.Project SWL **Subject:** Minimum Water Flow - Against

Quarry Marina P O Box 431 Mountain Home, AR 72654 870-499-5388 Richard and Cheri

Hanson, Owners Opponents of White River Minimum Water Flow White River Minimum

Flow Reallocation Study

How does minimum flow affect the Norfork River?

How does minimum flow affect the Norfork Lake?

How does minimum flow affect the White River?

The study looks at each of these 3 different bodies of water as a whole. Each of these bodies of water has different habitat, different water fluctuations, different water temperatures, different water depths..etc. The study should address each different

body with its own specific parameters.

The study gives figures for tourism dollars that will be increased because of the good effects that minimum water flow will have on the river system. What are the basis for the calculation of these figures?

The minimum flow study only reports on the "potential" increase in river fisheries; there are no guarantees to making anything better. Unless specific increases can be posivitively identified, the public should not be mislead into believing that the implentation of the minimum flow will correct the problems it states that occur in the river fisheries.

Is money being allocated to "fix" the problems that will occur on the lake side due to the increase of water useage by the river? Extend boat ramps, dredge deeper channels for low water years.

Add/enlarge parking lots, boat ramps and swimming areas during high water years.
There are problems with the lake and with the rivers; but is it a responsible decision to spend millions on the "potential" betterment of the rivers to the detriment of the lakes?

If the Norfork and White Rivers and world-class fisheries already, then why are you trying to fix them?

The data supplied in the study is incomplete. The USACE needs to reformulate its data for Bull Shoals and Norfork; because Table Rock, Beaver and Greers Ferry lakes were included in the initial study, new data needs to be projected.

hanson@quarrymarina.com
Richard & Cheri Hanson Quarry Marina P O Box 431 Mountain Home, AR 72654 870-499-5388
www.quarrymarina.com

From: Matt Tucker [mailto:matt@ozarkchronicles.com] **Sent:** Friday, August 11, 2006 7:12 AM **To:** Biggs, Mike L SWL
Subject: Support of Minimum Flow

Mike:

I wanted to take a minute and let you know that I support minimum flow for the white river tailwater system and the norfork tailwater. Arkansas has an unbelievable trout fishery, and I can only imagine how much better it would be with minimum flow regulations in place. I hope that you too support minimum flow on these tailwaters.

Fish Hard, Matt
Tucker
www.OzarkChronicles.com

From: lanede@bellsouth.net [mailto:lanede@bellsouth.net]
Sent: Friday, August 11, 2006 8:22 PM
To: Biggs, Mike L SWL
Subject:

August 11, 2006

Dear Mike:

My name is David Lane and I am 62 years old. My brother, Doug Lane, and I have purchased some land in Norfork. It is our intention when we retire to spend a lot of time on this land and raise our nine grandchildren to fish an hunt. Our father raised us this way and we are very grateful. The main reason we bought this land was because it is so close to the best fly fishing waters in our great country. It is my understanding that if there is a minimum flow policy put into effect that it will increase the life of fly fishing on the river. I also understand that the quality of the fish caught will be enhanced since the spawning grounds for the fish will be increased.

Please give consideration to placing a minimum flow policy on the Norfork River. Thanks in advance for any help you can give.

Sincerely,

David Lane

From: Jim Szpicki [mailto:jimszpicki@centurytel.net] **Sent:** Friday, August 18, 2006 10:27 AM **To:** Biggs, Mike L SWL
Subject: Min. Flow

Hi Mike,

Just got off the phone with you. As I said my concerns are flowing in drought conditions, losing beach and boat launching areas and other adverse effects on the lake.

Thanks,

Jim Szpicki 103 Hawthorne
Pl. Lakeview, Ar. 72642 870
431 8838

From: Jim & Joy Wencker [mailto:gpwen@centurytel.net] **Sent:** Friday, August 18, 2006 9:17 AM **To:** Minimum.Flow.Project SWL
Subject: minimum flow

From: "Jim & Joy Wencker" <gpwen@centurytel.net>
To: "ATTN: Mike BIGGS" <minimum.flow.project@usace.army.mil>
Subject: MINIMUM FLOW - WHITE RIVER LAKES
Date: Friday, August 18, 2006 9:01 AM

Dear Corps.

I am FOR minimum flow for the CURRENTLY DESIGNATED TROUT WATERS of the White
River and its tributaries. However, I have serious doubts that the current
plan as designated in your DEIS is adequate to resolve problems currently in
existence or those that may be the result of operations

instituted by the
current plan.

I am very dubious of the Southwest Power Administration and its highhanded
approach to this issue.

Where is the rate schedule for the electricity that they sell? How does the
price of electricity that they sell compare with other sources?

Why was it necessary to draw down Lake Norfork during the winter of 2005-06.
This is the time of year when hydropower, and electricity in general
is lowest. The generators ran around the clock for weeks! The city of
Mountain Home was forced to lower their city water intake and to make
expensive preparations to pump water into the current intake from barges off
shore which were transported from Texas. That water should have been held
in reserve for the summer of 2006 since we were already in a very dry
period.

Can the SWP be trusted to consider other issues besides the sale of
electricity? Are they so single minded (sic.) that they think that they
live in a vacuum in which only they and their customers (us) are considered?

What is to be done about the current high temperature, low

oxygen, and high
heavy metals currently released under the current system?

There are so many issues that your study did not cover,
contradicted itself,
or were extensions of the current conditions - WORLD-CLASS

TROUT FISHERY that it would take volumes to cover...which is what I
suggestthat you dobefore implementing this plan.

Thank you, and I hope that you do a better job on thefinished plan
and thatyou offer a period of comments on that plan..

James Wencker Mountain
Home, AR

From: james_cash@baxter.com [mailto:james_cash@baxter.com] **Sent:** Thursday, August 17, 2006 1:12 PM **To:** Minimum.Flow.Project SWL
Subject: Minimum Flow

When is the earliest that minimum flow would be started at Bull Shoals and Norfork. I am looking forward to this.

Thanks, Jim Cash

From: Hale, Arthur E Jr MD [mailto:AEHale@sprg.mercy.net] **Sent:** Thursday, August 17, 2006 2:39 PM **To:** Minimum.Flow.Project SWL
Subject: minimal flow

Hello. I am co-owner of Beaver Creek Marina LLC on Bull Shoals Lake in the Beaver Creek campground at Kissee Mills. The recent approval of raising the pool level of Bull Shoals lake will adversely affect our business because of flooding. Access to the marina becomes very limited at levels above 660 feet. Lost revenue is anticipated to be approximately $20,000 annually if changes are not made to the access to the marina. These necessary changes include a new utility pole at the cost of approximately $1,000 and additional walkways that will cost approximately $15,000. More importantly the topography at the shore of the lake at the marina entrance will need to be changed which will require heavy equipment such as a backhoe and will require gravel to be trucked in. This will cost approximately $15,000. Please inform us of the necessary steps to take for reimbursement for these costs. If you have any questions please feel free to at (417) 546-2447 or
(417) 546-5121. Thank you.

Art Hale,

member

Beaver

Creek Marina llc

From: Chuck Tyrrell [mailto:chuckinra@cox.net] **Sent:** Thursday, August 17, 2006 9:41 PM **To:** Biggs, Mike L SWL
Subject: minimum flow

Norfork and Bull Shoals

Generators will be generatoning with that water.

Little bugs will grow in the tail waters, making the trout happy.

There will be a few inches more water in the tailwaters.

There will be more oxygen in the water and cooler water further downstream.

This makes for a better fishery and more fishermans dollers into the economy.

The lakes will have a little more water in them, that equals more habitat, and that

equals more fish, which draws more fisherman to the lake side also.

Lets get it on.

Beaver

Get the hatchery or grow out built.

Chuck Tyrrell

907 N. 10th Rogers Ar 72756

From: Charbonneau Construction, Inc. [mailto:charboconst@centurytel.net] **Sent:** Thursday, August 17, 2006 12:36 PM **To:** Minimum.Flow.Project SWL **Subject:** Minimum Flow

I am AGAINST minimum flow on the North Fork River & White River because I
feel that not enough research has been done for our rivers.
Thank you,
Deborah Charbonneau

From: Bob Sarle [mailto:sarler@centurytel.net] **Sent:** Thursday, August 17, 2006 6:21 PM **To:** Minimum.Flow.Project SWL **Subject:** FLOW

Don't change the rivers.

From: Biggs, Mike L SWL **Sent:** Tuesday, August

08, 2006 4:40 PM **To:** 'Phil Lilley' **Subject:** RE:
from Phil Lilley

Good afternoon Phil, sorry for taking so long to reply, but the alligators are snapping.
Below are my answers to your questions:

Mike- who pays the $9m? The $9M will be appropriated by Congress.

Southwest Power Administration will be given a "credit" of _The dollar amount is not known. It will be determined by SWPA during the Preconstruction-Engineering-and Design (PED) phase___ because of its loss to minimum flow. SPA maintains the dams- and credit will offset part of this maintenance, and the same as Empire, this credit is given so that SPA can't pass on this loss to the consumer.

Mike- who gives the credit- I think you said congress. How much? I am not sure. Part of the efforts during PED will be to determine the mechanism for giving SWPA a credit. I have been asking this question and no one is sure because this has never been done before.

A year ago, MF was a dead issue. Then two sponsors or partners stepped up to the plate and committed to pick up some of the "expense" of MF- that's what changed the outcome. Arkansas Fish & Game agreed to pay for the impact of both lakes **(Mike- and rivers? There shouldn't be any adverse impacts to river facilities, so I believe the only facility modifications will be on the lake side.)** and congress agreed to pay power providers for their loss.

Mike - At Bull Shoals Dam, what needs to be added, smaller turbine?
The only modifications to Bull Shoals required for Minimum Flows implementation is a change in the computer language, work on existing bulk head, and development of a real time water supply accounting program. And at Norfork the same? Norfork will need a new bulk head, a siphon and valve system, and new Station Service Unit Costs? Bull Shoals will cost around $400,000 in construction costs, and Norfork will require around $4,100,000 Time allowed? One year to implement at Bull Shoals, 2.5 years at Norfork.

I think you said MF would be a reality by 2010- right? 2010 is a conservative projection, and I believe it is the most realistic considering current funding status.

Economic Affect - $130,000 to the bad -- $3.5m to the good annually, averaged over 60 years?? This encompasses a 2 hour radius of the tailwaters, including all of Bull Shoals and Norfork Lake Regions. We amortized benefits over 50-years. The minimum flow reallocation and release scenario selected by

Congress results in an annual loss of -$130,000 in in-pool recreation benefits but a gain of $2,730,000 in tailwater benefits.

Thanks for your support at the meeting, and thanks for your interest in the Minimum Flows study. Contact me again if you have any more comments.

Regards

Michael L. Biggs, P.E. Programs and Project Management Div. Little Rock District Corps of Engineers phone: (501) 324-5842 x 1071 mobile: (501) 749-5248

From: Phil Lilley [mailto:phil@lilleyslanding.com] **Sent:** Friday, August 04, 2006 9:25 AM **To:** Biggs, Mike L SWL
Subject: from Phil Lilley

Mike- wanted to get some blanks filled in from the meeting last night.

This will be posted on my forum at http://ozarkanglers.com/forums It does have a vast readership - about 1200 people read it daily.

In attendance (more or less) -

Mike Biggs, CORP Planning, Environmental and Regulatory Division Chuck Pennell, Taney Co Perciding Commissioner (called for the meeting) Ron Herschend, Taney Co Commissioner, West Danny Strahan, Taney Co Commissioner, East Maynard Wallace, former Mo Rep running for senate Mark Oliver, Assistant Fisheries Chief, Ar. State Fish & Game Total of 38 in attendance.

Biggs started the meeting going over the $800,000+ study that congress authorized in 2001 on the affects of a minimum flow below Bull Shoals and Norfork Dams.

Increasing the minimum flow below Bull Shoals, they would have to add 5 feet to the "flood pool" or level over present power pool of 654, increasing it to 659. Any impact on roads, ramps, beaches, docks within this 5 feet would be remedied and paid for by the Arkansas Fish & Game. Any impact above the 659 level would be given consideration for "aid".
Empire Electic would be paid a one-time buy out of $9m. They will suffer loss at the Powersite Plant because of the rise in power pool level. The $9m buy out means Empire can't pass this loss onto its

customers.

Mike- who pays the $9m?

Southwest Power Administration will be given a "credit" of _____ because of its loss to minimum flow. SPA maintains the dams- and credit will offset part of this maintenance, and the same as Empire, this credit is given so that SPA can't pass on this loss to the comsumer.

Mike- who gives the credit- I think you said congress. How much?

A year ago, MF was a dead issue. Then two sponsors or partners stepped up to the plate and committed to pick up some of the "expense" of MF- that's what changed the outcome. Arkansas Fish & Game agreed to pay for the impact of both lakes **(Mike- and rivers?)** and congress agreed to pay power providers for their loss.

Time table- No money has been allocated to continue the project in '07. But in 2008, it is possible that this will be picked back up by congress.

Mike - At Bull Shoals Dam, what needs to be added, smaller turbine? And at Norfork the same? Costs? Time allowed?

I think you said MF would be a realiety by 2010- right?

Economic Affect - $130,000 to the bad -- $3.5m to the good annually, averaged over 60 years?? This encompases a 2 hour radius of the tailwaters, including all of Bull Shoals and Norfork Lake Regions.

I'm not going to get into the comments of the meeting. Most comments by residents were short sighted and self seeking, especailly by some politians. Some bascially called the study bogus and the Corp liars... not much you can say to that. Some honestly didn't believe the figures. I was amaized that they focused on the $130k loss instead of the $3.5m increase.
The flood issue was a hot subject though. Their logic, and it is understandable, was that if you add 5 feet to the power pool that the lake would flood more often. The study findings show that there's a 1.8% high chance that the lake would flood at 675 with the new power pool level. That means the frequency of flooding isn't affected, only the duration. In this case, a road that's flooded at 675 will be under water 2-4 more days, for example.

The positive impact is going to be on the fishing- both above and below the dams. More water in the conservation pool will help spawning periods. It's too bad MDC wasn't there to address this. I made this point at the end of the meeting- said I was amazed no one had brought it up since most in the room fished.

Links -

http://www.swl.usace.army.mil/planning/wrminflow.html

http://www.swl.usace.army.mil/planning/

draft_eis_wrmf_reallocation_study_may_2006.pdf

75 day comment period ends August 18, 2006 Send comments to Mike Biggs at mike.l.biggs@usace.army.mil

Mike- anything you want to add please feel free.

Thanks!!

Phil

From: Arnold Knox [mailto:aknox@cityofmountainhome.com] **Sent:** Thursday, August 10, 2006 2:54 PM **To:** Biggs, Mike L SWL **Cc:** Ed House; Alma **Subject:** Norfork River Minimum Flow comment

Mr. Biggs, Thank you for your time and discussion in Mountain Home on August 10th at the Mountain Home Rotary Club. The city of Mountain Home is requesting some information of pool levels and there relation with minimum flow. Our concern starts with the recent winter months of 2005/2006, Norfork lake was brought down to a level not seen since the mid 1970's. During the winter we saw the lake levels within a few feet of our lowest water plant intake flume elevation. At Norfork's lake lowest point this last winter we were still seeing discharges dropping the lake a few inches every day. This precipitated a chain of events that made the city of Mountain Home fabricate a barge and fitted with pumps in case the lake lowered, and the city constructed a new intake flume out into Pigeon Creek channel. This spring we finally saw rains return and the lake returned to conservation level.

On behalf of the City trying to protect our water supply, what frequency is the Corp projecting that a return drought event can happen at the levels we saw this last winter and will Minimum

Flow make the lake elevations higher or lower during a drought like we saw in the winter of 05/06?

Thank you for your time,

Arnold Knox,P.E., P.L.S. City Engineer City of Mountain Home, AR

-----Original Message-----
From: Ann Dickens [mailto:addickens@sbcglobal.net] Sent: Thursday, August 17, 2006 10:39 PM To: Minimum.Flow.Project SWL Subject: White River Minimum Flow Study

As a property owner of land on Bull Shoals lake I have several concerns about raising the lake level 5 feet. The boat rams at Moores Bend are not maintained well as it is. If the lake level is raised 5 feet it will make one ramp unuseable and the other one is in such disrepair we are afraid to use it. If "unlimited funds" are available to do fix problems raisng the lake level will cause when are they available and will they be used to upgrade the boat ramps and parking areas that will be covered up by the higher water? Having owned property at Moores Bend for many years we are used to the fact that Table Rock lake levels are maintained at the expense of Bull Shoals. We understand there are many businesses at Table Rock that depend on a stable water level. However, we have our hard earned money on property that we would like to be able to enjoy. If you raise the level at Bull Shoals you will be covering up our boat ramp, taking a lot of our parking area, and flooding the sandy beach where our children love to play. We would just like to know that we have some concessions coming in the way of improvements where we can still safely launch our boat and park our vehicles while we are out on the water. We would also like to know that those improvements will be done before the lake level is raised and not 10

years down the road or never. Dean Dickens

Appendix C - National Park Service Coordination

United States Department of the Interior

NATIONAL PARK SERVICE

MIDWEST REGION
1709 JACKSON STREET
OMAHA, NEBRASKA 68102-2571

IN REPLY REFER TO:

RECEIVED
BUFFALO NATIONAL RIVER
DATE 8/21/00 INIT
TO
SUPERINTENDENT
MGMT. ASST.
CHIEF RANGER
ADMIN OFCR
INTERPRETATION
FACILITY MGR
CONCESSIONS
RES. MGMT
FILE/LIBRARY

ER-00/444

AUG 8 2000

Mr. Jim Ellis
U.S. Army Corps of Engineers
Little Rock District
Planning Branch
P.O. Box 867
Little Rock, Arkansas 72203

Dear Mr. Ellis:

We have reviewed the notice of intent to prepare an environmental statement (EIS) for the White River Minimum Flow Study, Arkansas and Missouri, and would like to submit the following comments for your consideration.

Our comments stem from the National Park Service's (NPS) congressional mandate to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (NPS organic act, 16 USC § 1)." There are two specific issues we would like you to address in the EIS. These issues relate to existing and potential impacts of White River flow, temperature, and other alterations on our legislated mandate to manage Buffalo National River as a natural "free-flowing stream" and to preserve its natural character, native resources and ecological processes (P.L. 92-237).

1. *We recommend the EIS include an analysis of the impact of any White River flow regulations on the native warm-water fish fauna of both the White River and its Buffalo River tributary.* The construction of Bull Shoals Dam on the White River 27 miles above its confluence with the Buffalo, and the addition of Norfolk Dam downstream of this confluence, have resulted in at least two major shifts in the Buffalo River's native fish communities. First, the cold-water tailrace below the Bull Shoals dam now supports a coldwater fish assemblage and is stocked with non-native rainbow and other trout species. However, these non-native trout are not confined to the White River but have been observed in the Buffalo River as much as 60 miles upstream from its confluence with the White River. Second, and more significantly, the cold-water tailrace has altered the migration patterns of warm-water fish species that historically moved into the Buffalo River from the larger Mississippi River drainage (references available upon request). The thermal barrier has effectively extirpated the once prominent channel and flathead catfishes and, according to Arkansas Game and Fish Commission (AGFC) fisheries biologists, may be affecting white and black bass, as well as white crappie. We feel the dams on the White River have significantly altered the Buffalo River's aquatic ecosystem and impaired our ability to meet congressional mandates as they apply to this unit of the National Park System.

2. *We recommend the EIS address possible mitigation measures for any impacts resulting from the operation of the Bull Shoals or Norfolk Dams on the ecology of Buffalo National River.* The NPS and AGFC have embarked on a long-term hatchery rearing and stocking program in an attempt to return some component of the channel catfish fishery to the Buffalo River. However, a better mitigation strategy would employ knowledge of warm-water fish migration patterns and perhaps regulate hydrologic release patterns from the dams during critical seasons to allow easier passage of warm-water species through the cold-water zone and into the Buffalo River.

The NPS is willing to devote hydrologic and fisheries staff expertise to this effort and will work with the COE and other agencies to conduct the needed assessments and develop and review practical alternatives. Please contact Mike Madell, Midwest Region Environmental Coordinator at (608) 441-5600 if you have questions or comments. We look forward to working with the COE to make the minimum flow study a win-win situation for all parties involved.

Sincerely,

David N Given

David N. Given
Acting Regional Director

United States Department of the Interior
NATIONAL PARK SERVICE
Buffalo National River
402 N. Walnut, Suite 136
Harrison, AR 72601

IN REPLY REFER TO:

L54(BUFF-ONR)

July 20, 2005

Colonel Wally Z. Walters
Commander and District Engineer
Little Rock District
U.S. Army Corps of Engineers
Post Office Box 867
Little Rock, Arkansas 72203-0867

Dear Colonel Walters:

The National Park Service, Buffalo National River (NPS) sent comments to the Little Rock District (District) in August of 2000 concerning our desire to participate in the environmental impact statement (EIS) process for the White River minimum flow study (see attached copy). Our concerns remain as stated in that letter.

We understand the District prepared an interim reallocation study report and a Chief's Report on minimum flows prepared and signed in 2004, and that you continue to proceed on an EIS. The NPS requests to participate as a cooperating agency for that effort, in accordance with the Council on Environmental Quality regulations (40 CFR 1501.6 and 1508.5). Following recent guidance from the Department of the Interior (see *Federal Register* Monday, June 6, 2005, pp. 32840 to 32844), we believe the preparation and execution of a Memorandum of Understanding between the NPS and the District can clarify our participation in that effort and allow us to assist EIS preparation.

The NPS has a continuing interest in working with the District to ensure that impacts to resources of concern to the NPS are adequately addressed. Please contact me at 870-741-5446, ext. 222, to verify your decision regarding this request. Thank you.

Sincerely,

Ronald R. Switzer
Superintendent

Enclosure (1)

DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203-0867

REPLY TO
ATTENTION OF

August 10, 2005

Mr. Ronald R. Switzer
Superintendent
Buffalo National River
National Park Service
402 North Walnut, Suite 136
Harrison, AR 72601

Dear Mr. Switzer:

The Little Rock District received your letter requesting participation in the completion of the White River Minimum Flow environmental impact statement (EIS). The district thanks you for your interest and requests the National Park Service (NPS) to participate as a cooperating agency in this effort. Your interest and desire to ensure the impacts to the NPS resources of concern are addressed is welcomed and the district looks forward to working with the NPS.

As we discussed at our June 30 meeting, the draft EIS is scheduled to be completed in January 2006, therefore it is important that we begin the cooperative effort as soon as possible.

My staff will draft a Memorandum of Understanding (MOU) between our respected agencies and outline the responsibilities of the NPS in the completion of the EIS in accordance with 40 CFR 1501.6. We would like to schedule a meeting to discuss the NPS role in the project and finalize the MOU. The district's point of contact for this effort will be Mike Rodgers and he can be reached at 501-324-5030, michael.r.rodgers@usace.army.mil.

Sincerely,

Wally Z. Walters
Colonel, US Army
District Engineer

United States Department of the Interior
NATIONAL PARK SERVICE
Buffalo National River
402 N. Walnut, Suite 136
Harrison, AR 72601

IN REPLY REFER TO:

L54 (BUFF-ONR)

February 24, 2006

Mr. Michael R. Rodgers, Project Manager
U. S. Army Corps of Engineers
Little Rock District
Post Office Box 867
Little Rock, Arkansas, 72203

Dear Mr. Rodgers:

As set forth in our Memorandum of Understanding for the development of a White River Minimum Flow Environmental Impact Statement (EIS), we have prepared the attached document that addresses the general impacts of White River water development to the natural resources of Buffalo National River. As the EIS continues to develop, our agencies need to further discuss the issues brought forth by further analysis of the current action to increase minimum flow. We request that the U. S. Corps of Engineers provide draft sections of the EIS as they become available so that we may review the development in a timely manner.

If you have questions please contact David Mott, Chief of Resource Management at (870) 741-5446, extension 270. Thank you for your consideration of our view point and your continued cooperation in the development of the White River Minimum Flow EIS.

Sincerely,

Ronald R. Switzer
Superintendent

Enclosure

Synopsis of Impact to Buffalo National River by the Cold Tail-Waters of the White River

The White River's cold-water habitat that currently affects the Buffalo River is approximately 70 miles in length, from Bull Shoals dam to roughly Gion, Arkansas. This large cold-water segment encompasses the mouth of the Buffalo River and continues approximately 25 miles downstream of the river's confluence. The cold-water segment is thought to be inhibiting migration patterns of native, warm-water fish, and increasing the range of non-native, cold water fish during the winter months. An investigation into the fish community suggested that cold-water from the White River functions as a migration barrier during the warm seasons reducing the abundance of some fish species within Buffalo River (Petersen and Justus, 2005). Specific research into channel catfish population declines within the Buffalo River found that populations were not self-sustaining. Research suggested the low population density of adult channel catfish was a product of reduced migration caused by the artificial, cold-water habitat in the White River (Siegwarth, 1992). Reduced abundances and extirpations of some warm-water fish species is also thought to negatively affect to the native mussel communities within the Buffalo River. An effect on other aquatic communities such as macroinvertebrates is unknown.

Petersen and Justus (2005) sampled the fish communities of Buffalo River during the field seasons of 2001 and 2002 in order to document the presence/absence of fish species. Community sampling was conducted at multiple sites within the river drainage using varying electrofishing methodologies (boat, barge, and backpack collections). Seventy-four species were documented with several expected, common species missing or considered rare. During the intensive summer collections, researchers did not collect a single channel catfish, a fish common to river systems in northwest Arkansas. They later captured fewer than a dozen channel catfish during seasonal sampling (winter of 2003 and spring of 2004). All of these were of the same size class, probably representing recent experimental AGFC/NPS restoration stocking event. Other fish known to be common in large Ozark rivers were collected but were low in abundance, these include the American eel, gizzard shad, spotted sucker, freshwater drum, black crappie, least brook lamprey, walleye, and quillback. Furthermore, American brook lamprey, black bullhead, blackside darter, highfin carpsucker, speckled darter, spotted bass, white bass, and the gilt darter were expected, but not found at any Buffalo River sites. Aside from the walleye, which is a cool-water species, all of these fish are warm-water species, and most have some migratory tendencies. The influence of the substantial, artificial, cold-water habitat within the White River (what was once a large warm-water river system) remains unclear for most of these species of fish that are rare and/or potentially extirpated from the Buffalo River. Petersen presented the reiterated the concept, as presented by earlier researchers (Siegwarth, 1992), that the cold-water of the White River functions as a migration barrier reducing the abundance and presence of common fish species within Buffalo River.

Siegwarth (1992) compared channel catfish population dynamics among the Kings, Mulberry, Illinois, and Buffalo Rivers to document baseline conditions prior to stocking

channel catfish, to assess the need for supplemental stocking in Ozark warm-water streams, and to assess the fate of hatchery-reared catfish following their release into the Buffalo River. At the time of assessment, the Buffalo River channel catfish population was estimated at four to six thousand individuals with greater than 94% of the total population originating from past stocking programs. Siegwarth noted that the natural (non-stocked) population within the Buffalo was much lower than those of the other systems. Siegwarth also observed that young-of-year (YOY) channel catfish abundance was lowest in the Buffalo River. Low production of YOY was attributed to low abundance of adult channel catfish within the Buffalo River. Temperature differences between the Buffalo and White Rivers at the confluence were much as 21.5 $^{\circ}$ C during the spawning season. Siegwarth noted that YOY channel catfish, when experimentally placed in the cooler waters of the White River, quickly died from temperature shock. The elimination of YOY produced within Buffalo River and the lack of adult channel catfish within the confluence segment of the White River (Brown, 1967) may have eliminated behavioral cues needed for upstream migration of adult catfish into the Buffalo River. Because the cold tail-waters isolate the Buffalo River from adult channel catfish spawning migrations and resulting lack of YOY produced within the system, the cold tail-water within White River has significantly limited adult channel catfish assemblages within the Buffalo River. Siegwarth concluded that Buffalo River populations of channel catfish were not self-sustaining, and he attributed the low population densities of channel catfish within the Buffalo River to reduced immigration caused by the migration barrier of the cold-water system within the White River. Reduced abundances and absence of common warm-water fish species within Buffalo River, such as channel catfish, may also be negatively affecting to the surrounding aquatic ecosystem.

Currently, 22 species of native mussels are found within the Buffalo River, and 11 of these species are considered rare and are state listed (Christian, Mathews, and others, ongoing research, 2006; ANHC, 2006). Of the mussel species known to be historically abundant within the Buffalo River (Meek and Clark, 1912), several are in decline. *Ligumia recta* and *Potamilus purpuratus*, both species of concern, have been reduced in abundance are thought to be totally absent from the Buffalo River. Research suggests that significant environmental changes or habitat modifications may have occurred since the Meek and Clark survey which render the Buffalo River unsuitable for these species. Or, another possibility is that some species of large migrant spawning fishes have been greatly reduced and perhaps totally eliminated within in Buffalo River, which native mussels need as suitable fish hosts for reproduction (Harris, 1995).

National Park Service management policies mandate that the service will maintain as parts of the natural ecosystems of parks all native plants and animals by preserving and restoring the natural abundances, diversities, dynamics, distributions, habitats, and behaviors of native plant and animal populations and the communities and ecosystems in which they occur (NPS 2001, Section 4.4.1). Given the loss of native fisheries in the Buffalo River this policy is not being accomplished because of the current management actions being implemented by State and Federal agencies responsible for the water and fisheries management in the White River basin. Fisheries mitigation actions put in place

when the dams were constructed on the White River (trout hatchery and stocking program) have only compounded the complexity of native fisheries management in Buffalo National River by allowing non-native trout species access to the Buffalo River. Mitigation of the documented native fisheries impacts in the Buffalo River has never been addressed.

Assessment of unmitigated impairments that already exist within the Buffalo River, as a result of the initial hydrologic changes of the White River, need to be conducted prior to any future modifications of flow within the White River. Modifications of the current hydrologic conditions without proper ecosystem investigations may exacerbate and further accelerate the impacts already sustained by the Buffalo River ecosystem. Impacts of future hydrologic modifications of the White River system need to be fully understood as they relate to potential further harm of the functionality of the Buffalo River ecosystem. The U. S. Army Corps of Engineers and other resource management agencies should recognize the opportunity that exists during the review of the White River Minimum Flow to take corrective actions that directly or indirectly truly mitigate native fisheries impacts on Arkansas largest unit of the National Park Service which is recognized as an outstanding, nationally significant aquatic resource.

Literature Cited

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Harris, J. L., Ph. D., 1996. The Freshwater Mussel Resources of the Buffalo National River, Arkansas. Phase I Qualitative Survey: Location, Species Composition, and Status of Mussel Beds. Final Report.

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Siegwarth, G.L., 1992. Channel Catfish of the Buffalo River, Arkansas: Population Abundance, Reproductive Output, and Assessment of Stocking Catchable Size Fish: Arkansas Cooperative Fish and Wildlife Research Unit, University of Arkansas, Fayetteville, Arkansas, 107pp.

Appendix D - Fish and Wildlife Coordination

January 24, 2006

Planning & Environmental Office

Allan Mueller
Arkansas Field Supervisor
U.S. Fish and Wildlife Service
Arkansas Field Office
1500 Museum Road, Suite 105
Conway, AR 72032

Dear Mr. Mueller,

The purpose of this letter is for the Little Rock District Corps of Engineers to provide your office information regarding the determination of the affect on Threatened and Endangered (T&E) species from the White River Minimum Flow (WRMF) reallocation project. We are submitting the information at your request to solidify the analysis and get written concurrence from your agency.

Informal coordination with the Arkansas and Missouri field offices has been conducted since the initiation of the study. Elevations of concern were provided by the USFWS in 2002 and were evaluated through analyses of the duration and frequency output generated from the SUPER Model. The differences observed annually and seasonally were evaluated for each elevation of concern. The information attached supported the conclusion that the project may affect but is not likely to adversely affect the T&E species as noted in the documentation.

The USACE and USFWS continue coordination efforts in the completion of the WRMF project as well as other projects throughout the district. If you have any questions on the WRMF project please contact Mike Rodgers at 501-324-5030.

Sincerely,

Ronald R. Carman, P.E.
Assistant Chief, Planning & Environmental

The following are summaries of the annual SUPER output and Elevations of Concern at each lake. Duration equals the percent of time the elevation is met or exceeded.

Beaver Lake

The USFWS identified several elevations of concern on the Beaver project relative to the potential affects on Threatened and Endangered (T&E) species. The elevations are 1110, 1120, 1130 and 1140. The species of concern at 1110, 1120 and 1130 was the endangered gray bat and its habitat (Pigeon Roost Cave). The reallocation will result in less duration of the elevation of concern. This difference will result in an increase in the availability of use of the natural entrance of the cave and is considered a positive effect. Concerns for the Ozark cave fish led to the inquiry about changes at 1120 – 1140. There have been no adverse effects identified to T&E species at Beaver.

Beaver Lake Annual Pool Elevation-Duration for Pool Elevations of Interest				
Elevation	Current	Conservation	Flood	Split 50/50
1110	91.2	86.65	86.92	86.74
1120.4	45.86	42.69	42.83	42.79
1121	38.19	35.98	36.59	35.26
1121.2	36.87	34.5	35.28	33.93
1121.9	30.77	28.52	28.98	27.94
1130	0.34	0.31	0.33	0.29
1140	0	0	0	0

Beaver Lake Differences in Annual Pool Elevation: Duration for Pool Elevations of Interest (Alternative minus Current)			
Elevation	Conservation	Flood	Split 50/50
1110	-4.54	-4.28	-4.45
1120.4	-3.17	-3.03	-3.07
1121	-2.21	-1.61	-2.93
1121.2	-2.37	-1.6	-2.94
1121.9	-2.25	-1.79	-2.84
1130	-0.04	-0.02	-0.05
1140	0	0	0

Bull Shoals

The USFWS identified 670, 675, and 690 as elevations of concern on the Bull Shoals project relative to the potential impacts on the endangered Tumbling Creek Cave Snail and its habitat. A recovery plan for this species has been completed by USFWS. The concern is that the drainage system velocities of the cave (and resulting sedimentation) are affected at the higher lake levels. There is <3 percent increase in duration at the 670 elevation if any storage in reallocated from the flood pool. A slight reduction (<1 percent) in duration is expected if the storage is reallocated from the conservation pool. There have been no adverse effects identified to T&E species at Bull Shoals. The USACE completed a Biological Assessment (BA) for the impacts to the Tumbling Creek Cavesnail, Gray Bat and Indiana Bat at Bull Shoals in May 2004. The BA concluded the reallocation may affect but not likely to adversely affect the species of concern. The conclusion was based on the following: 1) statistical analysis that Bull Shoals lake levels do not have statistically significant effect on the flows within Tumbling Creek cave, 2) the cave snail is not known to occur in the lower reaches of the drainage system and spring discharge areas, and 3) the elevation of concern (670 NGVD) is currently met or exceeded 38 days annually and a 10 day increase is not considered significant. Concurrence with the findings of the BA was received from USFWS on July 13, 2004.

Bull Shoals Lake

Annual Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
654	59.92	51.39	81.96	69.60
656.5	30.26	27.96	71.54	51.82
657	28.00	26.06	68.88	38.84
659	23.01	21.43	53.01	27.96
670	10.65	9.96	13.48	11.32
675	7.60	7.03	9.42	8.17
690	2.02	1.90	2.23	2.05
695	0.57	0.46	0.61	0.54

Bull Shoals Lake

Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
654	-8.53	22.03	9.68
656.5	-2.31	41.27	21.56
657	-1.94	40.88	10.84
659	-1.58	30.00	4.95
670	-0.69	2.83	0.67
675	-0.57	1.82	0.57
690	-0.12	0.21	0.03

Greers Ferry

The USFWS identified 480, 490, and 500 as elevations of concern relative to the potential impacts on the candidate species yellow cheek darter in the Archey Fork arm. The percent difference between the current condition and each alternative plan is less than 1 percent on an annual or seasonal basis; therefore, there have been no adverse effects identified to T&E species at Greers Ferry.

Greers Ferry Lake Annual Pool Elevation-Duration for Pool Elevations of Interest				
Elevation	Current	Conservation	Flood	Split 50/50
461	44.46	39.14	66.08	53.83
462.0	21.66	20.00	60.80	47.89
463	15.13	13.94	55.73	32.48
464	11.98	11.19	40.78	14.01
480	0.98	0.81	1.22	0.94
487	0.16	0.13	0.18	0.16
490	0.00	0.00	0.00	0.00
500	0.00	0.00	0.00	0.00

Greers Ferry Lake Differences in Annual Pool Elevation: Duration for Pool Elevations of Interest (Alternative minus Current)			
Elevation	Conservation	Flood	Split 50/50
461	-5.32	21.61	9.37
462.00	-1.65	39.14	26.23
463	-1.19	40.60	17.35
464	-0.79	28.80	2.03
480	-0.17	0.24	-0.04
487	-0.03	0.02	0.00
490	0.00	0.00	0.00
500	0.00	0.00	0.00

Table Rock

The USFWS identified 940, 960, and 1100 as critical elevations around the lake. These elevations are above the top of the flood pool and will not be affected by this reallocation.

Norfork Lake

The elevations identified by USFWS as critical elevations (> 580) are above the top of the flood pool and will not be affected by this reallocation.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1500 Museum Road, Suite 105
Conway, Arkansas 72032
Tel.: 501/513-4470 Fax: 501/513-4480

August 9, 2001

IN REPLY REFER TO:

Colonel Benjamin H. Butler
U.S. Army Corps of Engineers
P.O. Box 867
Little Rock, Arkansas 72203-0867

Dear Colonel Butler:

This planning aid letter provides comments and recommendations for the White River Minimum Flow Study and Environmental Impact Statement, White River, Arkansas and Missouri. The project, sponsored by the Arkansas Game and Fish Commission (AGFC), is intended to improve the trout fishery in the tailwaters of the five dams in the White River basin. This report was prepared in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661-667e) but does not constitute the final report as required by Section 2(b) of the Act.

Description of Study Area

The White River encompasses both the Ozark mountain and Mississippi alluvial valley ecoregions. The watershed supports significant aquatic and terrestrial natural resources, including habitat for wintering waterfowl, migratory songbirds, freshwater mussels, nearly 100 species of fish, and the largest contiguous block of bottomland hardwood forest remaining on any tributary of the Mississippi River. Publicly owned lands in the basin include national forests, national wildlife refuges, state parks, and wildlife management areas.

Construction of the five large reservoirs on the White River and its tributaries for flood control, hydropower generation, and other uses began in the 1940s. Beaver, Table Rock, Bull Shoals, Norfork, and Greers Ferry Reservoirs control 47 percent of the White River's total drainage area and have changed the nature of the White River, the North Fork White River, the Little Red River, and their tributaries. The year round release of cold water from the dams has virtually eliminated the native warmwater fishery and freshwater mussel community for miles downstream. This loss of native aquatic resources has been mitigated to some degree by the development of a trout fishery made possible by the cold temperatures of the tailwater. Additionally, moderation of the hydrograph (i.e., reducing peak flows and increasing low flows) by the five dams has had a significant effect on the hydrology of the basin and the geomorphology of the river itself.

The Fish and Wildlife Service (Service) is actively involved in mitigating the effects of dams on fishery resources through trout production at national fish hatcheries at several of the reservoirs on the White River. Hundreds of thousands of trout produced at state and federal fish hatcheries are stocked in the tailwaters of these dams annually, producing a world class trout fishery. Numerous world record trout have been caught in the tailwaters of these dams, contributing to the nationally important trout fishing industry.

The Corps of Engineers (Corps) and AGFC propose to reallocate 1.5 feet of storage from Beaver Lake, 2 feet from Table Rock Lake, 3.5 feet from Norfork Lake, 5 feet from Bull Shoals Lake, and 3 feet from Greers Ferry Lake to provide minimum flows of approximately 800 cfs in the tailwaters of each of the dams. These minimum flows would enhance the trout fisheries by keeping temperatures lower during hot summer months, providing more reliable spawning habitat, increasing the wetted perimeter to provide a larger prey base, and increasing dissolved oxygen levels.

Fish and Wildlife Resources

The upper White River basin is located in the Ozark Plateau of Arkansas and Missouri. This region is comprised of karst geology and is rife with caves and other karst passages forming a network across the region. When the rivers were impounded, many of these karst passages were flooded miles from the perimeter of the reservoirs. Karst conduits can act as capillaries, transporting water for long distances. Many karst species were extirpated from flooded caves, including bats, crayfish, cavefish, amphipods, and snails.

The dams on the White River and its tributaries transformed the riverine habitat to lentic conditions, suitable for warmwater recreational fisheries such as largemouth bass, crappie, walleye, and bream. The hypolimnetic releases from these impoundments are significantly cooler than the water temperature of the river prior to dam construction. As a result, habitat for native fish species has been converted into a coldwater nonnative trout fishery. Currently, fish species in the upper White River below the dams include rainbow (*Oncorhynchus mykiss*), brown (*Salmo trutta*), and brook trout (*Salvelinus fontinalis*); central stoneroller (*Campostoma anomalum*); northern hogsucker (*Hypentelium nigricans*); redhorse (*Moxostoma* spp.); and several species of sculpin (*Cottus* spp.). Greers Ferry and Norfork National Fish Hatcheries currently stock trout in the tailwaters.

The coldwater conditions transition to warmwater habitat as the water temperatures increase downstream of the dams. This transition zone currently is found in the vicinity of Guion, in Stone County, Arkansas. At this point, habitat becomes suitable for native fish, mussels, and other species. Most of the species found in the lower White River cannot tolerate the coldwater conditions of the upper portion of the river.

Federally listed species in the project area include the endangered pink mucket (*Lampsilis abrupta*), the endangered speckled pocketbook (*L. streckeri*), and the proposed endangered scaleshell (*Leptodea leptodon*) mussels; the endangered gray (*Myotis grisescens*) and Indiana bats (*Myotis sodalis*); the threatened bald eagle (*Haliaeetus leucocephalus*); two species of endangered cave crayfish (*Cambarus zophonastes* and *C. aculabrum*); and the threatened Ozark cavefish (*Amblyopsis rosae*). Federal candidate species include the Tumbling Creek cavesnail (*Antrobia culveri*), the Ozark hellbender (*Cryptobranchus alleganiensis bishopi*), and the yellowcheek darter (*Etheostoma moorei*).

There are numerous species of concern near the shorelines of the reservoirs or in karst habitats nearby. Plants include Bush's poppy mallow (*Callirhoe bushii*), Ozark corn salad (*Valerianella ozarkana*), venus looking glass (*Triodanis lamprosperma*), marine vine (*Cissus incisa*), Ozark spiderwort (*Tradescantia ozarkana*), French mulberry (*Callicarpa americana*), umbrella plant (*Eriogonum longifolium* var. *longifolium*), forked aster (*Aster furcatus*), and juniper-leaf (*Polypremum procumbens*). Animals include the rabbitsfoot (*Quadrula cylindrica cylindrica*), western fanshell (*Cyprogenia aberti*), western sand darter (*Ammocrypta clara*), shorthead redhorse (*Moxostoma macrolepidotum*), paddlefish (*Polyodon spathula*), Swainson's warbler (*Limnothlypis swainsonii*), highfin carpsucker (*Carpiodes velifer*), William's crayfish (*Orconectes williamsi*), Ozark cave amphipod (*Stygobromus ozarkensis*), and alligator snapping turtle (*Macroclemys temminckii*).

Terrestrial species in the vicinity of the reservoirs and their tailwaters include northern bobwhite, cottontail rabbit, mourning dove, gray squirrel, fox squirrel, white-tailed deer, eastern wild turkey, migratory mallards, and snow geese. Mink, muskrat, beaver, and raccoon also inhabit the area.

Description of Proposed Project

The amount of storage reallocation under study is 1.5 feet in Beaver Reservoir, 2 feet in Table Rock Reservoir, 3.5 feet in Norfork Reservoir, 5 feet in Bull Shoals Reservoir, and 3 feet in Greers Ferry Reservoir. In each reservoir, the storage would be reallocated from the conservation pool, the flood pool, or a combination of the two. The stored water would be used for releases during periods when hydropower is not being generated and flood water releases are not being made. These minimum flows are intended to sustain the trout fishery by increasing dissolved oxygen levels, decreasing temperatures during hot weather, and increasing the wetted perimeter, which encourages production of aquatic insects, the primary food source for trout.

Fish and Wildlife Resource Concerns

Several federally listed species, listed above, occur in the vicinity of the reservoirs and below the dams. The endangered pink mucket mussel and proposed endangered scaleshell mussel occur in

the White River downstream of Bull Shoals and Norfork Reservoirs, below the thermal transition zone, which is the area where the water temperatures warm to conditions more similar to those experienced prior to dam construction. Currently, the transition zone on the White River is below Bull Shoals Dam in the vicinity of Guion, approximately 75 river miles downstream, and the current upstream extent of the pink mucket and scaleshell is unknown. The added volume of cold water to the White River could extend the transition zone downstream, further reducing available habitat for these and other mussel species. This may also occur below Greers Ferry Dam, where the transition zone currently exists near Searcy. Native fish and invertebrates also cannot tolerate cold water conditions, and a downstream extension of the transition zones would further reduce available habitat. The amount the transition zone will be extended downstream should be evaluated thoroughly by this study.

Other endangered species in or near the project area include the endangered gray and Indiana bats, which occur in caves in the vicinity of the White River. Two species of endangered cave crayfish and the threatened Ozark cavefish occur in several Ozark caves. Additionally, the Tumbling Creek cavesnail, also a federal candidate species, is known only from Tumbling Creek Cave in Taney County, Missouri, near Bull Shoals Reservoir. These cave species could be affected severely by increased water levels in the reservoirs, which could flood caves and karst spaces.

This project is likely to raise the level of the conservation pool of each reservoir by reallocating a portion of the necessary storage from the flood pool. Because the Corps attempts to maintain reservoir levels at the top of the conservation pool, reservoir levels would rise. This would result in an increased frequency of flooding of additional stream habitat and karst passages. Currently, the reservoirs on the White River and tributaries flood an indeterminate amount of karst habitat, which has been severely degraded throughout the Ozark plateau from numerous threats. Beaver Lake is thought to serve as a barrier for the threatened Ozark cavefish, which cannot survive in open water, nor can it evade predation by upper trophic level fishes, which find their way into karst passages through high water levels. Additionally, Pigeon Roost Cave on Hobbs State Management Area currently floods when reservoir levels are up. An alternative entrance had to be constructed into the cave to allow passage for the endangered gray bats that roost in the cave. It is unknown how many other species in caves and karst passages would be affected in such a manner, but many threatened and endangered species and species of concern could be negatively affected by such flooding. Further degradation of a very sensitive ecosystem and numerous endangered species in order to improve conditions for non-native trout should be carefully considered. Although it may appear that a reallocation of several feet would have a negligible effect on these species, several feet of elevation in karst systems can affect habitats miles from the reservoir. Karst conduits can act as capillaries (Nielson and Perrochet 2000), so water may pond at elevations higher than the level of the conservation pool. In addition, several proposals are being evaluated for reallocation of water from Beaver Reservoir for municipal and industrial uses. Although they currently propose to reallocate water from the conservation pool, which would not affect water levels, a final report and decision have not yet been issued. The combination of reallocations for minimum flows and municipal uses could raise the water levels

in Beaver Reservoir approximately 9 feet, which would have a very large affect on karst species and habitats.

If conservation pool levels are raised, the yellowcheek darter could be negatively impacted. This species has recently been elevated to federal candidate species status. It is endemic to the Little Red River system and currently is found in four tributaries that flow into Greers Ferry Reservoir. The yellowcheek darter cannot tolerate flooded conditions, so these populations are completely isolated from one another. Before Greers Ferry Dam was constructed, the populations formed a single metapopulation, in which individual populations went extinct and the habitat recolonized, based on local conditions. Presently, the reservoir prevents movement of darters between populations. Therefore, if a population drops below viable levels or is extirpated, the site cannot be recolonized with individuals from other tributaries. The recent drought has reduced severely the amount of available habitat for yellowcheek darters in these tributaries to a few stream miles in each tributary. Populations in the Middle, Archey, and South Forks of the Little Red River extend to approximately 2.5 kilometers above the reservoir (Wine *et al.* 2000). Raising reservoir levels would make the lower reaches of these streams unsuitable for the yellowcheek darter, further reducing the range of this species. This species is endemic to Arkansas, and the loss of the populations in the Little Red River system would mean the extinction of the species.

A similar situation exists with the endangered speckled pocketbook. This species is found only in the Middle Fork of the Little Red River and was relegated to the upper reaches of this stream when Greers Ferry Dam was constructed. Populations of this mussel exist within several miles of the reservoir (B. Posey, AGFC, personal communication), and a rise in conservation pool elevations would further restrict this species to the upper reaches of this stream. Because this species is only found in one stream, the further restriction of populations could be extremely detrimental to the species.

Finally, the Ozark hellbender, which has recently been elevated to federal candidate species status, occurs in the coldwater zone downstream of Norfork and Bull Shoals dams. It is unlikely this species would be affected downstream of the dams, as hellbenders do quite well in coldwater streams, but hellbenders cannot tolerate flooded conditions. The best population of Ozark hellbenders in Missouri is currently in the North Fork of the White River above Norfork Reservoir. Additional flooded stream habitat would displace any hellbenders currently in the stream. In recent years, the population in the North Fork of the White River has been declining seriously (Wheeler *et al.* 1999). The raising of the conservation pool of Norfork Reservoir would damage Missouri's best population of this imperiled species.

The effects of raising the conservation pools in each reservoir should be evaluated extensively. The impacts of this action could have a large effect on numerous ecosystems, both aquatic and terrestrial. The amount of additional stream habitat that would be impounded above each reservoir should be quantified, and the increased flooding of karst habitat should be estimated. If it is determined that endangered species in any of these ecosystems will be affected, formal

consultation with the Service under Section 7 of the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.) must be initiated.

The natural hydrologic cycle of the White River and tributaries has been altered by construction of the five large reservoirs. Because the dams are operated under plans designed to accomplish their authorized purposes, including flood control and hydropower, flood peaks have been reduced and minimum flows have been increased. Reallocation of water to provide some minimum flow for trout would necessitate another change in the established water release schedules and could further alter existing hydrologic patterns. Seasonal flooding under the existing hydrologic regime provides habitat for migratory waterfowl and is critical to maintaining the bottomland hardwood forests in the lower part of the basin. Therefore, this study should evaluate potential impacts supplemental water releases may have on waterfowl habitat and forest health.

The Norfork and Greers Ferry National Fish Hatcheries both receive water directly from the reservoirs. An increase in reservoir temperatures could be detrimental to trout in the hatcheries. This is of particular concern in the fall, when fish densities in the hatcheries are highest. During these months, concentrations of manganese, iron, and hydrogen sulfide are particularly high. Compounding these stressors with lower dissolved oxygen from higher temperature waters could result in high mortality of trout. Therefore, it will be important to determine what effect the releases may have on reservoir temperatures and hatchery trout populations. Additionally, increased releases may cause the water temperatures in those reservoirs to rise, which could have an adverse effect on the coolwater fishery resources within the reservoirs.

The releases are unlikely to have an effect on downstream public lands, including Cache and White River National Wildlife Refuges. Increased flooding could be a concern, however, if it is determined that the releases would be of a larger magnitude than they are currently planned. Presently, the increased flow downstream would likely be negligible due to the addition of flows from the Black and Cache Rivers.

The Missouri Department of Conservation (MDC) has made a preliminary recommendation of an instantaneous instream flow regime below Table Rock Dam that varies between 400 and 842 cubic feet per second annually (Amy Salveter, FWS, personal communication). It is our understanding that MDC, the US Geological Survey (USGS), and the Tennessee Valley Authority (TVA) are collecting data and developing/calibrating models to refine existing instream flow recommendations and better assess the effects of those recommendations on the elevation and temperature profiles of Table Rock Reservoir. The results of these studies should be incorporated into this study.

Recommendations

1. Avoid and minimize permanent increases in conservation pool elevations/storage in each reservoir. If water is to be reallocated from the flood pool, provide a detailed analysis of

the karst habitat in the vicinity of the reservoir, the approximate amount of habitat that would be flooded, and the species that would be affected. If any endangered species are known to be in the area, the Corps must consult with the Service on the effects of the project on the species.

2. Provide a detailed description of seasonal water level fluctuations for each reservoir included in the project, including the timing and duration of the fluctuations. In addition, the relationship between pool levels and water levels in karst areas should be determined. Time lags between reservoir draw down and the response of water levels in karst systems should be ascertained.

3. Examine the effects of a larger volume of cold water on downstream ecosystems, including the distance downstream the transition zone would be extended.

4. Conduct freshwater mussel surveys in the transition zone of the White River to determine if the pink mucket and scaleshell would be affected by a downstream extension of the transition zone.

5. Examine the effects of any conservation pool elevation rises in combination with any planned reallocations for municipal and industrial use, so that the total effects of the projects may be evaluated.

6. Evaluate potential impacts supplemental water releases may have on waterfowl habitat and forest health downstream.

7. Investigate the effect the releases may have on reservoir temperatures, hatchery trout populations, and reservoir fishery populations.

8. Before this study is completed, the results of MDC, USGS, and TVA's studies on instream flow should be evaluated and incorporated into this study.

Fish and Wildlife Coordination Act Activities for the Feasibility Phase

The Service will be responsible for preparing a Fish and Wildlife Coordination Act (FWCA) report as required by Section 2(b) of the Act. The report will evaluate alternative plans in detail and recommend measures to conserve fish and wildlife resources. To fulfill Service obligations under the FWCA and to fully evaluate each alternative developed, the following information should be produced and supplied to us during the feasibility phase:

1. Analysis of karst habitat and species occurrences in the vicinity of each reservoir. Detailed analyses will be necessary for each reservoir in which the conservation pool elevations are proposed to be raised.

2. Seasonal water level fluctuation data.

3. Results of models showing the physical, chemical, and biological effects of additional volume of cold water on the transition zone.

4. Results of all fish, wildlife, and habitat studies.

5. The final plans for each reservoir, including the amount of water that would be reallocated from each reservoir and from which pool.

6. The increased amount and frequency of stream habitat that would be flooded if conservation pool levels are raised.

7. Any changes in the extent or duration of flooding in downstream bottomland hardwood forests.

Summary of Findings and Service Position

The Service has identified several areas of concern related to the proposed project, including inundation of caves in the karst formation, extension of the cold water zone in the rivers, as well as others; however, due to the preliminary nature of the White River Minimum Flow Study, we are not able to analyze the full scope of the proposal. Therefore, we have not developed a position on the project at this time. The concerns, conservation methods, objectives, and recommendations identified in this report should be considered in future project planning.

We look forward to continued coordination with you on this project. If you have any questions, please contact Susan Rogers in our office at (501) 513-4481.

Sincerely,

Margaret Harney

Margaret Harney
Acting Field Supervisor

cc:

AGFC
ASWCC
USFWS, Columbia FO
USFWS, Greers Ferry NFH
USFWS, Norfork NFH

USFWS, White River NWR
USFWS, Cache River NWR
ANHC
EPA
ADEQ
MDC

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Appendix E - Fish and Wildlife Coordination Report

United States Department of the Interior

FISH AND WILDLIFE SERVICE
110 South Amity Road, Suite 300
Conway, Arkansas 72032
Tel.: 501/513-4470 Fax: 501/513-4480

IN REPLY REFER TO:

March 31, 2006

Colonel Wally Z. Walters
U.S. Army Corps of Engineers
P.O. Box 867
Little Rock, Arkansas 72203-0867

Dear Colonel Walters:

This revised draft Fish and Wildlife Coordination Act report provides comments and recommendations for the White River Minimum Flow Study, White River, Arkansas and Missouri. The project, sponsored by the Arkansas Game and Fish Commission (AGFC), is intended to improve the trout fishery in the tailwaters of the five dams in the White River basin. This report is submitted in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401. 16 U.S.C. as amended 616 et seq.).

Description of Study, Study Area and Project

The White River basin encompasses both the Ozark mountain and Mississippi alluvial valley ecoregions. The watershed supports significant aquatic and terrestrial natural resources, including habitat for wintering waterfowl, migratory songbirds, freshwater mussels, nearly 100 species of fish, and the largest contiguous block of bottomland hardwood forest remaining on any tributary of the Mississippi River. Publicly owned lands in the basin include national forests, national wildlife refuges, state parks, and wildlife management areas.

Construction of the five large reservoirs on the White River and its tributaries for flood control, hydropower generation, and other uses began in the 1940s. Beaver, Table Rock, Bull Shoals, Norfork, and Greers Ferry Reservoirs control 47 percent of the White River's total drainage area and have changed the nature of the White River, the North Fork White River, the Little Red River, and their tributaries. The year round release of cold water from the dams has virtually eliminated the native warmwater fishery and freshwater mussel community for miles downstream. This loss of native aquatic resources has been mitigated to some degree by the development of a trout fishery made possible by the cold temperatures of the deep water released tailwaters. Additionally, moderation of the hydrograph (i.e., reducing peak flows and increasing low flows) by the five dams has had a significant effect on the hydrology of the basin and the geomorphology of the river itself (Craig *et al.* 2002). Narrow temperature variation; constant

and irregular flow fluctuations; low dissolved oxygen; and loss of instream habitat have further affected the fisheries.

The Fish and Wildlife Service (Service) is actively involved in mitigating the effects of dams on fishery resources through trout production at national fish hatcheries at several of the reservoirs on the White and Little Red Rivers. Hundreds of thousands of trout produced at state and federal fish hatcheries are stocked in the tailwaters of these dams annually, producing a world class trout fishery. Numerous world record trout have been caught in the tailwaters of these dams, contributing to the nationally important recreational trout fishing industry. However, over time we have become aware of water quality issues attributable to the reservoirs and their releases that were not previously understood nor accounted for through mitigation or operations. Water quality, climate change, development, habitat loss, recreational demands, power demands, and an aging hatchery system are all contributing to the complex and difficult task of maintaining the trout fishery. The continued success of this mitigation effort will depend on the adaptation of trout production along with fisheries, recreation, development, habitat, and water quality management to meet these new challenges.

The Water Resource Development Acts (WRDA) of 1999 (Section 374) and 2000 (Section 304) modified the authorizations for Beaver, Table Rock, and Bull Shoals Lakes on the White River; Norfork Lake on the North Fork River; and Greers Ferry Lake on the Little Red River. Under the original authorization, water levels have been managed primarily for flood control and hydroelectric power generation, and to a lesser extent water supply with occasional releases for fisheries when requested. The directive in WRDA 1999 and 2000 creates a new procedure for storing and managing water in these five lakes and requires the Corps to assess project benefits in view of these changes. Because all of the storage space in the lakes is already allocated to existing purposes and no unused storage or surplus storage available, there would need to be a reallocation of storage to implement the added measure. The reallocated storage is intended to provide increased minimal releases whenever flood or hydropower releases are not being made to ensure continuous minimum stream flow downstream to improve water quality and enhance fisheries.

Fish and Wildlife Resources

The upper White River basin is located in the Ozark Plateau of Arkansas and Missouri. This region is comprised of karst geology and is rife with caves and other karst passages forming a network across the region. When the rivers were impounded, many of these karst passages were flooded miles from the perimeter of the reservoirs. Karst conduits can act as capillaries, transporting water for long distances. Many karst species were likely extirpated from flooded caves, including bats, crayfish, cavefish, amphipods, isopods, and snails.

The dams on the White River and its tributaries transformed much of the riverine habitat to lentic conditions, suitable for warmwater recreational fisheries such as largemouth bass, crappie, walleye, and bream, but also created deep cold water conditions that supported the stocking of species such as striper and trout. The hypolimnetic releases from these deep impoundments are significantly cooler than the water temperature of the river prior to dam construction. As a result, habitat for many native fish species has been converted into a coldwater nonnative trout

fishery. Currently, fish species in the upper White River below the dams include rainbow (*Oncorhynchus mykiss*), brown (*Salmo trutta*), cutthroat (*Oncorhynchus clarki*), brook trout (*Salvelinus fontinalis*) and hybrid tiger trout (*Salmo trutta* x *Salvelinus fontinalis*) (Lewis 2005); central stoneroller (*Campostoma anomalum*); northern hogsucker (*Hypentelium nigricans*); redhorse (*Moxostoma* spp.); and sculpins (*Cottus* spp.). Many other native species such as shiners, walleye, smallmouth, and largemouth persist in the tailwaters in lesser numbers. Greers Ferry and Norfork National Fish Hatcheries and AGFC's Spring River Hatchery currently stock each trout species except tiger trout in the tailwaters. Brown trout are maintained mostly through natural reproduction with the other species having only limited reproductive success.

The coldwater conditions transition to warmwater habitat as the water temperatures increase downstream to conditions more similar to those experienced prior to dam construction. This transition zone currently is found downstream of Bull Shoals and Norfork dams, in the vicinity of Guion, in Stone County, Arkansas, approximately 75 river miles downstream. At this point, habitat becomes increasingly suitable for more native fish, mussels, and other species. Most of the species found in the lower White River cannot tolerate the coldwater conditions of the upper portion of the river except in backwaters and near the warm water confluences of tributaries such as Crooked Creek and the Buffalo National River. In contrast, the warm water contributions from these tributaries adds to the warming of the White River at low flows. The 1957 USFWS evaluation found 512 miles of stream impounded, 585 miles of streams below the dams radically influenced and 215 miles partially influenced.

The watershed in the project area consists of oak-hickory forest and cedar glades. Dominant species in the oak-hickory forest include red oak, white oak, black oak, shagbark hickory, elm, and ash. Dogwood, redbud, and serviceberry dominate the understory. Cottonwood, beech, river birch, and mulberry are common in the riparian. Shrubs and native grasses are also found throughout the region. Terrestrial fauna in the vicinity of the reservoirs and their tailwaters include northern bobwhite, cottontail rabbit, great blue herron, gray squirrel, fox squirrel, white-tailed deer, eastern wild turkey, migratory mallards, and snow geese. Mink, muskrat, beaver, otter, and raccoon also inhabit the area.

There are numerous federally listed species in the project area. Listed mussels that occur in the White River basin include the endangered pink mucket (*Lampsilis abrupta*), speckled pocketbook (*L. streckeri*), and scaleshell (*Leptodea leptodon*). These species cannot withstand the artificially cold conditions of the tailwaters, nor can they tolerate the lentic conditions of impoundments. These habitat limitations have eliminated the pink mucket and scaleshell from the upper White River downstream to the transition zone below Batesville Dam #1. Additionally, the speckled pocketbook only occurs in the forks of the Little Red River above Greers Ferry dam and Big Creek downstream. No individuals were found in the vicinity of the tailwater.

The endangered gray (*Myotis grisescens*) and Indiana bats (*Myotis sodalis*), two species of endangered cave crayfish (*Cambarus zophonastes* and *C. aculabrum*), the endangered Tumbling Creek cavesnail (*Antrobia culveri*), and the threatened Ozark cavefish (*Amblyopsis rosae*) occur in karst systems throughout the Ozarks. Many caves and karst passages in the vicinity of the

reservoirs were flooded when the reservoirs were impounded, extirpating these and similar karst dependent species.

The endangered Missouri bladderpod (*Lesquerella filiformis*), which has been proposed to be reclassified to threatened, occurs at Blue Springs Park on Beaver Reservoir, and the threatened Bald Eagle (*Haliaeetus leucocephalus*) occurs throughout the project area, both around the perimeter of the reservoirs and along the riparian area of the tailwaters. There are five known Bald Eagle nests along the White River in the tailwaters of Bull Shoals and Norfork Reservoirs, five nests on Bull Shoals Reservoir, two on Norfork Reservoir, two nests on Greers Ferry Reservoir, and one nest on the Little Red tailwater.

Federal candidate species in the project area include the Ozark hellbender (*Cryptobranchus alleganiensis bishopi*). Ozark hellbenders are found beneath large rocks in moderately deep (<1m), rocky, fast-flowing streams in the Ozark plateau. Currently, the best population of this species occurs in the North Fork White River above Norfork Reservoir. Additionally, an old individual was collected from the White River below its confluence with the North Fork White River. It is unknown if this individual was a relic from the population that occurred in this area prior to dam construction or if it is representative of a current viable population. Another individual was taken below Batesville Dam #1 by an angler; however, a survey of the immediate area below the dam did not reveal additional specimens.

Another candidate species, the yellowcheek darter (*Etheostoma moorei*), occurs in three tributaries of the Little Red River above Greers Ferry Reservoir. The populations in these tributaries have been isolated from one another since the reservoir was constructed, as the yellowcheek darter cannot tolerate lentic conditions. Extremely low population numbers in each of the tributaries in which the species is extant has resulted in the species being elevated to candidate status, and it is likely to be proposed for federal listing in the next several years.

There are numerous species of concern near the shorelines of the reservoirs, downstream of the tailwaters, or in karst habitats nearby. Plants include Ozark chinquapin (*Castanea pumila*), forked aster (*Aster furcatus*), and juniper-leaf (*Polypremum procumbens*). Animals include the rabbitsfoot (*Quadrula cylindrica cylindrica*), western fanshell (*Cyprogenia aberti*), salamander mussel (*Simpsonaias ambigua*), longnose darter (*Percina nasuta*), paddlefish (*Polyodon spathula*), Swainson's Warbler (*Limnothlypis swainsonii*), William's crayfish (*Orconectes williamsi*), cave amphipod (*Caecidotea stiladactyla*), Ozark cave amphipod (*Stygobromus ozarkensis*), and the alligator snapping turtle (*Macroclemys temminckii*). Locations of endangered, threatened, and candidate species, as well as species of concern in the project area that may be affected by the reallocations or increase in minimum flows have been provided to the Corps.

Description of Proposed Project

The U.S. Army Corps of Engineers (Corps) proposes to reallocate 1.5 feet of water storage from Beaver Lake to produce a minimum flow of 136 cubic feet per second (cfs) in the tailwater, 2 feet from Table Rock Lake to produce 400 cfs in the tailwater, 3.5 feet from Norfork Lake to produce 300 cfs in the tailwater, 5 feet from Bull Shoals Lake to produce a flow of 800 cfs in the tailwater, and 3 feet from Greers Ferry Lake to provide a minimum flow of 200 cfs in the tailwater. In each reservoir, the storage would be reallocated from the conservation pool, the flood pool, or a combination of the two. In any given reservoir, water reallocated from the flood pool would be added to the conservation pool, raising the elevation at which the lake is managed. The stored water would be used for releases during periods when hydropower is not being generated and flood water releases are not being made. These minimum flows are intended to sustain the trout fishery by decreasing temperatures during hot weather, provide more reliable spawning habitat, increasing the wetted perimeter (thus encouraging production of aquatic insects, the primary food source for trout), providing boat access through shoals, and possibly increasing dissolved oxygen levels.

The preferred combination of water storage reallocation has been identified as follows in the White River Minimum Flows Reallocation Study Report, Arkansas and Missouri, dated July 2004:

> WRDA authorized the Little Rock District Corps of Engineers to reallocate specific "feet" of storage from each of the five White River reservoirs. Three reallocation plans were formulated. The Corps modeled and studied minimum flows storage reallocations from flood pool only, conservation pool only, and a 50 percent flood pool and 50 percent conservation pool (50/50) reallocation scenarios (note: for reallocation of flood storage the result is an increase to average lake levels. This increase could necessitate relocation of some lake recreation and access facilities. An estimate for the relocations is included in the report. The requirement for relocations is an issue for additional study prior to implementation of minimum flows.) At each dam, for each proposed storage reallocation, three release alternatives have been modeled and analyzed (except at Bull Shoals, where four release alternatives have been modeled and analyzed). WRDA directed the Corps to determine whether the minimum flow reallocations and modifications would adversely affect other authorized purposes. Therefore, the intent of Congress through WRDA was to identify reallocation and release scenarios that meets the minimum flows criteria in a manner that is not only economically advantageous but also minimizes impacts/effects to the flood control, recreation, and hydropower purposes. The following alternatives are alternatives that produce results that minimize adverse impacts to existing, authorized users, are economically justified, technically sound, and have been found to likely be environmentally acceptable. Flood benefits, hydropower benefits, and recreation benefits as well as ecological impacts were used to identify these alternatives. The Arkansas Game and Fish Commission, as a potential local sponsor, has expressed that the locally preferred implementation plan for the Arkansas reservoirs is the identified National Economic Development (NED) plan. For a more detailed discussion of locally preferred plans, see Section

VII, Locally Preferred Plans, in the White River Minimum Flows Reallocation Study Report.

a. Beaver Lake. BV4, Siphon and existing SS unit with a conservation pool reallocation, reduces hydropower benefits by 0.4 percent and improves flood control benefits. The benefit to cost ratio for BV4 is 6.3 to 1.0 and would be considered the NED plan. First costs for implementation are $827,000. The minimum flows operation at Beaver Lake would improve eight miles of trout fishery with an annual improvement to the trout fishing industry of $364,000.

The alternate plan to the NED plan is a scenario that minimizes negative impacts to authorized project purposes or produces the most improvement to existing users. The alternate to the NED plan is plan BV5, new SS unit with a conservation pool reallocation, improves hydropower benefits by 0.7 percent and improves flood control benefits. The benefit to cost ratio for BV5 is 1.4 to 1.0. First costs for implementation are $5,615,000. The minimum flows operation at Beaver Lake would improve eight miles of trout fishery with an annual improvement to the trout fishing industry of $364,000.

b. Table Rock Lake. The NED Plan is TR5, new SS units with a conservation pool reallocation, reduces hydropower benefits by 0.5 percent, improves flood control benefits, and improves in-pool recreation benefits. The benefit to cost ratio for TR5 is 1.3 to 1.0. First costs for implementation are $10,678,000. The minimum flows operation at Table Rock Lake would improve 22 miles of trout fishery with an annual improvement to the trout fishing industry of $1,000,000.

The alternate plan to the NED plan is a scenario that minimizes negative impacts to authorized purposes or produces the most improvement to existing users. An alternate plan that meets these criteria is TR8, new SS units with a 50/50 reallocation, reduces hydropower benefits by 0.3 percent, decreases flood control benefits, and decreases in-pool recreation benefits. The benefit to cost ratio for TR8 is 1.2 to 1.0. First costs for implementation are $11,643,000. There are no environmental concerns with this plan. The minimum flows operation at Table Rock Lake would improve 22 miles of trout fishery with an annual improvement to the trout fishing industry of $1,000,000.

c. Bull Shoals Lake. Plan BS3, using the main turbine to achieve the minimum flows with a flood pool reallocation, reduces hydropower benefits by 1.6 percent and results in a 1 percent reduction in flood control benefits, however, the plan produces significant increases in tailwater benefits. Because of this improvement to the tailwater fishery and the resulting net increase in project benefits, the benefit to cost ratio for this plan is 71 to 1, and is considered the NED plan. First costs for implementation are $462,000. The minimum flows operation at Bull Shoals Lake would improve 66 miles of trout fishery with an estimated annual improvement to the trout fishing industry of $2,999,000.

No alternate plan was chosen for Bull Shoals. The NED plan represents the plan most likely to be accepted by the non-federal sponsor and stakeholders due to its low hydropower losses, relative to other plans, and its low first costs. All other plans have greater hydropower losses and/or greater annual costs that reduce the benefit to cost ratio to a fraction of the NED plans benefit to cost ratio.

d. Norfork Lake. NF4, existing SS unit and siphon with a conservation pool reallocation, reduces hydropower benefits by 3.2 percent, improves flood control benefits, and improves in pool recreation benefits. The benefit to cost ratio for NF4 is 16 to 1.0 and is considered the NED plan. First costs for implementation are $975,000. The minimum flows operation at Norfork Lake would improve 29 miles of trout fishery with an annual improvement to the trout fishing industry of $1,318,000.

An alternate plan is NF2, new SS unit with a flood pool reallocation, improves hydropower benefits by 0.6 percent, reduces flood control benefits, and reduces in pool recreation benefits. The benefit to cost ratio for NF2 is 2.2 to 1.0. First costs for implementation are $9,788,000. The minimum flows operation at Norfork Lake would improve 29 miles of trout fishery with an annual improvement to the trout fishing industry of $1,318,000.

A second alternate plan is plan NF8, new SS unit with a 50/50 reallocation, has no impact to hydropower, reduces flood control benefits, and reduces in pool recreation benefits. The benefit to cost ratio for NF2 is 2.2 to 1.0. First costs for implementation are $9,788,000. The minimum flows operation at Norfork Lake would improve 29 miles of trout fishery with an annual improvement to the trout fishing industry of $1,318,000.

e. Greers Ferry Lake. GF4, existing SS unit and siphon with a conservation pool reallocation, reduces hydropower benefits by 1.8 percent, improves flood control benefits, and improves in pool recreation benefits. The benefit to cost ratio for GF4 is 20.2 to 1.0 and is considered the NED plan. First costs for implementation are $959,000. The minimum flows operation at Greers Ferry Lake would improve 30 miles of trout fishery with an annual improvement to the trout fishing industry of $1,363,000.

An alternate plan is GF5, new SS unit with a conservation pool reallocation, improves hydropower benefits by 0.3 percent, improves flood control benefits, and improves in pool recreation benefits. The benefit to cost ratio for GF5 is 3.52 to 1.0. First costs for implementation are $6,711,000. The minimum flows operation at Greers Ferry Lake would improve 30 miles of trout fishery with an annual improvement to the trout fishing industry of $1,363,000.

Environmental Summary. Little Rock District is coordinating with natural resource agencies in the preparation of an Environmental Impact Statement. An environmental summary identifying impacts to the ecological features associated

with each reallocation alternative is included in Chapter III, Environmental Summary. This report package does not include a draft EIS but will quantitatively and/or qualitatively identify potential impacts (beneficial or negative). If approved, this report is not sufficient for reallocation and release implementation. The NEPA process must be completed including a complete EIS with full public involvement. The Nature Conservancy will perform the Independent Technical Review of the Draft EIS.

The AGFCs preferred plans for the Arkansas lakes are consistent with their belief that fish and wildlife impacts have never been appropriately mitigated. The AGFC believes that the public will benefit from a minimum flow operation more so than what is being experienced under the project's current operation. The excerpts below constitute AGFC's preferred options:

1. The AGFC prefers, "the listed National Economic Development (NED) plan for each of the Arkansas projects: Beaver, Bull Shoals, Norfork and Greers Ferry. We agree with the Little Rock District Corps of Engineers' findings that the NED plans provide the best solutions for implementing the minimum flow plan. These outcomes will result in only slight or modest impacts to hydropower, flood control and in-lake recreation while implementing minimum flow under the lowest costs".

2. It is AGFC's position, "that the cost of storage should be a federal responsibility and that the local sponsor, the Arkansas Game and Fish Commission, should not pay any cost of storage. As Congressman John Boozman highlighted in his letter to the Corps on July 15, 2003, the purpose of Section 374 of WRDA 1999 was to partially mitigate losses associated with construction of the dams by providing a more stable aquatic environment. Furthermore, we would argue that incremental changes in flow as a result of evolving power demands over the past few decades have further deteriorated the in-stream ecosystems. Thus, any restoration costs should be a federal responsibility borne as a benefit to the nation".

3. As mentioned above, the AGFC "view this project as appropriate mitigation for the loss of habitat to support a native fishery. We believe any implementation costs should be at 100 percent federal expense".

4. AGFC recognizes, "that the preferred option for Bull Shoals Lake may impact some lake facilities. However, we believe that any decision to relocate facilities should be based on a more in-depth evaluation of actual, real-time loss of use. We will work with the SWL to identify these facilities as part of a monitoring process once minimum flows are implemented".

5. The interim report mentions a credit to the marketing agency in order to reduce their liability to the federal government for loss of storage. AGFC, "fully support this position".

A copy of the AGFC's comments concerning the Locally Preferred Plans is in Appendix E. At this time Missouri has not expressed a Locally Preferred Plan for Table Rock Lake.

The **Energy and Water Appropriations Act of 2006** authorizes and directs the Corps to implement the following:

SEC. 132. WHITE RIVER BASIN, ARKANSAS- (a) MINIMUM FLOWS-

(1) IN GENERAL- The Secretary is authorized and directed to implement alternatives BS-3 and NF-7, as described in the White River Minimum Flows Reallocation Study Report, Arkansas and Missouri, dated July 2004.

(2) COST SHARING AND ALLOCATION- Reallocation of storage and planning, design and construction of White River Minimum Flows project facilities shall be considered fish and wildlife enhancement that provides national benefits and shall be a Federal expense in accordance with section 906(e) of the Water Resources Development Act of 1986 (33 U.S.C. 2283(e)). The non-Federal interests shall provide relocations or modifications to public and private lakeside facilities at Bull Shoals Lake and Norfork Lake to allow reasonable continued use of the facilities with the storage reallocation as determined by the Secretary in consultation with the non-Federal interests. Operations and maintenance costs of the White River Minimum Flows project facilities shall be 100 percent Federal. All Federal costs for the White River Minimum Flows project shall be considered non-reimbursable.

(3) IMPACTS ON NON-FEDERAL PROJECT- The Administrator of Southwestern Power Administration, in consultation with the project licensee and the relevant state public utility commissions, shall determine any impacts on electric energy and capacity generated at Federal Energy Regulatory Commission Project No. 2221 caused by the storage reallocation at Bull Shoals Lake, based on data and recommendations provided by the relevant state public utility commissions. The licensee of Project No. 2221 shall be fully compensated by the Corps of Engineers for those impacts on the basis of the present value of the estimated future lifetime replacement costs of the electrical energy and capacity at the time of implementation of the White River Minimum Flows project. Such costs shall be included in the costs of implementing the White River Minimum Flows project and allocated in accordance with subsection (a)(2) above.

(4) OFFSET- In carrying out this subsection, losses to the Federal hydropower purpose of the Bull Shoals and Norfork Projects shall be offset by a reduction in the costs allocated to the Federal hydropower purpose. Such reduction shall be determined by the Administrator of the Southwestern Power Administration on the basis of the present value of the estimated future lifetime replacement cost of the electrical energy and capacity at the time of implementation of the White River Minimum Flows project.

Fish and Wildlife Resource Concerns

The thermal transition zone essentially begins immediately below the tailwater releases of each reservoir where temperatures gradually increase with downstream flow, groundwater, and

tributary influences. On the White River this transition zone decreases substantially near Guion, Arkansas, 75 river miles downstream of Bull Shoals dam to Batesville where temperatures warm to native species tolerances. The added volume of cold water to the White River could extend the transition zone downstream, further impacting and reducing available habitat for native aquatic species. This may also occur below Greers Ferry dam, where the transition zone currently ends near Searcy. Many native fish and invertebrates cannot tolerate persistent cold water conditions, and a downstream extension of the transition zones would further reduce available habitat. Temperature models have shown the effect the additional volume of cold water would have on these zones is minimal. A mussel survey of the remaining unsurveyed reach of the lower White River upstream to the transition zone resulted in very few live mussels within this stretch, and it did not result in any listed species or species of concern (Posey 2003). Although a downstream extension of this zone could impact aquatic species, these impacts should be minimal.

This project will increase the pool elevation-duration at each reservoir as a result of the reallocation of storage and planning. Because the Southwestern Power Administration (SWPA) attempts to maintain reservoir levels at the top of the conservation pool, reservoir levels will rise above and remain at higher elevations longer than they have previously. This will result in a minor increase in the frequency and duration of flooding of additional stream habitat and karst passages in the flood pool of each reservoir. Currently, the reservoirs on the White River and tributaries flood an indeterminate amount of karst habitat, which has been severely degraded throughout the Ozark Plateau from numerous threats. It is unknown how many other species in caves and karst passages would be affected in such a manner, but many threatened and endangered species and species of concern could be negatively affected by such flooding. Although it may appear that a reallocation of several feet would have a negligible effect on these species, several feet of elevation in karst systems can affect habitats miles from the reservoir. Karst conduits can act as capillaries (Nielson and Perrochet 2000), so water may pond at elevations higher than that of the conservation pool. Endangered species that may be affected by increased water levels include the endangered gray and Indiana bats, two species of endangered cave crayfish, the Tumbling Creek cavesnail, and the threatened Ozark cavefish, all of which occur in caves in the vicinity of the White River.

At the Service's request and in accordance with Section 7(c) of the Endangered Species Act (ESA), the Corps has completed a Biological Assessment (BA) for potential impacts to the Tumbling Creek Cave and the associated federally listed species at that site. The purpose of the BA was to specifically evaluate the potential effects of water storage reallocation alternatives in Bull Shoals Lake on these federally listed endangered species which include the Tumbling Creek cavesnail, Indiana bat, and gray bat. The Corps' assessment concluded that the proposed action alternatives would have no effect on the federally listed endangered gray bat and Indiana bat. In addition, the Corps found that the reallocation of 5 feet of storage from the proposed storage alternatives may affect, but is not likely to adversely affect the Tumbling Creek cavesnail. The Service reviewed the BA and concurred with these findings by letter on July 13, 2004.

The Corps has cooperated thoroughly with the Service in the assessment of all potential effects to threatened and endangered species over the range of the study. No other BAs were requested or are required. The Service believes that this project may affect, but is not likely to adversely

affect any of the aforementioned federally listed threatened or endangered species and concurs with the Corps previous determinations.

The effects of raising the pools in each reservoir were evaluated extensively as the impacts of this action could have a large effect on numerous ecosystems, both aquatic and terrestrial. The increased frequency and duration of flooding of karst habitat has been estimated through analysis of the Super Model and based on the results **the Service concurs with the Corps' January 24, 2006 assessment that this project may affect, but is not likely to adversely affect threatened and endangered species. Therefore, no further consultation with the Service under Section 7 of the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.) is required.**

The Norfork and Greers Ferry National Fish Hatcheries (NFH) both receive water directly from the reservoirs. An increase in reservoir temperatures could be detrimental to trout in the hatcheries. This is of particular concern in the fall, when fish densities in the hatcheries are highest. During these months, concentrations of manganese, iron, and hydrogen sulfide are particularly high. Compounding these water quality stressors with lower dissolved oxygen and higher temperatures could result in increased trout mortality in the hatchery. Therefore, it was important to determine what effect the releases may have on reservoir temperatures, dissolved-oxygen, and hatchery water quality. Additionally, increased releases may cause the water temperatures in the reservoirs to rise as more cold water is released, which could have an adverse effect on the coolwater fishery resources within the reservoirs.

The U.S. Geological Service (USGS) assessed the impact of increased minimum flows on temperature and dissolved-oxygen concentrations of reservoir water and the outflow at Beaver, Table Rock, Bull Shoals, and Norfork reservoirs. Numerous simulations were run on various scenarios and reallocations. The preferred alternative scenarios for increasing minimum flow are summarized here.

Simulations for additional minimum flow plus initial increase in pool elevation (0.5 meter) at Beaver Lake appeared to decrease outflow water temperature (0.5 degrees Celsius) and increase dissolved oxygen concentration (<1.2 milligrams per liter) through time. Simulations for Table Rock indicated that temperatures would likely stay the same or increase slightly (less than 0.37 °C) and dissolved oxygen would likely decrease slightly (less than 0.78 mg/L) in the outflow during the thermal stratification season. The increased minimum flow and increased initial water-surface elevation (1.5 meters) simulation at Bull Shoals decreased outflow water temperature and dissolved-oxygen concentration through time. Their simulations indicated that an increase in the lake elevation for minimum flow releases would decrease outflow water temperature and increase dissolved-oxygen concentration through time at Norfork. Therefore, the Service does not anticipate any additional adverse effects to Norfork NFH from this project based on these results. Furthermore, this data suggests that there should not be adverse effects to these reservoirs from the reallocations. Currently, there has not been an assessment of a Greers Ferry reservoir reallocation; therefore, the Service can not comment on that scenario at this time.

The natural hydrologic cycle of the White River and tributaries has been altered by construction of the five large reservoirs. Because the dams are operated under plans designed to accomplish

their authorized purposes, including flood control and hydropower, flood peaks have been reduced and minimum flows have been increased (Craig *et al.* 2002). Reallocation of water to provide some minimum flow for trout would necessitate another change in the established water release schedules and could further alter existing hydrologic patterns. Seasonal flooding under the existing hydrologic regime provides habitat for migratory waterfowl and is critical to maintaining the bottomland hardwood forests in the lower part of the basin.

The releases are unlikely to have an effect on downstream public lands, including Cache and White River National Wildlife Refuges. The minor increase in flow downstream would likely be negligible due to the contribution of numerous large tributaries such as the Buffalo National River, Black and Cache Rivers.

Another concern was the potential affect of lowering water temperatures in the transition zone between Crooked Creek and Batesville. Further decreases in water temperatures could negatively affect native fish and mussels; however, temperature decreases would only occur during warm periods and low water conditions and would not exceed the current daily low temperature. As a result the Service believes that the lowering of average daily temperatures will benefit the trout fisheries while having only a negligible impact on the persisting native fisheries due to the available backwaters and the contribution of numerous warm water tributaries such as Crooked Creek, the Buffalo National River, Sylamore Creek, and Piney Creek. In addition, mussel surveys have found that no mussels remain in the tailwaters upstream of Guion. The Service believes that the lowering of average daily temperatures will be negligible to the mussels and native fisheries downstream of Guion.

Following are concerns and conclusion specific to implementing minimum flows at each reservoir:

Beaver Reservoir

Beaver Reservoir is thought to serve as a barrier for the threatened Ozark cavefish, which cannot survive in open water, nor can it evade predation by upper trophic level fishes, which find their way into karst passages through high water levels. There are two known cavefish locations in Benton County, Arkansas, very near the current conservation pool elevation. Any increased flooding frequency or duration in these systems would likely cause more karst habitat to be unsuitable for cavefish in at least one of these sites. The first site, located near Monte Ne, is approximately at elevation 1235 feet NGVD, which will remain unaffected by the project. However, the second location is an AGFC nursery pond located at elevation 1120 NGVD and will be affected by the project.

As stated above, the Ozark cavefish cannot avoid predation from other fish species. It evolved in the stable environment of karst systems, which are relatively predator-free. As such, it has not developed responses necessary to successfully avoid predators. Additionally, the cavefish is a long-lived organism with low reproductive potential; therefore, the loss of just a few individuals

can be detrimental to the population. Increased flood frequency could allow upper trophic level fishes additional access to karst areas at this cavefish site and could impact the population. However, Corps data suggests that this will not occur and may reduce cave intrusion.

The endangered gray bat roosts within Pigeon Roost Cave on Hobbs State Management Area, which is located at approximately elevation 1120 NGVD. This cave currently floods when reservoir levels are high, and an alternative entrance had to be constructed into the cave to allow passage for the endangered gray bats that roost in the cave during these periods of flooding. Increased flooding would affect the behavior of the bats by increasing the amount of time the bats must use the alternate entrance.

Both the gray and Indiana bats occur at War Eagle Caverns **(approximate elevation 1160 NGVD)**, as well, although increased water levels should not impact these populations. Similarly, the endangered Missouri bladderpod occurs at Blue Springs Park, in Washington County, Arkansas, on a dolomitic glade at approximate elevation 1190 NGVD and should not be affected by the releases.

According to White River duration curves provided to the Service by the Corps, the reallocation will result in less duration of flooding at the elevations of concern. This difference will result in an increase in the availability of use of the natural entrance of these caves and is considered a positive effect. Based on this information the Service does not anticipate any additional negative effects to any listed species due to the proposed reallocations on Beaver Lake. Furthermore, their may be positive net benefits for multiple listed species at Beaver Lake.

Beaver Lake Differences in Annual Pool Elevation: Duration for Pool Elevations of Interest (Alternative minus Current)			
Elevation	Conservation	Flood	Split 50/50
1110	-4.54	-4.28	-4.45
1120.4	-3.17	-3.03	-3.07
1121	-2.21	-1.61	-2.93
1121.2	-2.37	-1.6	-2.94
1121.9	-2.25	-1.79	-2.84
1130	-0.04	-0.02	-0.05
1140	0	0	0

Beaver Lake				
Annual Pool Elevation-Duration for Pool Elevations of Interest				
Elevation	Current	Conservation	Flood	Split 50/50
1110	91.2	86.65	86.92	86.74
1120.4	45.86	42.69	42.83	42.79
1121	38.19	35.98	36.59	35.26
1121.2	36.87	34.5	35.28	33.93
1121.9	30.77	28.52	28.98	27.94
1130	0.34	0.31	0.33	0.29
1140	0	0	0	0

Table Rock Reservoir

The Service and the Missouri department of Conservation identified two state Species of Conservation Concern that may be affected by the project. Williams' crayfish (*Orconectes williamsi*) and Meeks' crayfish (*Orconectes meeki*) are known to occur in two tributaries, Little Indian Creek and Nauvoo Creek, which could be affected if reservoir elevations reach 940, 960, or 1100. However, the Corps identified in their January 24, 2006, letter that these elevations are above the top of the flood pool (El. 931) and will not be affected by this reallocation. Therefore, the species and habitats at these elevations will not be affected by this project.

There is potential for increased minimum flows to extend the transition zone further into the reservoir. Decreases in water temperatures could negatively affect native fish and mussels; however, temperature decreases would only occur during warm periods and low water conditions and would not exceed the current daily low temperature. As a result the Service believes that the lowering of average daily temperatures will benefit the trout fisheries while having only a negligible impact on the persisting native fisheries in the tailwater and an imperceptible effect on the large 43,100 acre reservoir.

Bull Shoals Reservoir

Five known Bald Eagle nests are located below Bull Shoals dam on the White River upstream of Cotter. Although, it is unlikely the additional releases will impact the eagles, they should be considered during the evaluation of impacts. Additionally, there is a gray bat hibernaculum cave near Cotter that will not likely be affected by the project.

The endangered Tumbling Creek cavesnail is known only from Tumbling Creek Cave in Taney County, Missouri, near Bull Shoals Reservoir. It is a small (height = 2.3 mm), white, blind, aquatic snail that typically is observed on the undersurface of rocks in areas of the cave stream. This species has experienced a dramatic population reduction, such that very few individuals were found during surveys conducted in 2001 and 2002. If the water necessary for providing minimum flows below Bull Shoals Reservoir increases the backwater flooding from the reservoir into Big Creek, which Tumbling Creek drains into, the inundation could negatively impact the

cavesnail by reducing flow within Tumbling Creek Cave and increasing siltation. Some experts believe that siltation is the main reason for the drastic decline in cavesnail numbers.

The Service identified 670, 675, and 690 as elevations of concern on the Bull Shoals project relative to the potential impacts on the endangered Tumbling Creek cavesnail and its habitat. The concern is that the drainage conduit velocities from the cave (and resulting sedimentation) are affected at the higher lake levels during periods of inundation along Big Creek. In May 2004, the Corps completed a Biological Assessment (BA) for the impacts to the Tumbling Creek cavesnail, Gray Bat and Indiana Bat at Bull Shoals. The Corps found that there is a <3 percent increase in duration at the 670 elevation if any storage is reallocated from the flood pool. A slight reduction (<1 percent) in duration is expected if the storage is reallocated from the conservation pool. Therefore, the Corps' determination is that there have been no adverse effects identified to T&E species at Bull Shoals. The BA concluded that the reallocation may affect but is not likely to adversely affect these species. The conclusion was based on the following: 1) statistical analysis that Bull Shoals lake levels do not have statistically significant effect on the flows within Tumbling Creek cave, 2) the cave snail is not known to occur in the lower reaches of the drainage system and spring discharge areas, and 3) the elevation of concern (670 NGVD) is currently met or exceeded 38 days annually and a 10 day increase is not considered significant. Following review of the BA the Service concurred with these finding by letter on July 13, 2004.

Bull Shoals Lake

Annual Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
654	59.92	51.39	81.96	69.60
656.5	30.26	27.96	71.54	51.82
657	28.00	26.06	68.88	38.84
659	23.01	21.43	53.01	27.96
670	10.65	9.96	13.48	11.32
675	7.60	7.03	9.42	8.17
690	2.02	1.90	2.23	2.05
695	0.57	0.46	0.61	0.54

Bull Shoals Lake			
Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)			
Elevation	Conservation	Flood	Split 50/50
654	-8.53	22.03	9.68
656.5	-2.31	41.27	21.56
657	-1.94	40.88	10.84
659	-1.58	30.00	4.95
670	-0.69	2.83	0.67
675	-0.57	1.82	0.57
690	-0.12	0.21	0.03

Norfork Reservoir

As with Bull Shoals Reservoir, the bald eagle and gray bat occur downstream of Norfork Reservoir, within several miles of the dam. Although these species will not likely to be affected by the minimum flows, they should be considered when evaluating impacts.

The Ozark hellbender, which was elevated to federal candidate species status in October 2001, occurs in the coldwater zone downstream of Norfork and Bull Shoals dams. It is unlikely this species would be affected by the altered releases downstream of the dams, as hellbenders do quite well in coldwater streams, but hellbenders cannot tolerate flooded conditions.

The best population of Ozark hellbenders in Missouri is currently in the North Fork of the White River above Norfork Reservoir at elevations > 580 NGVD. Additional flooded stream habitat would displace any hellbenders currently in the stream. In recent years, the population in the North Fork of the White River has been declining seriously (Wheeler *et al.* 1999). Increased flooding of Norfork Reservoir could damage Missouri's best population of this imperiled species, as it occurs within one mile upstream of the reservoir. Conserving candidate species before they are listed is a priority for the Service and prevents additional regulations from being imposed.

The Corps indicated in their January 24, 2006, letter that the elevations of concern are above the top of the flood pool and will not be affected by this reallocation. Therefore, the species and habitats at or above these elevations will not be affected by this project.

Greers Ferry Reservoir

Greers Ferry Reservoir, which impounds the Little Red River and its headwater tributaries, serves as a barrier for a number of endangered and threatened species, candidates, and species of concern. These species include the endangered speckled pocketbook and candidate yellowcheek darter. Species of concern include the longnose darter, salamander mussel, western fanshell, and rabbitsfoot. The endangered gray bat and threatened Bald Eagle could also be impacted by raising the conservation pool elevation.

The yellowcheek darter, a candidate species, and the endangered speckled pocketbook likely would not be affected by the proposed change in reservoir levels, as their populations are located upstream of the flood pool and out of the zone of influence of the reservoir. Additionally, there are two Bald Eagle nest sites along the perimeter of Greers Ferry Reservoir. Changes in the operational plan of this reservoir should not affect this species.

The gray bat occurs in a cave near the Middle Fork Little Red River upstream of Shirley. Although this cave is approximately 10 miles upstream of the flood pool of Greers Ferry Reservoir, karst passages can act as capillaries, transporting water relatively far from its origin. Because of this, it is vital that the potential impacts of elevating the conservation pool are fully evaluated to determine if that action would have an impact on this gray bat roost site.

There are a number of species of concern that occur in the tributaries above the reservoir, namely, the western fanshell, rabbitsfoot, salamander mussel, and longnose darter. These species have experienced a notable decline in numbers and contraction of range in recent years, and increased inundation of stream habitat will further contribute to their decline. In particular, freshwater mussels have experienced one of the most drastic declines of any group of taxa, with approximately 75% considered extinct or imperiled. The present conservation of the western fanshell, rabbitsfoot, and salamander mussel would prevent the need for federal listing in the future. As these species cannot tolerate impounded conditions, an increase in flooding of their habitats could negatively impact their populations.

The Service identified 480, 490, and 500 as elevations of concern relative to the potential impacts on the candidate species yellowcheek darter in the Archey Fork. The Corps indicated in their January 24, 2006 letter that the percent difference between the current condition and each alternative plan is less than 1 percent on an annual or seasonal basis; therefore, there will be no adverse effects to species of concern, T&E or candidate species at Greers Ferry. The Service concurs with this determination.

Greers Ferry Lake Differences in Annual Pool Elevation: Duration for Pool Elevations of Interest (Alternative minus Current)			
Elevation	Conservation	Flood	Split 50/50
461	-5.32	21.61	9.37
462.00	-1.65	39.14	26.23
463	-1.19	40.60	17.35
464	-0.79	28.80	2.03
480	-0.17	0.24	-0.04
487	-0.03	0.02	0.00
490	0.00	0.00	0.00
500	0.00	0.00	0.00

Greers Ferry Lake				
Annual Pool Elevation-Duration for Pool Elevations of Interest				
Elevation	Current	Conservation	Flood	Split 50/50
461	44.46	39.14	66.08	53.83
462.0	21.66	20.00	60.80	47.89
463	15.13	13.94	55.73	32.48
464	11.98	11.19	40.78	14.01
480	0.98	0.81	1.22	0.94
487	0.16	0.13	0.18	0.16
490	0.00	0.00	0.00	0.00
500	0.00	0.00	0.00	0.00

Summary of Findings and Service Position

The Service does not believe that the implementation of minimum flows on the White River will contribute to the further decline of any of the species discussed in this report. This project is designed to improve habitat for trout that were introduced as mitigation for impacts resulting from the initial impoundment of these rivers. The Service believes that this project will achieve its goal and support the improvement of habitat for the mitigation fishery, the persisting native fishery and the associated wildlife. However, the Service believes that this project and other actions are necessary to provide the full extent of functional and appropriate mitigation relating to the initial impoundments. The need to alter releases and improve water quality in the reservoirs and tailwaters is evidence of the inadequacy of the previously anticipated impacts and mitigation. A mitigation fishery can not achieve its goals of compensation if the habitat and water quality is not equally and adequately mitigated and maintained.

The Service is equally concerned about the additional water quality issues in the tailwaters and Norfork and Greers Ferry National Fish Hatcheries (NFH). The Arkansas Department of Environmental Quality recently added the North Fork tailwater to its 303(d) list of impaired waterbodies due to DO falling below state standards. In addition, the combined effects of reservoir stratification, depth, geology, high temperatures, anoxia, and no light result in increased concentrations and releases of manganese and hydrogen sulfide. The resulting low DO releases and manganese precipitants are causing fish mortality in both the tailwater and the hatcheries.

Norfork and Greers Ferry NFHs and the cooperative trout stocking program with the AGFC was established to mitigate for the loss of the native fishery resulting from the coldwater releases created by the reservoirs. The trout that are grown in these hatcheries and stocked in the tailwaters are part of that mitigation and should be maintained in accordance with the original intent and objectives. The current situation demands that in order to sustain appropriate and viable mitigation, action must be taken to resolve these water quality issues in the tailwaters and the hatcheries created by the damming of these rivers and the subsequent eutrophication of the reservoirs.

The Service sees this as only a part of the solution. The Service supports the AGFC in taking immediate action to prevent further trout mortality, but the state should not be ultimately responsible for improving water quality problems attributable to a federal project. Furthermore, the minimum flow releases will not resolve the water quality problems of the hatcheries. Reducing the mortality of stocked trout in the tailwaters will become increasingly irrelevant if trout mortality continues or increases during production in the hatcheries. The Service supports this project; however, a long term and comprehensive solution should be implemented to resolve all of the tailwater and NFH water quality problems.

We recommend that the Service, SWPA, USACE, AGFC, and the Arkansas Department of Environmental Quality continue to work toward developing a solution for the tailwaters and the hatcheries. One project currently being considered involves the construction of two mechanical aerators immediately below the power house in the tailwater of Norfork Reservoir to improve DO during the non-generation periods. The floating aerators will be supplied by the AGFC and the USACE will design a structure to mount and hold the aerators in place. However, projects like this alone will not resolve the water quality issues or efficiently maintain mitigation objectives. The aerators will not resolve the water quality problems of Norfork NFH and reducing the mortality of stocked trout in the tailwaters will become increasingly irrelevant, if trout mortality continues or increases during production in the hatcheries.

The SWPA, in cooperation with the White River Dissolved Oxygen Committee, AGFC, and the USACE, is investigating the use of a forebay oxygen diffuser system to increase DO in Norfork Reservoir near the dam. This would improve the water quality of the reservoir as well as outflows into the tailwater and Norfork NFH. However, this would only improve the situation at Norfork and would have no effect on other water quality and mitigation issues. Similar projects and modifications would be necessary at each of the reservoirs to achieve the same improvements and to achieve mitigation objectives.
The Service supports the proposed action to prevent further trout mortality. However, the Service and the state should not be entirely responsible for improving additional water quality problems and maintaining a mitigation fishery attributable to a federal project sponsored by another agency or agencies. Currently the Service and the AGFC expend their appropriations and funds to offset mitigation fishery costs through hatchery production and stocking. Over time, these costs have increased and the facilities have aged resulting in strained budgets and antiquated facilities. The Service believes that the Federal sponsors of these projects should provide funds for the improvement and maintenance of these facilities. The June 14, 2000 General Accounting Office (GAO) report recommended that, "To provide an additional source of funding for hatchery operations that mitigate the impacts of federal water development projects that benefit third parties, such as water users or electric power recipients, we recommend that the Congress provide the Service with clear authority to seek reimbursement from federal water development agencies and/or project beneficiaries for all hatchery operation and maintenance expenses associated with such projects. More recently House Resolution H.R. 537 was introduced to more clearly define the roles and responsibilities of the Service and the project sponsor(s). If passed, H.R. 537 would establish that, "...a sponsor agency shall pay to the Service the total amount of funds necessary to meet the mitigation fishery costs to meet objectives described in the fishery mitigation plan for a respective water development project.

The funds to be obligated for this purpose shall be identified in advance by the Director of the United States Fish and Wildlife Service."

In light of these recommendations and Congressional interest, it is the Service's opinion that the Federal sponsor(s) of these projects should request guidance and funding to support the NFHs in meeting the mitigation objectives. The initial funds provided for construction of the Greers Ferry and Norfork NFHs have proven inadequate to meet long-term needs for maintenance and operations and without sponsor agency assistance these objectives will continue to become increasingly difficult to meet.

The Service supports this project; however, a long term and comprehensive solution should be implemented to resolve the tailwater and NFH water quality problems. The EIS should acknowledge that the minimum flow project is also only a partial solution and that other options are being investigated whereby the federal government will resolve these issues in the tailwaters and at Norfork and Greers Ferry NFHs.

If you have any questions, please contact Lindsey Lewis in our office at (501) 513-4489 or our Columbia, Missouri Field Office at (573) 876-1911.

Sincerely,

Signed

Kathy Granillo
Field Supervisor

cc:

Arkansas Department of Environmental Quality
Arkansas Game and Fish Commission
Arkansas Natural Heritage Commission
Arkansas Natural Resources Commission
Missouri Department of Conservation
Southwest Power Administration
USFWS, Cache River NWR
USFWS, Columbia FO
USFWS, Greers Ferry NFH
USFWS, Norfork NFH
USFWS, White River NWR
U.S. Environmental Protection Agency

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Appendix F - Tumbling Creek Cavesnail Biological Assessment

BIOLOGICAL ASSESSMENT

FOR IMPACTS TO THE TUMBLING CREEK CAVESNAIL (*Antrobia culveri*), GRAY BAT *(Myotis grisescens*) and INDIANA BAT *(Myotis sodalis*)

RELATIVE TO THE WHITE RIVER MINIMUM FLOW PROJECT

U.S. Army Corps of Engineers
Little Rock District
700 W. Capitol
Little Rock, AR 72201

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 ACTION AREA

The Action Area for this Biological Assessment (BA) includes Tumbling Creek Cave and adjacent United States Army Corps of Engineers (USACE) property along Big Creek (Bull Shoals Reservoir). The Action Area is depicted in Figures 1, 2 & 3.

Federally Listed Endangered species and associated habitat are not known to occur within the USACE boundary of Bull Shoals Lake. However, endangered species are known to occur in close proximity to the USACE project boundary.

1.2 DESCRIPTION OF PROPOSED ACTION

Section 374 of the Water Resources Development Act of 1999 and Section 304 of WRDA 2000 modify the authorization of the White River lakes to include specific amounts of project storage for tailwater trout fisheries. Prior to this change, water level management decisions were based primarily on flood control and hydropower operations.

The act directed the USACE to reallocate this portion of storage in each of the five White River Reservoirs for minimum flow. The storage amounts include: 1.5 feet at Beaver Lake, 2 feet at Table Rock Lake, 5 feet at Bull Shoals Lake, 3.5 feet at Norfork Lake and 3 feet at Greers Ferry Lake.

The stored water will be used to make releases during periods when hydropower is not being generated. These minimum flows are intended to sustain the downstream trout fishery by providing: increased forage production for trout, improved growth and condition of the fish, cooler water temperatures during summer, and improved navigation and fish movement over shoals.

Congress directed the USACE to evaluate the reallocation to determine if minimum flow is technically feasible, environmentally acceptable, and economically justified. The USACE will report their findings back to Congress before making any modifications to provide minimum flows.

1.3 PURPOSE OF THE BIOLOGICAL ASSESSMENT

This BA has been prepared in compliance with requirements outlined under Section 7(c) of the Endangered Species Act (ESA). Section 7(a)(2) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened, and with respect to its critical habitat, if any has been designated. The USACE is the lead federal agency for the proposed project, and will oversee compliance with applicable federal laws, ordinances and regulations required for the project as well as protection measures for sensitive biological resources.

The purpose of this BA is to evaluate the potential effects of water storage reallocation alternatives in Bull Shoals Lake on Federally listed endangered species including the gray bat

(Myotis grisescens), Indiana bat *(Myotis sodalis*), and Tumbling Creek Cavesnail (*Antrobia culveri*). Three different water storage reallocation alternatives were evaluated to assess potential impacts. These alternatives and potential impacts are discussed in Section 3.0.


STATE HWY 125
125
Taney
US HWY 160
STATE HWY 95
Theodosia
Sundown
BIG CREEK
TUMBLING CREEK
CAVE AREA
Ozark
STATE HWY 125
MISSOURI
ARKANSAS
Diamond City
STATE HWY 7
Lead Hill
Bull Shoals Lake
Trimble Creek
Locust Creek
Coon Creek
Little Music Creek
0 2.5 5 Miles
Marion
HWY 125
Big Music Creek
Wolfpen Branch
Wildcat Creek
STATE HWY 178
Bull Shoals
Brushy Fork Creek
Jimmie Creek
Jimmie Creek
STATE HWY 14
N
TANEY COUNTY, MO
FIGURE 1
TUMBLING CREEK CAVE
VICINITY MAP

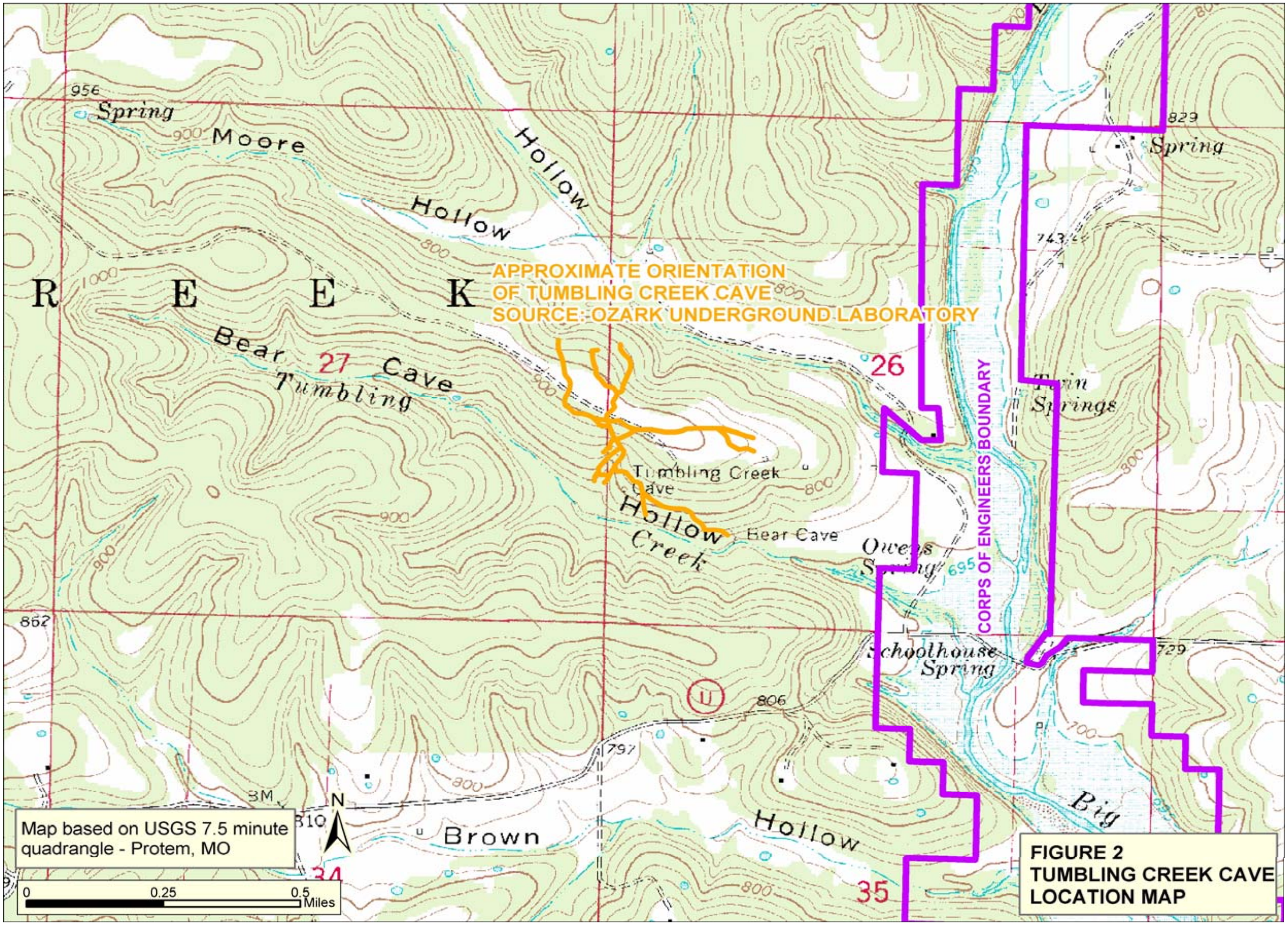


FIGURE 2
TUMBLING CREEK CAVE
LOCATION MAP

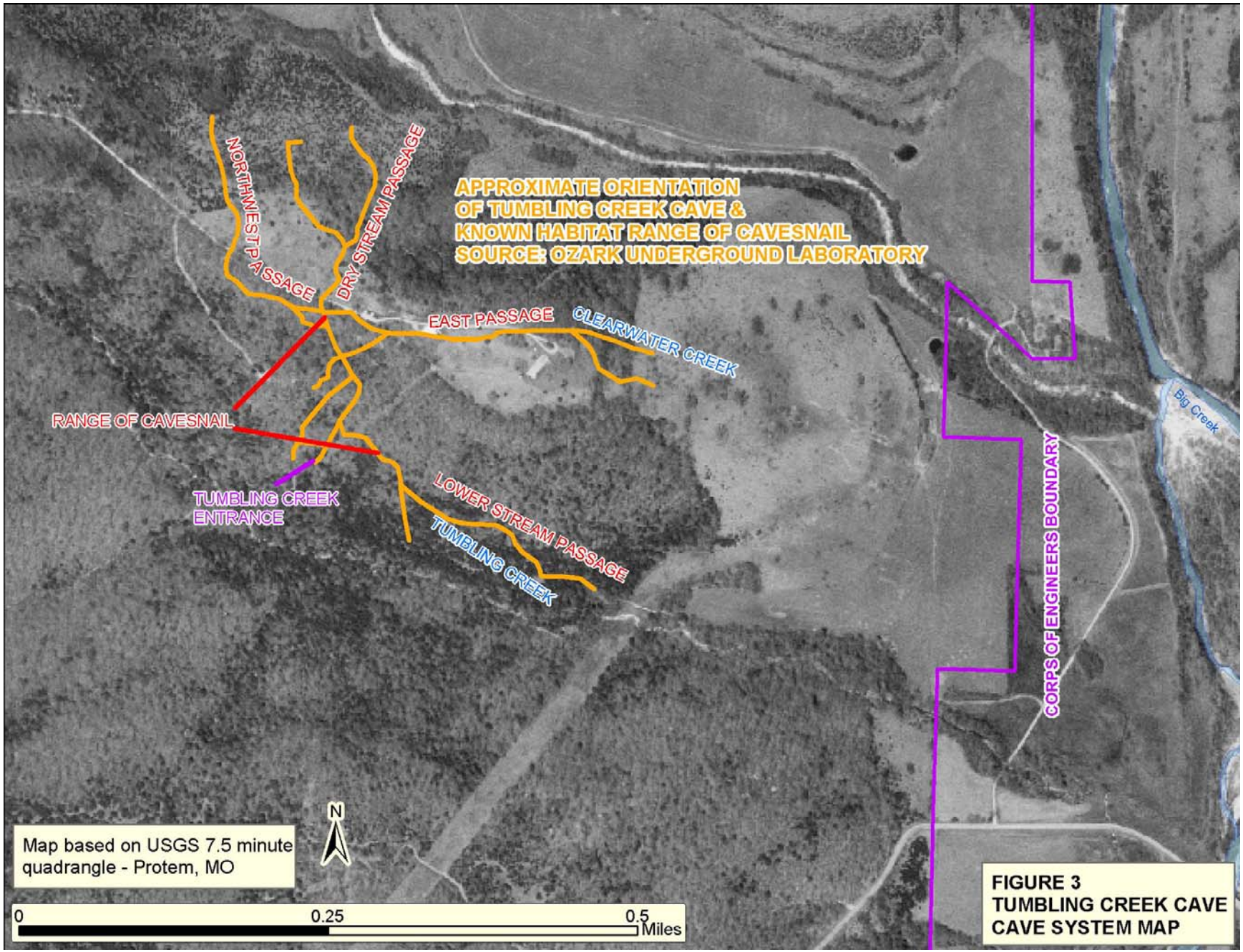


FIGURE 3
TUMBLING CREEK CAVE
CAVE SYSTEM MAP

2.0 SPECIES INFORMATION AND LISTING

2.1 TUMBLING CREEK CAVESNAIL

The Tumbling Creek cavesnail (*Antrobia culveri*) is a small, white, blind, aquatic snail with a height and diameter of barely over two millimeters. The occurrence of the cavesnail is restricted to a single location in southwestern Missouri. It is found only in Tumbling Creek cave in southern Taney County, Missouri (USFWS, 2003). Tumbling Creek Cave is located west of the Big Creek tributary to Bull Shoals Lake (Figure 1; Figure 2; Figure 3). The number of cavesnails has significantly decreased over the last few decades. Between January 2001 and April 2003, only one individual was found within the survey area, and a small population of approximately 40 individuals was found to occur in a small area upstream of the survey area (USFWS 2003).

The Tumbling Creek Cavesnail lives in the interstitial spaces on the underside of rocks within Tumbling Creek. Little is known about the cavesnail and its life history. It is believed to feed on aquatic microfauna (bacterial film or "biofilm"). There appears to be a relationship between large deposits of bat guano and the presence of cavesnails. The concentration of cavesnail populations has been documented in areas adjacent to large deposits of bat guano. The presence of the cavesnail may be indirectly dependent on such deposits for food. Critical habitat for the cavesnail has not been designated. The decline of the cavesnail is believed to be caused by a decrease in water quality resulting from erosion and other pollutants in the cave's recharge area (USFWS 2003).

Due to rapid decline, the cavesnail received emergency federal listing as endangered in December 2001 by the U.S. Fish and Wildlife Service. The cavesnail received final listing as endangered in August 2002.

2.2 GRAY BAT

Tumbling Creek Cave also provides habitat for a large maternity colony of federally listed gray bats *(Myotis grisescens*), with a 1998 estimated breeding population of 12,400 individuals. The Gray Bat Recovery Plan lists Tumbling Creek Cave as a "Priority 1" cave. Priority 1 gray bat caves have the highest level of biological significance for a gray bat maternity site (USFWS 2003).

On April 28, 1976, the Gray bat was designated as Endangered in the Entire Range. Within the area covered by this listing, this species is known to occur in: Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Missouri, Oklahoma, Tennessee, Virginia, West Virginia (USFWS 1991).

DESCRIPTION: The largest member of its genus in the eastern United States, the gray bat weighs from 7 to 16 grams. Its forearm ranges from 40 to 46 millimeters in length. One feature which distinguishes this species from all other eastern bats is its uni-colored dorsal fur. The other bats have bi- or tri-colored fur on their backs. Also, the gray bat's wing membrane connects to the foot at the ankle instead of at the base of the first toe, as in other species of *Myotis*. For a short period after molt in July or August, gray bats are dark gray; but their fur usually bleaches to russet between molts. This difference in fur color is especially apparent in females during their reproductive season in May or June. Little is known about the actual feeding habits of gray bats. However, limited observations indicate that the majority of insects eaten are aquatic species, particularly mayflies (USFWS 1991).

REPRODUCTION AND DEVELOPMENT: Upon arrival at their wintering caves in early fall, the mature females enter estrus and are inseminated by sexually active males. The offspring, one per female, are born the following June when the colonies have migrated to their summer range. The period from birth to weaning covers about 2 months. During this time the colonies are usually segregated into maternity caves, where the young are reared, and into bachelor caves which house the adult males and yearlings of both sexes. By August, all of the juveniles are flying and there is a general mixing and dispersal of the colony over the summer range. Fall migration begins around the first of September and is generally complete by early November (USFWS 1991).

RANGE AND POPULATION LEVEL: Populations are found mainly in Alabama, northern Arkansas, Kentucky, Missouri, and Tennessee, but a few occur in northwestern Florida, western Georgia, southwestern Kansas, south Indiana, south and southwestern Illinois, northeastern Oklahoma, northeastern Mississippi, western Virginia, and possibly western North Carolina. Distribution within range was always patchy, but fragmentation and isolation of populations have been a problem over the past 3 decades (USFWS 1991).

The gray bat population was estimated to be about 2.25 million in 1970; however, in 1976 a census of 22 important colonies in Alabama and Tennessee revealed an average decline of more than 50 percent. Due to protective increases taken at high priority colony sites in the late 1970's and throughout the 1980's, the declines have been arrested at some major sites and those populations are now stable or in some cases are increasing (USFWS 1991).

HABITAT: Gray bat colonies are restricted entirely to caves or cave-like habitats. During summer the bats are highly selective for caves providing specific temperature and roost conditions. Usually these caves are all located within a kilometer of a river or reservoir. In winter they utilize only deep, vertical caves having a temperature of 6-11 degrees Centigrade. Consequently, only a small proportion of the caves in any area are or can be used regularly. There are nine known caves that are believed to house roughly 95 percent of the hibernating population (USFWS 1991).

One-way migrating distance between winter and summer caves may vary from as little as 10 miles to well over 200. Banding studies indicate the bats occupy a rather definite summer range with relation to the roosting site and nearby foraging areas over large streams and reservoirs. Summer colonies show a preference for caves not over 1.2 miles from the feeding area (USFWS 1991).

REASONS FOR CURRENT STATUS: Gray bat colonies roost only in caves and cave-like habitats. Human disturbance and vandalism may have been primarily responsible for the decline. Disturbance of a maternity colony may cause thousands of young to be dropped to the cave floor where they perish; excessive disturbance may cause a colony to completely abandon a cave. Other factors which contributed to the decline included pesticide poisoning, natural calamities such as flooding and cave-ins, loss of caves due to inundation by man-made impoundments, and possibly a reduction in insect prey over streams that have been degraded through excessive pollution and siltation. Improper cave gating or cave commercialization have also contributed to some population declines (USFWS 1991).

MANAGEMENT AND PROTECTION: Blowing Wind Cave in northern Alabama, the most important summer cave known for gray bats, has been acquired by the U.S. Fish and Wildlife Service and a gate has been placed across the entrance. Fern Cave, the largest known gray bat

hibernaculum, has also been purchased by the Fish and Wildlife Service and is being managed for protection of the bats. Many other measures have been taken for protection of this species throughout its range. Some additional conservation measures needed include: (1) purchase and protection, through proper gating and restricted usage, of other gray bat caves; (2) education of spelunkers and other cave visitors who may unintentionally disturb the species; and, (3) continuation of Federal efforts to reduce persistent pesticides in the environment (USFWS 1991).

2.3 INDIANA BAT

There have been historical observations in Tumbling Creek Cave of a small hibernating population of the federally listed Indiana bat *(Myotis sodali*s). The Indiana bat has not been documented at the site since 1989 (USFWS 2003).

On March 11, 1967, the Indiana bat was designated as Endangered in the Entire Range. Within the area covered by this listing, this species is known to occur in: Alabama, Arkansas, Georgia, Iowa, Illinois, Indiana, Kansas, Kentucky, Maryland, Michigan, Missouri, Mississippi, North Carolina, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Virginia, Vermont, West Virginia (USFWS 1991).

DESCRIPTION: The Indiana bat is a medium-sized myotis, closely resembling the little brown bay (*Myotis lucifugus*) but differing in coloration. Its fur is a dull grayfish chestnut rather than bronze, with the basal portion of the hairs of the back dull lead colored. This bat's underparts are pinkish to cinnamon, and its hind feet smaller and more delicate than in *M*. *lucifugus*. The calcar (heel of the foot) is strongly keeled (USFWS 1991).

Little is known of the this bat's diet beyond the fact that it consists of insects. Females and juveniles forage in the airspace near the foliage of riparian and floodplain trees. Males forage the densely wooded area at tree top height (USFWS 1991).

RANGE AND POPULATION LEVEL: The Indiana bat occurs in the Midwest and eastern United States from the western edge of the Ozark region in Oklahoma, to southern Wisconsin, east to Vermont, and as far south as northern Florida. In summer it is apparently absent south of Tennessee; in winter it is apparently absent from Michigan, Ohio, and northern Indiana where suitable caves and mines are unknown. About 500,000 individuals of this species still exist (USFWS 1991).

REPRODUCTION AND DEVELOPMENT: This bat has a definite breeding period that usually occurs during the first 10 days of October. Mating takes place at night on the ceilings of large rooms near cave entrances. Limited mating may also occur in the spring before the hibernating colonies disperse (USFWS 1991).

Hibernating colonies disperse in late March and most of the bats migrate to more northern habitat for the summer. However, some males remain in the hibernating area during this period and form active bands which wander from cave to cave (USFWS 1991).

Limited observations indicate that birth and development occur in very small, widely scattered colonies consisting of 25 or so females and their young. Birth usually takes place during June with each female bearing a single offspring. About 25 to 37 days are required for development to the flying stage and the beginning of independent feeding (USFWS 1991).

Migration to the wintering caves usually begins in August. Fat reserves depleted during migration are replenished largely during the month of September. Feeding continues at a diminishing rate until by late November the population has entered a definite state of hibernation (USFWS 1991).

The hibernating bats characteristically form large, tight, compact clusters. Each individual hangs by its feet from the ceiling. Every 8 to 10 days hibernating individuals awaken to spend an hour or more flying about or to join a small cluster of active bats elsewhere in the cave before returning to hibernation (USFWS 1991).

HABITAT: Limestone caves are used for winter hibernation. The preferred caves have a temperature averaging 37 degrees to 43 degrees Fahrenheit in midwinter, and a relative humidity averaging 87 percent. Summer records are rather scarce. A few individuals have been found under bridges and in old buildings, and several maternity colonies have been found under loose bark and in the hollows of trees. Summer foraging by females and juveniles is limited to riparian and floodplain areas. Creeks are apparently not used if riparian trees have been removed. Males forage over floodplain ridges and hillside forests and usually roost in caves. Foraging areas average 11.2 acres per animal in midsummer (USFWS 1991).

CRITICAL HABITAT: The following caves have been designated as Critical Habitat within the Southeast Region:

Tennessee: White Oak Blowhole Cave, Blount County
Kentucky: Bat Cave, Carter County Coach Cave, Edmonson County

REASONS FOR CURRENT STATUS: The decline is attributed to commercialization of roosting caves, wanton destruction by vandals, disturbances caused by increased numbers of spelunkers and bat banding programs, use of bats as laboratory experimental animals, and possibly insecticide poisoning. Some winter hibernacula have been rendered unsuitable as a result of blocking or impeding air flow into the caves and thereby changing the cave's climate. The Indiana bat is nearly extinct over most of its former range in the northeastern states, and since 1950, the major winter colonies in caves of West Virginia, Indiana, and Illinois have disappeared. A high degree of aggregation during winter makes the species vulnerable. During this period approximately 87 percent of the entire population hibernates in only seven caves (USFWS 1991).

MANAGEMENT AND PROTECTION: The original Indiana bat recovery plan was approved in 1976, and a revised plan was approved on October 14, 1983, Some of the major recovery goals include: (1) Preserving critical winter habitat by securing primary caves and mines and restricting entry; (2) Initiating an information and education program; and, (3) Monitoring population levels and habitat (to include an evaluation of pesticide effects) (USFWS 1991).

To date, the primary conservation efforts have been to control access of people by the installation of properly designed gates across cave entrances. Some gating has already been accomplished on Federal and State lands. Gating of all seven of the major wintering hibernacula would provide protection for about 87 percent of the population. Some privately-owned caves in Missouri and West Virginia are being negotiated for public acquisition. The National Speological Society and the American Society of Mammologists are taking measures within their respective organizations to promote conservation of the Indiana bat (USFWS 1991).

2.4 OTHER SPECIES

The fauna of Tumbling Creek Cave is highly diverse with up to 114 species. A more notable species includes a cave millipede *(Scoterpes dendropu*s) that is on the Missouri Department of Conservation's (MDC) *Checklist of Species of Conservation Concern.* Other notable species that have been recently described include:

Aley's millipede *(Chaetaspis aleyoru*m)
Tumbling Creek Cave isopod *(Brackenridgia* sp.)
an amphipod *(Stygobromus* sp.)
a dipluran *(Plusiocampa* sp.)
a phalangodid harvestman *(Phalangium* sp.)
a cave spider *(Islandiana* sp.) (USFWS 2003)

A meeting was held at Tumbling Creek Cave in November 2003. Individuals and agencies represented included Mr. Tom Aley, the USACE, USFWS, and Arkansas Game and Fish. During discussion of the proposed action, the only species of concern identified was the Tumbling Creek Cavesnail.

2.5 TUMBLING CREEK CAVE HABITAT CHARACTERISTICS

Tumbling Creek Cave is located west of the Big Creek tributary to Bull Shoals Lake. Big Creek, the only perennial stream in the area, flows south into Bull Shoals Reservoir. Tumbling Creek Cave contains two streams. Tumbling Creek is the larger of the two streams flowing through the larger lower passage. It also contributes a larger discharge through 15 to 20 springs directly into Big Creek or indirectly through Bear Cave Hollow, a tributary to Big Creek. Clearwater Creek, the lesser stream, flows through the smaller east passage of the cave, but still contributes flow to Bear Cave Hollow and the lower springs along Big Creek (Aley 2001). The recharge area for the cave has been estimated at approximately 9 square miles (USFWS 2003).

The predominant rock type in Tumbling Creek Cave is of the Cotter Formation consisting of light brown to brown, medium- to finely-crystalline dolomite and argillaceous dolomite. Portions of the cave exhibit weathered rock, vertical solutional enlargement of fractures and joints, sections of bedded chert, and chert nodules. Springs located along Bear Cave Hollow and Big Creek have been formed through numerous and similar enlargements of factures and joints (USFWS 2003).

The cave and 395 adjoining acres were designated as a National Landmark and included on the National Registry of Natural Landmarks. About 25 percent of the recharge zone is owned and managed by the USDA Forest Service (23%) and the USACE (2%). The remaining 75 percent is privately owned (USFWS, 2002). Approximately 55 percent of the cave recharge is forested and 45 percent is cleared for pasture (Aley 2001).

2.6 SPECIES OCCURENCE IN THE PROJECT AREA

The occurrence of the Tumbling Creek Cavesnail has been documented in accessible portions of Tumbling Creek Cave. However, the cavesnail has not been documented in lower, down gradient areas near or adjacent to the USACE boundary and the Big Creek tributary to Bull Shoals Lake. Since these lower areas are virtually inaccessible and have never been surveyed, it is not known if the cavesnail occurs here. An approximate orientation of the cave system and known habitat range of the cavesnail is depicted in Figure 3.

2.7 POPULATION DECLINE AND REASONS FOR STATUS

The cavesnail may be threatened by actions in the cave's recharge area that degrade the water quality in Tumbling Creek. Sedimentation in the stream, a possible threat to the cavesnail, has noticeably increased over time. This is possibly due to increased erosion caused by the removal of streamside vegetation and livestock overgrazing on steep slopes within the recharge area. Other potential threats to water quality in Tumbling Creek include the drainage of barnyard and feedlot wastes, the discharge of treated sewage, accidental chemical spills and dumped trash within the recharge area (USFWS 2003).

Increased silt loads within Tumbling Creek could adversely affect the cavesnail by hindering reproduction and recruitment and suffocating juvenile cavesnails. Clay particles associated with deposited silt in Tumbling Creek have apparently settled between gravel and rocks and cemented them together to the stream bottom. Such cementing decreases habitat available to cavesnails, especially interstitial areas, because the species is generally restricted to the undersurface of gravel and rock (USFWS 2003).

The cavesnail may also be threatened by competition with other species. Potential threats include limpits that are also present in Tumbling Creek. In written correspondence to the USFWS, Dr. Julian Lewis references a situation in a southern Indiana cave stream where the presence of a rare isopod was replaced with a new population of limpits. Although inconclusive, Dr. Julian does note how the forces of competition can significantly affect the assemblage of aquatic cave communities. Competitive exclusion through the presence of these species could also be significant in the decline of the cavesnail (Lewis 2002).

The relationship between cavesnail populations and habitat with and without silt has not been established. Observations by Ashley found no significant difference in snail populations in habitats having silt and those not having silt. However, sufficient data is not available to determine if the presence of silt is detrimental to cavesnail habitat (USFWS 2003)

3.0 IMPACT ASSESSMENT

3.1 PREVIOUS STUDIES AND OBSERVATIONS FOR TUMBLING CREEK CAVE

GROUNDWATER TRACING

The Ozark Underground Laboratory conducted groundwater traces during 2003 and early 2004. These traces helped to delineate general flow patterns and travel rates within the groundwater system discharging into Big Creek and tributaries to Big Creek. Numerous interconnected springs are located along the right descending bank of Big Creek. Groundwater tracing has shown all these springs from Powerline Spring to the springs on the south side of Bear Cave Hollow to be hydrologically associated with Tumbling Creek Cave (Aley, 2004).

Travel rates observed during the groundwater tracing varied between locations. The fastest rates were observed in the lower springs including Powerline Spring and the Karst Window. These travel rates ranged up to 14 feet per minute. According to the study, these rates are within a turbulent flow regime, and are capable of transporting sediment (Aley, 2004). The type and size of sediment capable of being transported was not defined.

One conclusion in the groundwater tracing study states that slower travel rates would exist when water surface elevations in Bull Shoals Lake are above 670 feet. An increase in lake levels above 670 feet would lessen the groundwater gradient of the area and affect the rate of discharge into Big Creek. A decrease in groundwater velocity would increase sediment deposition, and decrease the ability to flush sediment through the system (Aley, 2004).

The degree to which the groundwater gradient might be affected and travel rates reduced is unknown. Contributing factors such as varying lake levels, head pressure in the aquifer, and higher springs and/or fractures that might allow alternate discharge of the system have not been evaluated. Due to a lack of site-specific information, only a general relationship can be developed.

STREAM FLOW ANALYSIS

The USACE Little Rock District conducted a flow analysis for Tumbling Creek in order to evaluate the relationship between Tumbling Creek within Tumbling Creek Cave and lake levels in Bull Shoals Lake. Continous flow data was provided by the Ozark Underground Laboratory for the time period of August 12, 2002 to November 19, 2003. The data was collected from an area of the cave known to be within the habitat range of the cavesnail. Water surface elevation data and precipitation data for Bull Shoals Lake was acquired from the gaging station at the Bull Shoals Dam.

Before the flow analysis for Tumbling Creek was conducted, a comparison of water surface elevation in Bull Shoals Lake was made. Surface water elevations at Big Creek and Bull Shoals Dam were compared for a given day to determine what difference existed between the two locations. Data and tables for the comparison are located in Appendix A. The average difference in surface water elevation between the two locations was shown to be 0.31 feet (3.72 inches). This small difference is not considered to be significant.

The purpose of the flow analysis was to determine the effect water surface elevation in Bull Shoals Lake and area precipitation have on streamflow within Tumbling Creek Cave. Flow data and water surface elevation data for a 14 month period was evaluated during the analysis. Water surface elevations during the time period evaluated ranged from 649 to 677 feet. Results of the flow analysis show that variable lake levels up to 677 feet have no significant effect on flow within Tumbling Creek. The effect of average daily lake elevations on discharge rates is not statistically different from zero (no significant affect). Precipitation, however, does have an affect on discharge rates and is statistically different from zero (significant affect). Analysis of precipitation data implies that for each inch of rain that falls, discharge within Tumbling Creek increases by 0.7021 cfs. A regressed R^2 measurement was also applied to the data. The R^2 is a statistical measure of how well the average daily water surface elevation and precipitation explain discharge. The regressed R^2 was shown to be very low implying there is a great deal more affecting discharge rates in the cave than the variables in this analysis have been able to explain. Surface elevation data above 677 feet is not available and was not evaluated. The complete flow analysis and list of methods used in the analysis are located in Appendix A.

SITE VISIT OBSERVATIONS

The USACE conducted site visits to Tumbling Creek Cave in November 2003 and January 2004. During both visits, silt-like sediment was observed within the streambed of Tumbling Creek. As a demonstration, rocks within the streambed were disturbed by hand to expose the interstitial silt deposits. Once disturbed, the silt was transported an undetermined distance. Observation has shown that these silts could not be flushed from the system while protected by overlying material. It is not known what flows are required to flush this sediment from the interstitial areas in the streambed. However, normal flow regimes with flows in excess of 30 cfs have not been able to remove existing sediment.

3.2 STUDY PROJECT STORAGE ALTERNATIVES

The WRDA of 1999 and 2000 modified the basic authorization and operation for the five multipurpose White River Basin lakes. Beaver, Table Rock, and Bull Shoals Lakes on the White River; Norfork Lake on the North Fork River; and Greer Ferry Lake on the Little Red River. The Little Rock District manages the water and land areas at the five reservoirs to ensure compliance with specific congressionally authorized flood control and power generation purposes, as well as to provide water supply, recreational, and other benefits to the public. The USACE has been directed to reallocate a portion of storage in each of the five White River Reservoirs for minimum flow. The reallocated storage amount for Bull Shoals Lake is 5 feet. These changes cannot be carried out until a study determines they are technically sound, environmentally acceptable, and economically justified.

ALTERNATIVE PLANS STUDIED

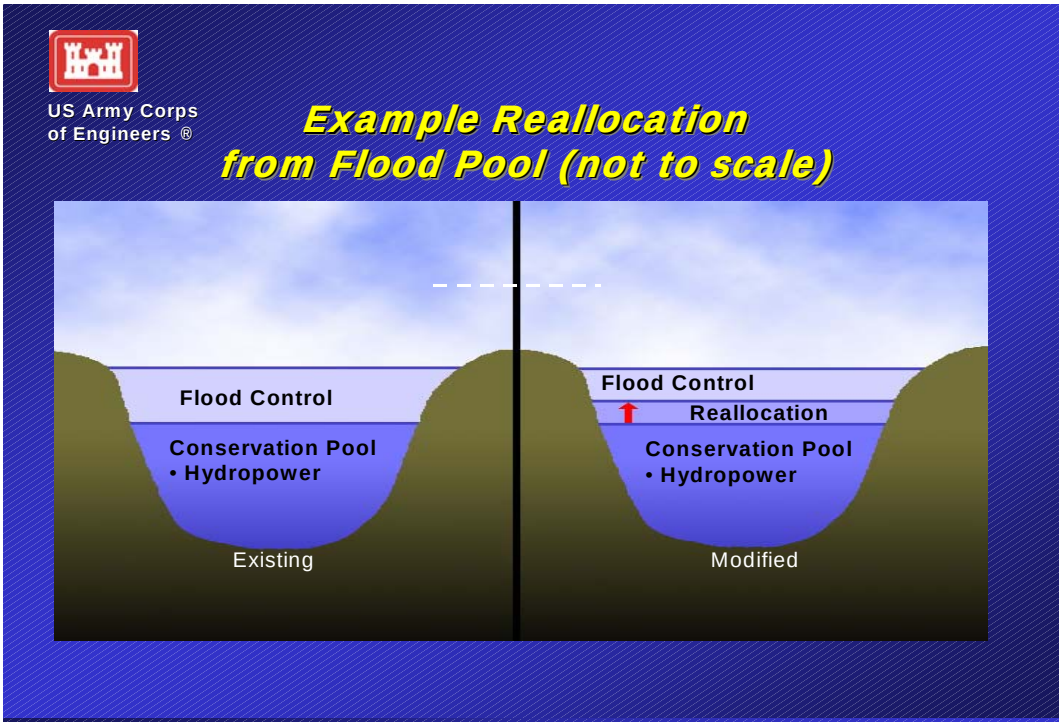
WRDA authorized the USACE Little Rock District to reallocate 5 feet of storage from Bull Shoals reservoir, but did not specify which storage zone to rellocate the storage from. Currently the lake is divided into two zones, flood pool and conservation pool. Three reallocation plans were formulated to meet the planning objectives while maintaining an unbiased perspective. The volume of the proposed minimum flows storage, in acre-feet, corresponding to the feet of storage authorized in WRDA 99 and 00 was calculated by adding the proposed amount of storage to the elevation defining the current top of conservation pool (Table 1). A flood pool reallocation would increase the volume of the conservation pool while reducing the volume of the flood pool by raising the top of conservation pool by the WRDA specified amount of storage (Figure 4, Figure 5). A flood pool reallocation would result in some changes to the Corps' flood operations.

TABLE 1 - ELEVATION CHANGE OF THE CONSERVATION POOL RELATIVE TO EACH ALTERNATIVE

LAKE	REALLOCATION	STORAGE POOL*	CONSERAVATION POOL ELEVATION	SURFACE AREA (acre)	ACRE INCREASE	% CHANGE IN SURFACE AREA	STORAGE (acre ft)
Bull Shoals	5 feet	Conservation Pool (CP)	654.00 ft	45,440			3,048,000
		Flood Pool (FP)	659.00 ft	48,005	2,565	5.6	3,281,000
		50%CP:50%FP	656.50 ft	46,715	1,275	2.8	3,162,500

* The current top of the conservation pool is 654 NGVD.

A conservation pool (CP) reallocation for minimum flow release is a proportional reduction of volume used for hydropower generation. The reallocated conservation pool storage does not affect current flood operations. However, the minimum flows storage reallocated from the conservation pool reduces the storage available for hydropower generation. When the flood pool is empty, power is generated using water specifically allocated for that purpose. Once USACE flood releases are concluded, Southwestern Power Administration (SWPA) will still have the opportunity to use their authorized storage to generate hydropower electricity. If SWPA chooses not to make hydropower releases, the minimum flow operations begin. During droughts the conservation pool may be depleted and refilled only when rainfall occurs. When



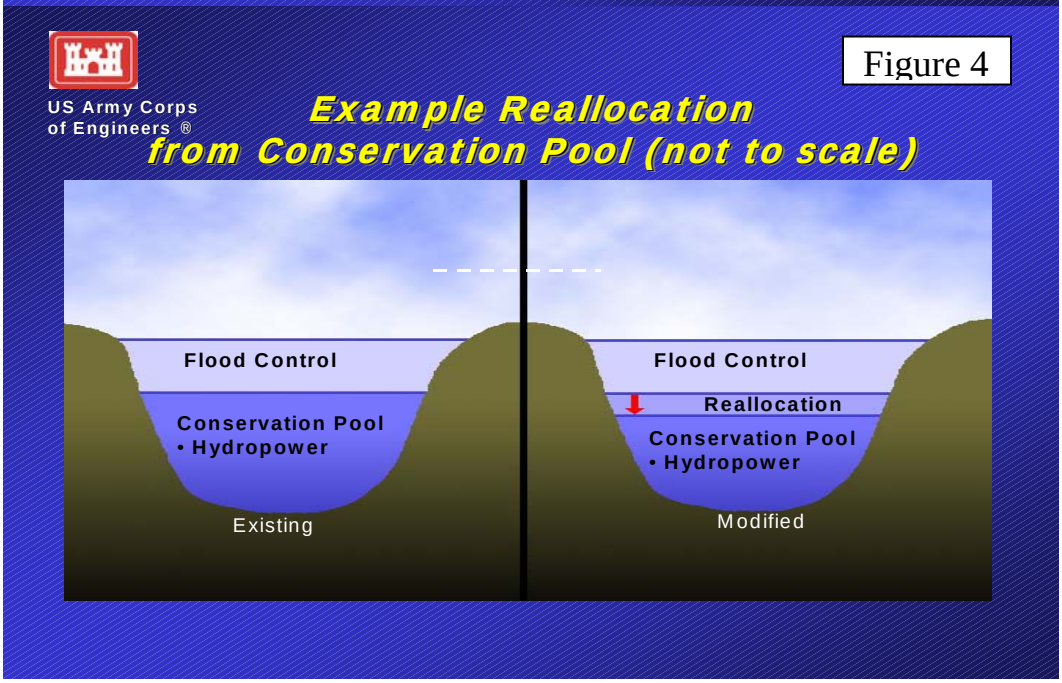


Figure 4

hydropower storage is depleted due to drought, power-generating operations are ceased until inflows recharge conservation pool storage. Similarly to hydropower, in drought years the minimum flow releases will be halted whenever the specific volume of minimum flows storage has been used and will not be restarted until inflows have recharged the storage.

The 50%CP/50%FP reallocation plan defines a volume of storage corresponding to half of the required "feet" of storage. Applying the upper and lower elevations bounding the WRDA storage to get respective acre-feet of storage, then taking the difference between to these two values, half of the incremental value of minimum flows storage in acre-feet was calculated. The volume of the incremental rise into the flood pool was added to the incremental portion of the conservation pool to get the total volume of minimum flows storage corresponding to the WRDA "feet" of storage.

3.3 ELEVATIONS OF CONCERN AND EVALUATION OF STORAGE ALTERNATIVES

The USFWS identified water surface elevations of 670 feet, 675 feet, & 690 feet as elevations of concern relative to potential impacts on the Tumbling Creek Cavesnail. The concern is that stream velocities in the lower cave system are reduced by adjacent elevated lake levels above 670 feet. Slower velocities in the stream and a lower rate of discharge into Big Creek could result in decreased sediment transport and an increase in silt deposition.

The USACE conducted a site visit to Tumbling Creek Cave in January 2004 and selected sixteen locations for an elevation survey. The locations are identified on Figure 6 and Figure 7. Selected locations included springs that surface down gradient of Tumbling Creek Cave. Four of the springs discharge directly into Big Creek, and two springs discharge into Bear Cave Creek, a tributary to Big Creek. An elevation survey was conducted in February 2004. Elevation data is listed in Table 2 and depicted in Figure 7. These surveyed elevations and elevations of concern identified by USFWS were evaluated with duration data generated from SUPER model output. The duration data was used to evaluate potential effects of different lake levels on Tumbling Creek and known cavesnail habitat. The duration data is listed in Table 3.

The daily river flows, river stages, and pool elevations resulting from the SUPER model simulations were used to develop pool elevation-duration data for current conditions and the alternative reallocation plans based on daily values (Table 3). The left side of Table 3 shows the results of the SUPER model output. The right side of Table 3 calculates the percent difference for current conditions and the alternative reallocation plans based on daily values. For example, an elevation of 670 feet is met or exceeded 10.65 % (38.8 days) annually. An increase of 5 feet from flood control pool reallocation will result in the elevation of 670 feet being met or exceeded 13.48% (49.2 days) annually. Therefore, reallocation from the flood control pool will result in an elevation of 670 feet being equaled or exceeded 2.83% or 10.4 days more than the current conditions. The split 50%CP/50%FP alternative would result in a duration increase of 0.67% or 2.52 days a year. Reallocation from the conservation pool decreases the duration of a given pool elevation more than the other reallocation alternatives.

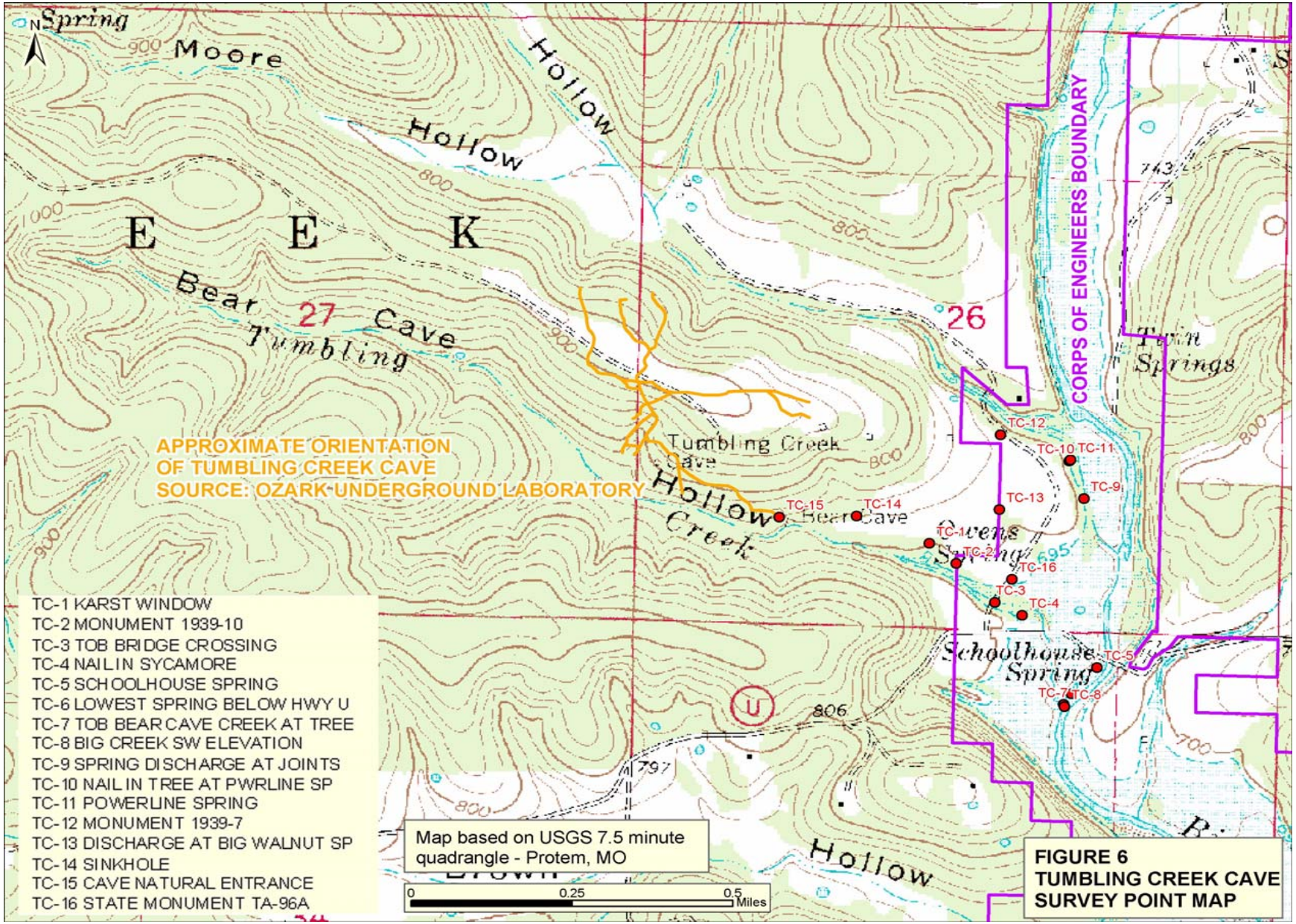
TABLE 2 - ELEVATION SURVEY DATA			
ID	DESCRIPTION	**ELEVATION**	**HEIGHT ABOVE CONSERVATION POOL 654 FT**
TC-1	KARST WINDOW	**708.9**	**54.9**
TC-2	MONUMENT 1939-10	704.0	NE
TC-3	TOP OF BANK (TOB) BRIDGE CROSSING	**693.5**	**39.5**
TC-4	NAIL IN SYCAMORE TREE	688.2	NE
TC-5	SCHOOLHOUSE SPRING	**672.2**	**18.2**
TC-6	LOWEST SPRING BELOW HWY U	**670.7**	**16.7**
TC-7	TOP OF BANK (TOB) BEAR CAVE CREEK AT TREE	**673.4**	**19.4**
TC-8	BIG CREEK SURFACE WATER ELEVATION	**670.8**	**16.8**
TC-9	SPRING DISCHARGE AT JOINTS	**679.0**	**25.0**
TC-10	NAIL IN TREE AT POWERLINE SPRING	688.2	NE
TC-11	POWERLINE SPRING	**681.0**	**27.0**
TC-12	MONUMENT 1939-7	712.8	NE
TC-13	DISCHARGE AT BIG WALNUT SPRING	**707.6**	**53.6**
TC-14	SINKHOLE	**716.9**	**62.9**
TC-15	CAVE NATURAL ENTRANCE	**722.1**	**68.1**
TC-16	STATE MONUMENT TA-96A	695.5	NE

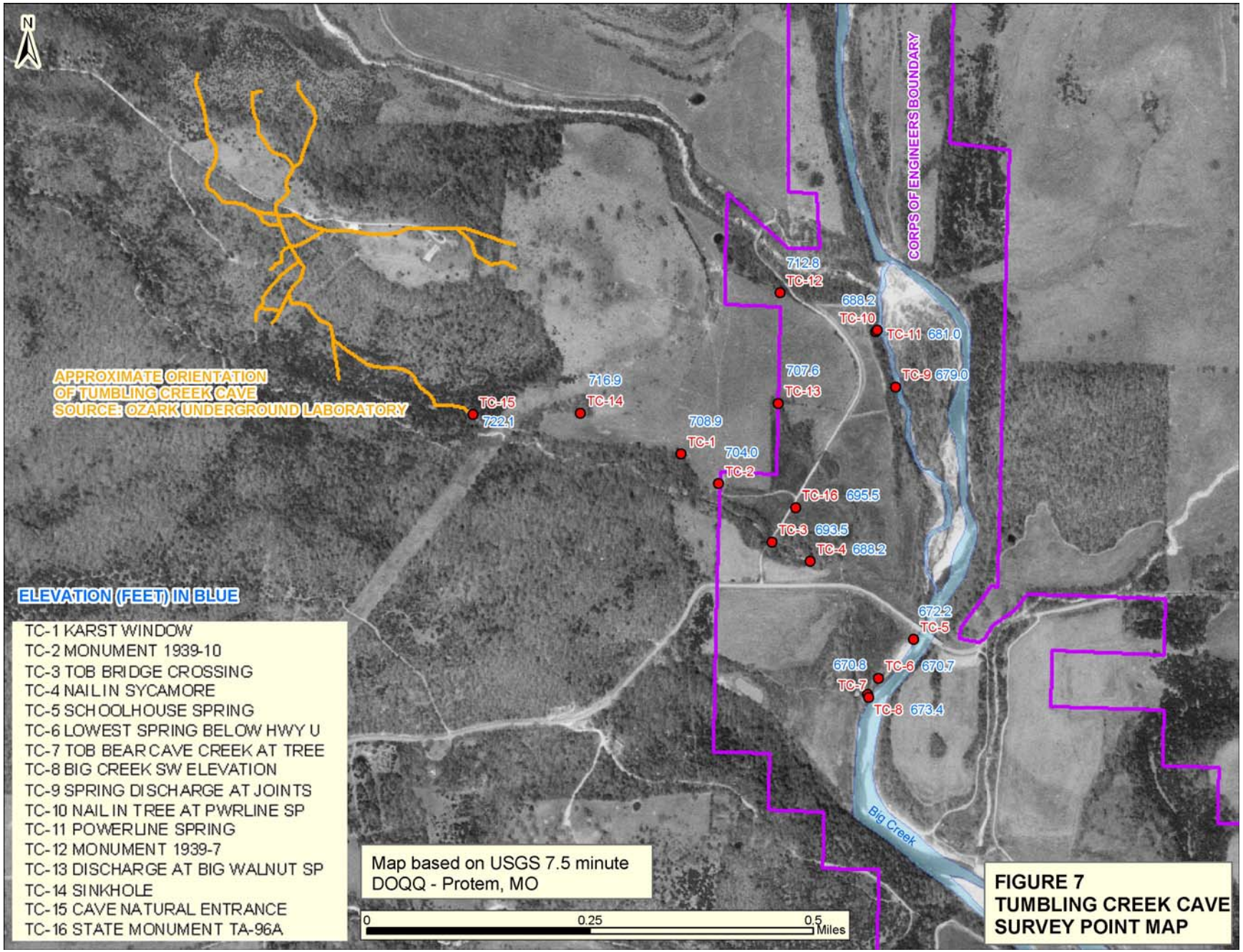
NE - not evaluated. Only spring elevations were evaluated. Non spring elevations were used for general reference and for other evaluations.

TABLE 3 - *SUPER* MODEL DURATION DATA

Annual Pool Elevation-Duration for Elevations of Interest**					**Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)**			
Elevation	Current	Conservation	Flood	Split 50/50	Elevation	Conservation	Flood	Split 50/50
654	59.92	51.39	81.96	69.60	654	-8.53	22.03	9.68
656.5	30.26	27.96	71.54	51.82	656.5	-2.31	41.27	21.56
659	23.01	21.43	53.01	27.96	659	-1.58	30.00	4.95
670 *	10.65	9.96	13.48	11.32	**670 ***	-0.69	2.83	0.67
670.7	10.29	9.57	12.72	10.84	670.7	-0.73	2.42	0.55
672.2	9.31	8.70	11.36	9.96	672.2	-0.61	2.05	0.65
675 *	7.60	7.03	9.42	8.17	**675 ***	-0.57	1.82	0.57
681	5.33	4.98	5.95	5.44	681	-0.35	0.62	0.12
690 *	2.02	1.90	2.23	2.05	**690 ***	-0.12	0.21	0.03
708.9	0.00	0.00	0.00	0.00	708.9	0.00	0.00	0.00

* USFWS elevation of concern ** percent of time the elevation is met or exceeded.


N
Spring
Moore
Hollow
Hollow
E E K
Bear
27
Cave
Tumbling
26
CORPS OF ENGINEERS BOUNDARY
Twin Springs
APPROXIMATE ORIENTATION
OF TUMBLING CREEK CAVE
SOURCE: OZARK UNDERGROUND LABORATORY
Tumbling Creek Cave
Hollow
Creek
Bear Cave
Owens Spring
Schoolhouse Spring
TC-1 KARST WINDOW
TC-2 MONUMENT 1939-10
TC-3 TOB BRIDGE CROSSING
TC-4 NAIL IN SYCAMORE
TC-5 SCHOOLHOUSE SPRING
TC-6 LOWEST SPRING BELOW HWY U
TC-7 TOB BEAR CAVE CREEK AT TREE
TC-8 BIG CREEK SW ELEVATION
TC-9 SPRING DISCHARGE AT JOINTS
TC-10 NAIL IN TREE AT PWRLINE SP
TC-11 POWERLINE SPRING
TC-12 MONUMENT 1939-7
TC-13 DISCHARGE AT BIG WALNUT SP
TC-14 SINKHOLE
TC-15 CAVE NATURAL ENTRANCE
TC-16 STATE MONUMENT TA-96A
Map based on USGS 7.5 minute quadrangle - Protem, MO
0 0.25 0.5 Miles
U
806
797
Hollow
FIGURE 6
TUMBLING CREEK CAVE
SURVEY POINT MAP


N
APPROXIMATE ORIENTATION OF TUMBLING CREEK CAVE SOURCE: OZARK UNDERGROUND LABORATORY
CORPS OF ENGINEERS BOUNDARY
TC-15 722.1
716.9 TC-14
708.9 TC-1
704.0 TC-2
707.6 TC-13
712.8 TC-12
688.2 TC-10
TC-11 681.0
TC-9 679.0
TC-16 695.5
TC-3 693.5
TC-4 688.2
672.2 TC-5
670.8 TC-7
TC-6 670.7
TC-8 673.4
Big Creek
ELEVATION (FEET) IN BLUE
TC-1 KARST WINDOW
TC-2 MONUMENT 1939-10
TC-3 TOB BRIDGE CROSSING
TC-4 NAIL IN SYCAMORE
TC-5 SCHOOLHOUSE SPRING
TC-6 LOWEST SPRING BELOW HWY U
TC-7 TOB BEAR CAVE CREEK AT TREE
TC-8 BIG CREEK SW ELEVATION
TC-9 SPRING DISCHARGE AT JOINTS
TC-10 NAIL IN TREE AT PWRLINE SP
TC-11 POWERLINE SPRING
TC-12 MONUMENT 1939-7
TC-13 DISCHARGE AT BIG WALNUT SP
TC-14 SINKHOLE
TC-15 CAVE NATURAL ENTRANCE
TC-16 STATE MONUMENT TA-96A
Map based on USGS 7.5 minute DOQQ - Protem, MO
0 0.25 0.5 Miles
FIGURE 7
TUMBLING CREEK CAVE
SURVEY POINT MAP

3.4 POTENTIAL IMPACTS TO CAVESNAIL FROM STORAGE ALTERNATIVES

The USACE concludes that a reallocation of 5 feet of storage from the proposed storage alternatives may affect, but is not likely to adversely affect the Tumbling Creek Cavesnail. This conclusion is based on the following:

- The cavesnail is not known to occur in the lower reaches of Tumbling Creek or spring discharge areas (Figure 3).

- The statistical analysis shows that Bull Shoals lake levels do not have a statistically significant effect on the Tumbling Creek flows at the weir within the cave.

- On the average, the elevation of concern (670 NGVD) is currently met or exceeded (38.8 days) of the time annually and the increase of 10.4 days is not considered significant.

The USACE concurs with the USFWS information listed in Section 2.5 and recognizes that watershed activities that lead to an increase in erosion and resulting sediment loads is the primary threat to the biota of the cave drainage system.

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COMPARISON OF WATER SURFACE ELEVATION BETWEEN
BIG CREEK AND BULL SHOALS DAM

On July 6, 2002, Mr. Tom Aley marked water level elevations for two locations along Big Creek. The marked locations were later surveyed by the USACE to determine lake elevation on this particular day. Average daily water surface elevation data from Bull Shoals Dam was compared to elevations observed along Big Creek. The average difference in surface water elevation between Big Creek and Bull Shoals dam was shown to be 0.31 feet (3.72 inches).

ELEVATION SURVEY DATA				
ID	DESCRIPTION	**ELEVATION (FEET)**	**WATER SURFACE ELEVATION (FEET) ON JULY 6, 2002 ***	**DIFFERENCE IN WATER SURFACE ELEVATON**
TC-4	NAIL IN SYCAMORE TREE	688.2	686.2	0.31
TC-10	NAIL IN TREE AT POWERLINE SPRING	688.2	686.2	0.31

***** NAIL ELEVATIONS WERE RECORDED TO BE 24 INCHES ABOVE WATER SURFACE ON JULY 6, 2002

MONTHLY RESERVOIR REPORT JULY 2002							
POOL	ELEVATIONS	STORAGE	RELEASES	EVAP	MEAN	RAINFALL	
DAY	FT-NGVD	VOLUME	DSF	DSF	INFLOW	INCHES	
700	2400	AC-FT	POWER	TOTAL	DSF	DAM	BASIN
JULY 5	686.07	685.89	4788906	11760	11760	457	6158
JULY 6	685.89	685.7	4776651	11990	11990	456	6427
JULY 7	685.65	685.44	4759880	12664	12664	455	4824

INFORMATION COLLECTED AT BULL SHOALS DAM

FLOW DATA ANALYSIS FOR TUMBLING CREEK

PURPOSE

The purpose of this analysis is to determine the statistical significance of the average lake level and precipitation in existence at Bull Shoals Lake when regressed on cubic feet of discharge (cfs) at the weir inside Tumbleing Creek Cave.

DATA

Ozark Underground Laboratories provided flow data for Tumbling Creek. Flow data was provided in cubic feet per second (cfs) for a time period of August 12, 2002 to November 19, 2003. Precipitation and daily average water surface elevation data was collected from the gaging station at Bull Shoals Dam. The precipitation data is shown in inches. The average daily water surface elevation of Bull Shoals Lake is shown in feet.

METHOD

Simple linear regression was used to analyze the data. The model has the following form:

$$Flow_t = \beta_{1t} + ALL\beta_{2t} + P\beta_{3t} + \varepsilon_t$$

The dependent variable, discharge at the weir (**Flow)**, and the independent variables are, average lake level **(ALL)**, and, precipitation **(P)**.

The equation will show the effect the average lake level and precipitation have on discharge at the Tumbling Creek weir. The average lake level is expected to have a negative coefficient. As the average surface level increases then discharge should decrease, since the pool level is rising to a point that would impede flows. The precipitation variable is expected to have a positive coefficient. Increased rainfall is expected to increase flows.

RESULTS

Table 1 lists the results from the regression. The expectations of the signs of the coefficients were confirmed. ALL and P have a negative and positive sign, respectively. The R^2 is low, for a time series model, 0.0531, which suggests that the data explains approximately 5.3% of the variation in the dependent variable. The F statistic is large, thereby allowing rejection of the null hypothesis that ALL=P=0. The p-values of the independent variables are low, 0.026 and 0.000, for ALL and P respectively. These p-values suggest that independent variables are significant below the 3% level of significance.

However, a test was run to determine if autocorrelation exists in the data. The Durbin-Watson Test was used:

$$d = \frac{\sum_{t=}^{T} (\varepsilon_t - \varepsilon_{t-1})^2}{\sum_{t=}^{T} \varepsilon_t^2} \qquad \text{(Durbin-Watson Formula)}$$

Running the test yielded a Durbin-Watson statistic of 0.2293. The Durbin Upper and Lower bounds for a data set of 411 observations and 2 independent variables are 1.72 1.63, respectively. The statistic, 0.2293, is well below the lower bound, suggesting positive autocorrelation; therefore the null hypothesis that the model does not have autocorrelation is rejected.

Table 1: ANOVA RESULTS

	df	SS	MS	F	Significance F
Regression	2	118.9301	59.4650	11.4760	0.00001
Residual	409	2119.3091	5.1817		
Total	411	2238.2392			

	Coefficients	Standard Error	t Stat	P-value
Intercept	31.6823	13.3780	2.3682	0.0183
Lake Level	-0.0457	0.0205	-2.2338	0.0260
Precipitation	1.4244	0.3294	4.3239	0.0000

Regression Statistics			
Multiple R	0.2305	Standard Error	2.2763
R Square	0.0531	Adj R Square	0.0485
DW Stat.	0.2293		

To correct for the autocorrelation, the Cochran-Orcutt Procedure was used. The following formula:

$$\hat{\varepsilon} = \rho \hat{\varepsilon}_{t-1} + \nu_t$$

involves a series of iterations, which produces an estimate, Rho ($\hat{\rho}$). This estimate is then used to perform a generalized differencing transformation, and then a new regression is run. This new regression will provide results that are adjusted for first order autocorrelation. The results are summarized in Table 2.

Table 2: ANOVA RESULTS, Corrected for First Order Autocorrelation

	df	SS	MS	F	Significance F
Regression	2	39.9971	19.9986	19.6889	0.00000
Residual	408	414.4177	1.0157		
Total	410	454.4148			

	Coefficients	Standard Error	t Stat	P-value
Intercept	-5.1999	6.9902	-0.7439	0.4574
Lake Level	0.0722	0.0932	0.7750	0.4388
Precipitation	0.7021	0.1128	6.2253	0.0000

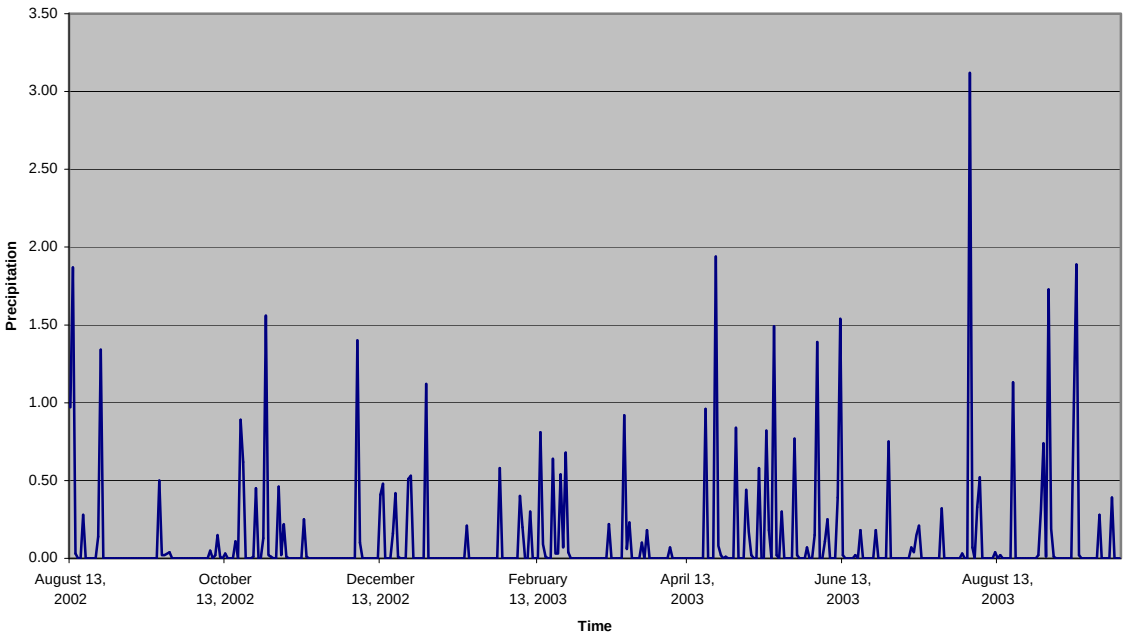
Regression Statistics			
Multiple R	0.2967	Standard Error	1.0078
R Square	0.0880	Adj R Square	0.0836

Cochran-Orcutt Estimate 0.8852

The new results show the variable ALL is no longer statistically significant and P is statistically significant below the 1% level of significance. The expectation of the sign of the coefficient P is still correct. The R^2 is still low, but has improved slightly to 0.0880, which suggests that the data explains approximately 8.8% of the variation in the dependent variable. The F statistic is again large, thereby allowing rejection of the null hypothesis that ALL=P=0.

This analysis of water surface elevation and precipitation data presents estimates for the effects of precipitation and daily average water surface elevations on discharge rates in the Tumbling Creek Cave. After analyzing the data the following conclusions can be inferred. The effect of average daily water surface elevation on discharge rates is not statistically different from zero. Precipitation's effect on discharge rates is statistically different from zero, implying that for each inch of rain that falls, discharge increases by 0.7021 cfs. The F-statistic has allowed us to conclude that average daily water surface elevation and precipitation are independent of one another. Lastly, the regressed R^2 is very low, 0.088. This implies there is a great deal more affecting discharge rates in the cave than the variables in this analysis have been able to explain.


680
675
670
665
660
655
650
645
July 13, 2002
September 1, 2002
October 21, 2002
December 10, 2002
January 29, 2003
March 20, 2003
May 9, 2003
June 28, 2003
August 17, 2003
October 6, 2003
November 25, 2003
Time


3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Precipitation
August 13, 2002
October 13, 2002
December 13, 2002
February 13, 2003
April 13, 2003
June 13, 2003
August 13, 2003
Time

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Columbia Ecological Services Field Office
101 Park DeVille Drive, Suite A
Columbia, Missouri 65203-0007
Phone: (573) 234-2132 Fax: (573) 234-2181

July 13, 2004

Johnny McLean, Acting Chief, Environmental Section
Department of the Army
Little Rock District, CORPS of Engineers
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mr. McLean:

This response is provided by the U.S. Fish and Wildlife Service (Service) under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543). We have reviewed the "Biological Assessment for Impacts to the Tumbling Creek Cavesnail (*Antrobia culveri*), Gray Bat (*Myotis grisescens*) and Indiana bat (*Myotis sodalis*) Relative to the White River Minimum Flow Project."

We concur with your determination that the proposed action alternatives would have no effect on the federally listed endangered gray bat (*Myotis grisescens*) and Indiana bat (*Myotis sodalis*). In addition, we concur with your determination that a reallocation of 5 feet of storage from the proposed storage alternatives may affect, but is not likely to adversely affect the Tumbling Creek Cavesnail.

We look forward to continued coordination with you on the White River Minimum Flow Project. Should you have questions, or if we can be of further assistance, please contact Amy Salveter at (573) 234-2132, extension 113.

Sincerely,

Rick L. Hansen

for Charles M. Scott
Field Supervisor

Cc: USFWS, Conway, AR, Attn. Alan Mueller, Field Supervisor
MDC, Jefferson City, MO, Attn. Gene Gardner, Policy Coordination Division
Ozark Underground Laboratory, Protem, MO, Attn. Tom Aley

ALS:als:2004-0140

Appendix G – Additional Lake Evaluation Data

Misc. Topography & Physiography

Beaver lake is located on the southwest flank of the Ozarks, a region of dissected tablelands composed for the most part of gently dipping sedimentary strata. Elevations range from 1,500 feet to 900 feet above NGVD. Five rock formations are exposed in the uplands bordering the lake. These include the Powell, Cotter, and Jefferson City Dolomites of Ordovician age, Chattanooga Shale of Devonian age, and the Boone Limestone of Mississippian age. The most prominent surface geological feature is a low, persistent, limestone bluff formed by the St. Joe Limestone, the basal member of the Boone formation. The base of this bluff is about 50 feet higher than the top of the flood control pool near the dam. Going upstream, the bluff descends gradually in elevation until it is below the top of the pool in the area east of Rogers. Table Rock Lake is located east of Beaver Lake on the western and southwestern flank of the Ozarks. The Springfield Plateau in this region rises to an elevation of approximately 1,400 feet. The White River has cut its channel to a depth of about 700 feet below the surface of the plateau. Three rock formations are present in the Table Rock Lake area. These include the Cotter and Jefferson City formations of Ordovician age and the Boone formation of Mississippian age. The Boone formation caps the higher hills in the area.

The area surrounding Lake Taneycomo also displays topography characteristic of the Salem and Springfield Plateaus of the Ozark Plateaus physiographic province.

The tributaries of the Little Red River have their origin on the southeastern flank of the Boston Mountains division of the Ozark physiographic province. Folding is gentle, and the axes of the synclines and anticlines are difficult to trace. The main stem of the Little Red and its tributaries flow entirely in the Atoka shale outcrop area. The Atoka has a thickness of 6,000 or more feet over the outcrop area. It is primarily a shale formation, but sandstone members varying in thickness are common. Interbedded sandstone and shale members are also common to the formation. Sandstone members of the Atoka shale formation now cap remnants of a former plateau. The plateau maintains an elevation of about 600 feet above sea level, with variations that reflect the comparative resistance to erosion of the various types of strata in the Atoka.

The region around the lake is rugged and mostly wooded. Greers Ferry Lake is very irregular in shape because of the mountainous character of the region. Steep rock slopes and bluffs form the shoreline. Steep bluffs on both sides of the central portion of the lake confine the water to a straight channel that divides the lake into two distinct segments. Some of the higher mountains in the region reach an elevation of more than 1,000 feet above NGVD

General Soils – Beaver Lake, Table Rock Lake, and Greers Ferry Lake

Soil associations in the vicinity of Beaver Reservoir are Captina-Nixa, Captina-Pembroke, Clarksville-Nixa-Baxter, and Corydon-Sogn. The Captina silt loam, 1 to 3 percent slopes, is classified as prime farmland. The other soils in associations in the vicinity of Beaver Lake are not prime farmland.

The primary soil association in the vicinity of Table Rock Reservoir is the Gasconade-Opequon-Clarksville Association. No soil in this association is classified as prime farmland.
The Gasconade-Opequon-Clarksville association is the primary soil association in the vicinity of Lake Taneycomo. The soils in the Gasconade-Opequon-Clarksville association are not prime farmland.

The Corydon-Sogn association is the primary soil association in the vicinity of Bull Shoals Lake. Neither the Corydon nor the Sogn soil is classified as prime farmland.

Soils in the Talbott-Sogn, Talbott-Colbert, Talbott, and Cordyon-Sogn associations are present in the vicinity of Norfork Lake. Lands adjacent to Norfork Lake are classified primarily as Talbott-Sogn association. None of the above soils has been classified as prime farmland.

Soils in the Upper White River area, that is, below Bull Shoals Lake and above Batesville, Arkansas include the following associations: Talbott-Colbert, Corydon-Sogn, and Sogn-Mountainburg in Baxter County, Sturkie-Peridge, Noark-Portia, and Arkana-Moko. In addition, Brockwell-Boden-Portia in Izard and Stone Counties, Clarksville-Gepp-Ventris, Beasley-Gasconade, and Egam-Arrington in Independence County. The Sturkie, Portia, and Egam soil series contain lands classified as prime farmland; the other series listed above contain no prime farmland. The Corydon-Sogn association is the primary soil association in the vicinity of Bull Shoals Lake. Neither the Corydon nor the Sogn soil is classified as prime farmland

Soils resources in the vicinity of the Lower White River include the Sharkey-Boudre association in Woodruff County, the Sharkey-Commerce association in Monroe County, the Sharkey and Newellton-Sharkey-Tunica associations in Phillips County, the Sharkey-Acadia association in Arkansas County, and the Sharkey association in Desha County. The above soils with the exception of the Commerce series in Monroe County and the Sharkey and Acadia series in Arkansas County are classified as prime farmlands.

Soil associations in the vicinity of the Little Red River include Linker and Sequatchie-Philo while in the vicinity of Greers Ferry Lake the Linker, Linker-Mountainburg, and Linker-Hartsells associations are present. The Linker soil (3-8% slope) is prime farmland; the other soils in the vicinity of Greers Ferry Lake and the Little Red River are not prime farmland.

Beaver Lake (Affected Environment)

Beaver Dam is located on the White River in northwest Arkansas, 6 miles west of Eureka Springs, Arkansas (Figure 1). Construction of the project began in 1959 and was completed in 1965. At the top of the flood control pool the lake has a surface area of 31,700 acres and a shoreline approximately 500 miles long. The drainage area is 1186 mi^2. The lake is operated for flood control, hydropower production, water supply and fish and wildlife.

The Shoreline Management Plan (SMP) establishes policy and furnishes guidelines for the protection and conservation of the desirable environmental characteristics of the lake while

maintaining a balance between public and private shoreline uses. The SMP provides for the effective long-range management of the shoreline resources of Beaver Lake. This SMP describes the types of private uses and activities that may be permitted on public lands.

Management of the shoreline will provide an opportunity for optimum recreational experiences for the maximum number of people, the environment, and project resources. The objectives of the SMP are to manage and protect the shoreline; to establish and maintain acceptable fish and wildlife habitat; aesthetic quality, and natural environmental conditions; and to promote the safe and healthful use of the lake and shoreline for recreational purposes by all users.

At the top of conservation pool elevation 1120.43 NGVD. Beaver Lake has a shoreline of 449 miles. As the pool rises to the top of flood control pool elevation 1,130 NGVD, the shoreline increases to 483 miles. The Beaver project area contains 40,463 surface acres. Land, which is owned in fee by the government, consists of land that surrounds the lake. The limits of fee land are defined by the Government Fee Take Line (GFTL). The GFTL consists of a straight line from monument to monument. The boundary markers, or monuments, are topped with a brass cap, which indicates the tract of land which was purchased from the land owner. Ownership of private land does not convey any exclusive rights to the use of adjoining public lands, or the lake. The general public can use public lands. Shoreline Use Permits or Licenses may be issued within the guidelines of ER 1130-2-406, dated 27 July 1990, Shoreline Management at Civil Works Projects, SWLOM 1130-2-23, dated 15 September 1993; and the SMP for Beaver Lake, dated 28 August 1998.

Natural and recreational resources at the Beaver Lake provide social, economic, and environmental benefits for all Americans. Following are facts related to the Corps' role managing natural and recreational resources in Beaver Lake (Table 1).

Figure 1: Beaver Lake

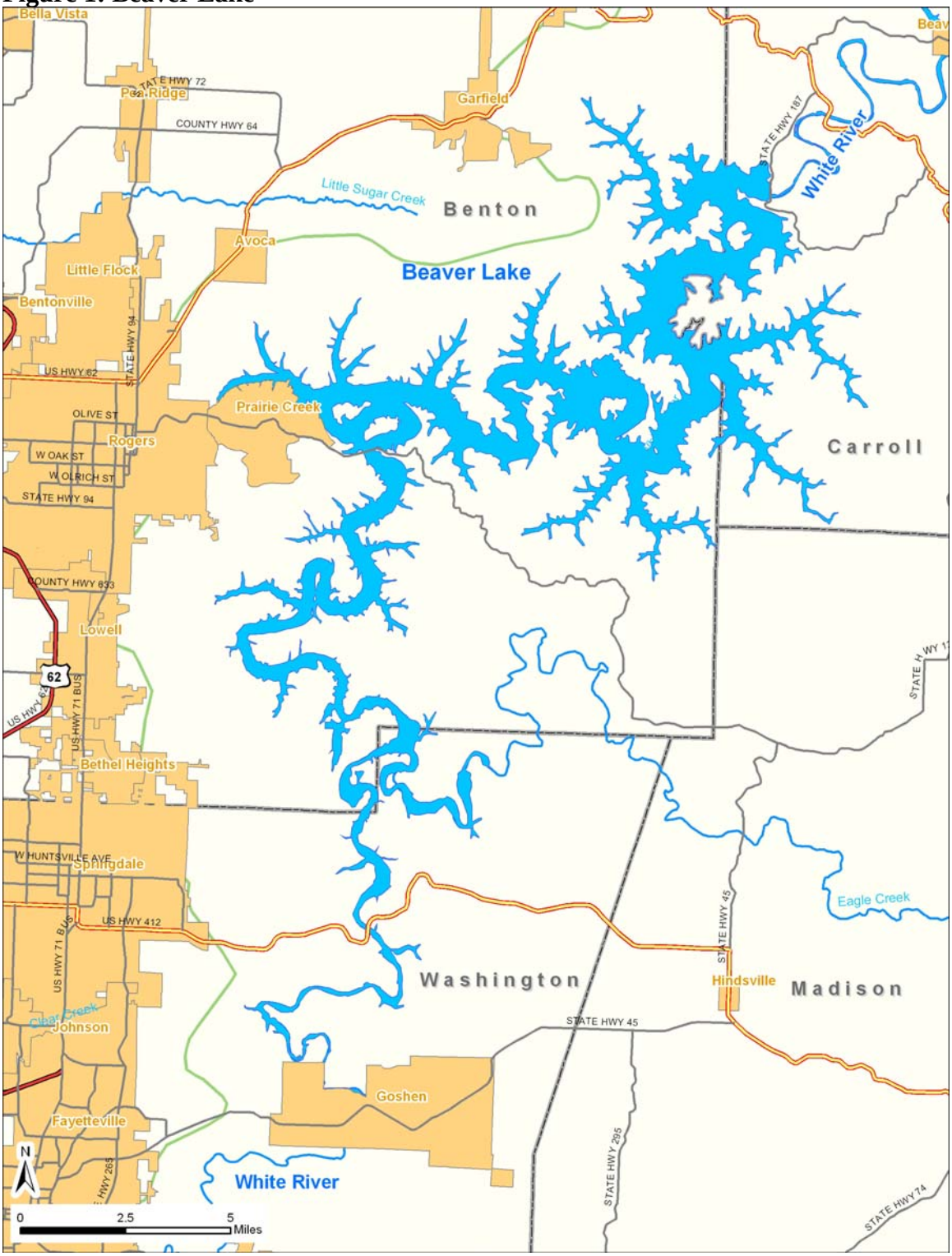


Table 1: Natural and recreational resource benefits at Beaver Lake.

Social Benefits		
Facilities	**Visits (person-trips)**	**Benefits in Perspective**
- 37 recreation areas	- 2,388,800 in total	
- 161 picnic sites	- 358,320 picnickers	By providing opportunities for active recreation, Corps lakes
- 682 camping sites	- 35,524 campers	help combat one of the most significant of the nation's health
- 11 playgrounds	- 95,552 swimmers	problems: lack of physical activity.
- 14 swimming areas	- 47,776 water skiers	
- 7 trail miles	- 668,864 boaters	
- 10 fishing docks	- 812,192 sightseers	Recreational programs and activities at Corps lakes also help
- 41 boat ramps	- 549,424 anglers	strengthen family ties and friendships; provide opportunities
- 7 marinas	- 23,888 hunters	for children to develop personal skills, social values, and
- 1,491 marina slips	- 429,984 others	self-esteem; and increase water safety.
Economic Benefits		
2,388,800 visits per year resulted in:		**Benefits in Perspective**
- $38.27 million in visitor spending within 30 miles of the Corps lake.		The money spent by visitors to Corps lakes on trip expenses
- 65% of the spending was captured by local economy as direct sales effects.		adds to the local and national economies by supporting jobs and generating income. Visitor spending represents a sizable component of the economy in many communities
With multiplier effect, visitor trip spending resulted in:		around Corps lakes.
- $44.07 million in total sales.		
- $23.02 million in total income.		
- Supported 1,186 jobs in the local community surrounding the lake.		
Environmental Benefits		
		Benefits in Perspective
- 11,956 land acres		Recreation experiences increase motivation to learn more
- 28,220 water acres		about the environment; understanding and awareness of
- 449 shoreline miles		environmental issues; and sensitivity to the environment.
- 0 acres reforested		
- 438 environmental educational contacts		

Source: Value to the Nation web site at www.CorpsResults.us. Use Fast Facts to view this and other reports.

Topography

The Beaver Dam and Lake area is part of the Ozark Uplift, and is typical of the Ozarks Highlands, which is characterized by a rugged terrain containing narrow ridges and V-shaped valleys, steep, rocky slopes and bluffs. Some of the higher peaks in the region reach an elevation of more than 1,400 feet above NGVD.

Vegetation

Beaver Lake's native vegetation is primarily a climax oak-hickory type. Much of the tillable, rich, river bottomland was in cultivation during the construction of Beaver Lake. As a result of the dam, and subsequent impoundment of Beaver Lake, the bottomlands were inundated. Up-land hardwoods, near the upper levels of the flood control pool, have been subjected to periodic flooding, siltation, and wave action. Presently, a new ecotone has formed between the lakefront and the original forest. This area has been reforested naturally by pioneer species that have a relatively short life span. Some park areas contain small natural pine stands or pine plantations. Much of the area adjacent to Beaver Lake has remained relatively undeveloped primarily due to poor access. Since the impoundment of the lake, some extensive home and resort development has occurred in some areas. The largest single ownership, adjoining the lake, is the Hobbs Estate, which is currently owned and managed by the Arkansas Game and Fish commission,

Arkansas State Parks, Arkansas Natural Heritage commission, and the Arkansas Forestry commission. As of this date, there are no large industrial or commercial land ownerships that adjoin Beaver Lake.

Project lands within the compartments of Beaver Lake consist of developed and undeveloped parks and project acreage. The project lands outside of park boundaries are a relatively narrow band, much of which remains undisturbed for various reasons and are often unmanageable due to remoteness and small size. On Beaver Lake, the largest blocks of these types of manageable lands are located on the four large islands.

Fish and Wildlife

Fish and wildlife resources are recognized as making a vital contribution to the project's natural resource because of an increasing public interest in hunting and fishing. Effective and coordinated planning is essential to sustain and increase our fish and wildlife resources.

Beaver Lake has 28,200 acres of water surface at conservation pool level. The lake provides habitat for many sport fishes consisting of walleye, striped bass, blue catfish, white bass, channel catfish, flathead catfish, crappie, black bass, and various species of sunfish. The abundance of warm water fish provides recreational activities enjoyed by many visitors. With the exception of blue catfish and striped bass, the aforementioned species of fish were native to the White River prior to the impoundment.

Major wildlife species to be managed will include whitetail deer, dove, quail, turkey, squirrel, and rabbit. In the past, primary consideration by the Corps of Engineers has been given to the planting of pine seedlings in plantations. When appropriate, concentrated efforts will be made to plant mast-producing hardwood species conducive for various forms of wildlife.

Numerous wildlife plots have been distributed throughout the developed parks around Beaver Lake. These food plots contain a wide variety of plant foods for wildlife. Future sites should be considered in areas of limited development that are located outside the developed parks, primarily in areas adjoining state owned properties.

Fish attractors are distributed around Beaver Lake each year. They provide additional cover for a variety of game fish species while also providing a constant and reliable food source to the biota.

Threatened and Endangered Species

Beaver Lake is thought to serve as a barrier for the threatened Ozark cavefish, which cannot survive in open water, nor can it evade predation by upper trophic level fishes, which find their way into karst passages through high water levels. There are two known cavefish locations in Benton County, Arkansas, very near the current conservation pool elevation. Increased frequency of flooding in these systems would likely cause more karst habitat to be unsuitable for cavefish at these sites.

Additionally, the endangered gray bat roosts within Pigeon Roost Cave on Hobbs State Management Area. This cave currently floods when reservoir levels are up, and an alternative

entrance had to be constructed into the cave to allow passage for the endangered gray bats that roost in the cave during periods of flooding. Increasing the elevation of the conservation pool of Beaver Reservoir will affect the behavior of the bats by increasing the amount of time the bats must use the alternate entrance. Both the gray and Indiana bats occur at War Eagle Caverns, as well, and it is important to ensure increased water levels do not impact these populations.

Missouri bladderpod occurs at Blue Springs Park, in Washington County, Arkansas, on a dolomitic glade. This species typically inhabits limestone glades; therefore, its presence at this unusual site is significant. It is important that increased pool heights would not cause this unique bladderpod site to be inundated, as the species requires open, dry conditions.

A cave isopod, *Caecidotea stiladactyla,* occurs in several caves along the perimeter of Beaver Reservoir. This species occurs in the Ozark Mountains and is very rare throughout its range.

Although it is not federally protected, the Corps should avoid adversely impacting this species. Conserving species before they become federally listed helps to avoid the need for listing in the future.

Beaver Lake continues to be a favorite winter habitat for the bald eagle. There have been a relatively stable number of eagle sightings in recent years. The cave crayfish may occur in the vicinity of Beaver.

Pigeon Roost Cave on Beaver Lake is one of only eight known caves in five states where the endangered gray bat (*Myotis grisescens*) is known to reside. Research has revealed that the cave was probably once a maternity cave and home to as many as 15,000 bats. In 1979, an Ozark Underground Laboratory researcher discovered the cave. Today, Pigeon Roost Cave is classified as a bachelor cave and managed as a protected habitat by the Arkansas Game and Fish Commission.

The Ozark cavefish live in two known underground crevices on or near Federal lands surrounding Beaver Lake. The Blackburn Creek Nursery Pond, which is managed by the Arkansas Game and Fish Commission, contains one underground crevice in the southeastern corner. These fish are protected by a retaining wall built around an underground cave that measures approximately six feet in diameter and nearly thirty feet deep. The other underground crevice and home for the Ozark cavefish is located on flowage-easement lands on the south shore of the Monte Ne Arm. This site is a limestone cave formation and natural spring lying in the center of a small streambed.

Table 2: Beaver Lake Threatened and Endangered Species

Common Name	Scientific Name	Status
Gray bat	*Myotis grisescens*	endangered
Indiana bat	*Myotis sodalis*	endangered
Ozark cave fish	*Amblyopsis rosae*	threatened
Missouri bladderpod	*Lesquerella filiformis*	endangered

Bald eagle	*Haliaeetus leucocephalus*	threatened
Cave crayfish*	*Cambarus aculabrum*	endangered
Cave crayfish*	*Cambarus aculabrum*	endangered

*may occur

Water Supply

There are currently four water utilities that use Beaver Lake as a water supply. They are Beaver Water District, Carroll-Boone District, The Benton/Washington County Regional Public Water Authority, and the Madison County Water District. Of the original 50,000 acre-feet of Corps discretionary authority in this lake, just over 2,000 acre-feet remains for reallocation - assuming the current studies underway are approved. This would provide a yield of about 1 MGD. Beaver Lake continues to provide a safe and dependable public drinking and industrial water supply, as well as aquatic habitat, and recreational opportunities. Safeguarding the water quality of the lake is of utmost importance. The cooperation of all individuals, federal, state, and local agencies is necessary in this effort.

Park Facilities

There are eleven developed parks around Beaver Lake operated by the Corps of Engineers; in addition, one park, Big Clifty is leased to Carroll County, Arkansas. Five future parks are planned; two developed parks (Blue Springs and Ventris) have been closed due to budget and manpower reductions. Seven of the developed parks have commercial boat dock facilities. The recreation fee season runs from six to 8 months, depending on the park. Most of the parks open in April and close in October.

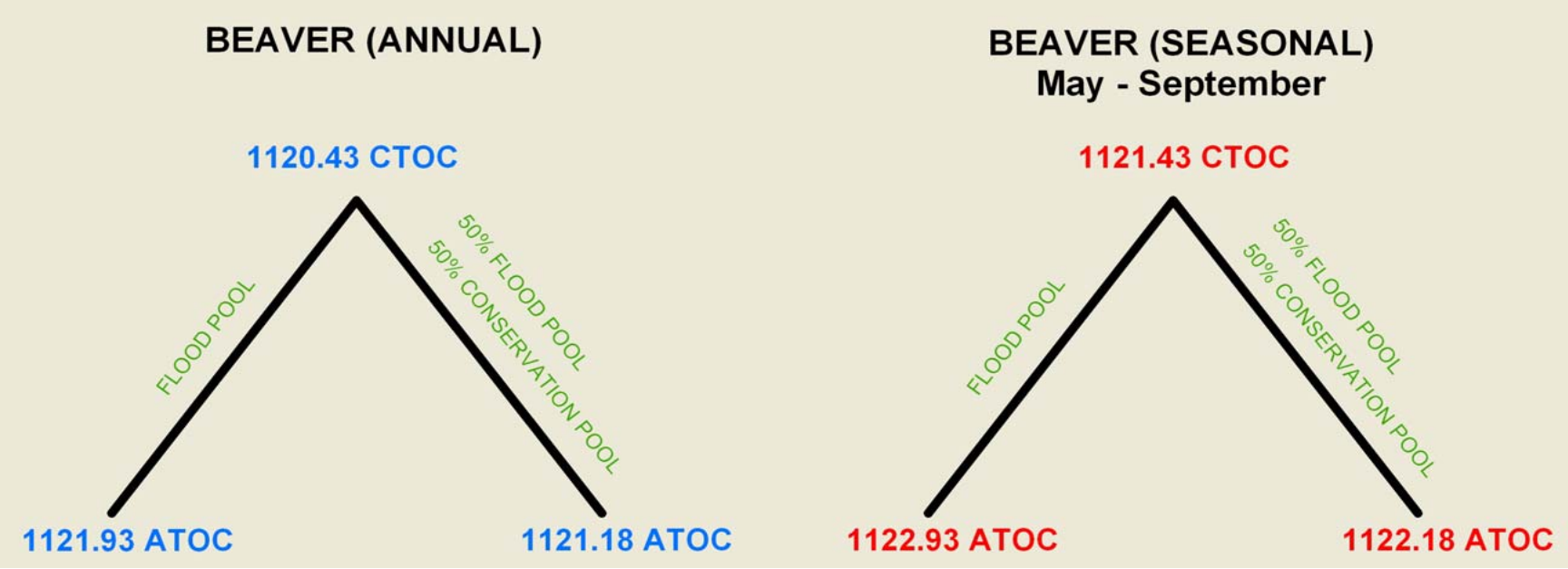
Table 3: Beaver Lake Recreation Areas and Amenities

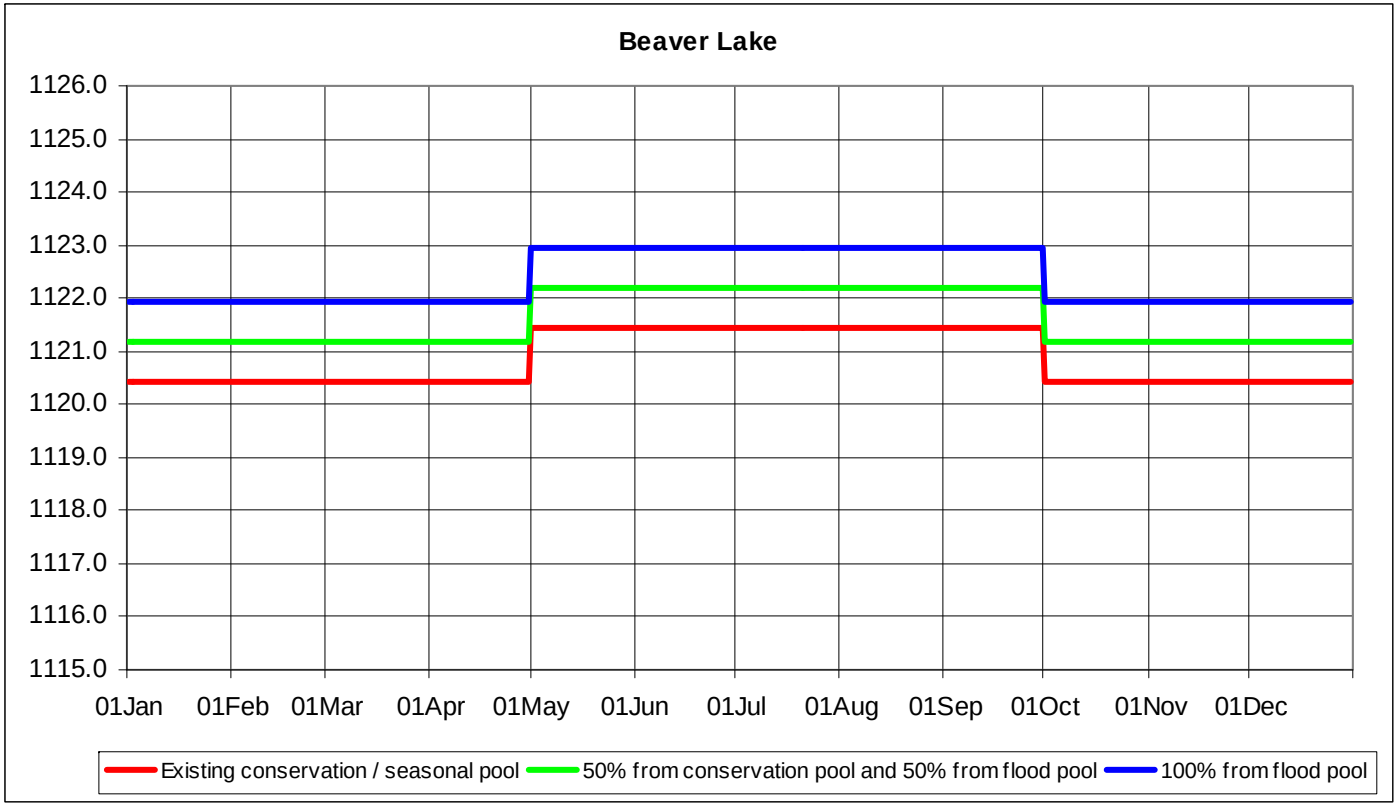
Recreation Area	Corps Managed	Corps Fee Collected	Camping	Lodging	Showers	Boat Ramps	Marina	Gas	Picnic Area / Shelter	Playground	Swimming Area	Fishing Facilities	Trails	Golf Course	Amphitheater	Grocery / Snack Bar
- Blue Springs	X					X										
- Cliffty Park*																
- Dam Site Day Use	X	X				X			**GS**	X	**B**					
- Dam Site Overlook	X												**H**			
- Dam Site Road	X															
- Dam Site Lake	X	X	**ET**	X	X	X				X	**B**					
- Dam Site River	X	X	**E**	X		X				X						
- Hickory Creek	X	X	**E**	X		X	X		**GS**	X	**B**					
- Hide-A-Way Campground*																
- Horseshoe Bend East & West	X	X	**E**	X		X	X	X	**GS**	X	**B**		**H**		X	
- Indian Creek	X	X	**ET**	X	X	X				X	**B**		**H**			
- Lost Bridge North	X	X	**ET**	X	X	X	X	X		X	**B**		**H**			
- Lost Bridge South	X	X	**E**	X		X				X	**B**		**H**			
- Prairie Creek	X	X	**ET**	X	X	X	X		**GS**	X	**B**		**H**		X	
- Rocky Branch	X	X	**ET**	X	X	X	X			X	**B**					
- Starkey	X	X	**ET**	X	X	X	X		**GS**	X	**B**					
- Trails End Resort*																
- Twin Cove Resort*																
- Ventris	X					X										
- War Eagle	X	X	**E**	X		X	X		**GS**	X	**B**					

*Managed by others E: Electric Campsites H: Hiking Trails

B: Beach GS: Group Picnic Shelters T: Pull Through Campsites

The current top of the conservation (CTOC) pool changes seasonally to provide some storage for the tailwaters in the hot months. The alternative top of conservation pool (ATOC) was compared to the CTOC annually and seasonally to identify the changes at the conservation pool elevation in effort to identify the potential for vegetation establishment based on duration changes.




Beaver Lake
1126.0
1125.0
1124.0
1123.0
1122.0
1121.0
1120.0
1119.0
1118.0
1117.0
1116.0
1115.0
01Jan
01Feb
01Mar
01Apr
01May
01Jun
01Jul
01Aug
01Sep
01Oct
01Nov
01Dec
Existing conservation / seasonal pool
50% from conservation pool and 50% from flood pool
100% from flood pool

Beaver Lake

January - March Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
1120.43	39.48	35.90	37.31	33.67
1121.18	32.96	29.81	32.24	28.49
1121.43	30.32	27.85	29.87	26.74
1121.93	27.66	25.34	26.53	23.95
1122.18	26.70	24.40	25.63	23.40
1122.93	23.48	21.63	22.57	21.07

April - June Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
1120.43	75.51	73.61	74.01	73.31
1121.18	70.03	67.79	68.32	66.86
1121.43	58.96	56.72	57.10	55.90
1121.93	55.79	53.53	54.02	52.70
1122.18	55.01	52.87	53.38	52.09
1122.93	51.97	50.00	51.16	48.99

July - September Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
1120.43	31.21	29.29	29.89	29.66
1121.18	26.25	24.31	24.81	24.69
1121.43	23.41	21.38	21.70	21.70
1121.93	21.93	19.80	19.98	20.03

Beaver Lake

Differences in January - March Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
1120.43	-3.58	-2.17	-5.82
1121.18	-3.15	-0.72	-11.00
1121.43	-2.47	-0.45	-3.58
1121.93	-2.32	-12.96	-3.71
1122.18	-2.30	-1.07	-3.30
1122.93	-1.85	-0.92	-2.41

Differences in April - June Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
1120.43	-1.90	-1.50	-2.20
1121.18	-2.24	-1.71	-8.64
1121.43	-2.24	-1.86	-3.06
1121.93	-2.26	-1.78	-3.09
1122.18	-2.13	-1.63	-6.87
1122.93	-1.97	-7.80	-2.98

Differences in July - September Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
1120.43	-1.92	-1.32	-1.55
1121.18	-1.94	-1.44	-1.57
1121.43	-2.03	-1.71	-1.71
1121.93	-2.13	-1.94	-1.90

1122.18	21.24	19.25	19.44	19.38
1122.93	19.31	17.62	18.27	18.04

October - December Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
1120.43	20.94	19.06	18.12	18.58
1121.18	18.52	16.35	16.03	15.93
1121.43	17.58	15.28	15.24	14.97
1121.93	16.64	14.28	14.17	13.92
1122.18	16.03	14.07	13.86	13.65
1122.93	14.19	12.71	12.27	12.35

1122.18	-1.99	-1.80	-4.03
1122.93	-1.69	-5.14	-1.28

Differences in October - December Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
1120.43	-1.88	-2.82	-2.36
1121.18	-2.17	-2.49	-5.02
1121.43	-2.30	-2.34	-2.61
1121.93	-2.36	-6.77	-2.72
1122.18	-1.96	-2.17	-2.38
1122.93	-1.48	-1.92	-1.84

Beaver Lake Elevations of Concern (T&E Species)

The USFWS identified several elevations of concern on the Beaver project relative to the potential affects on T &E species. The elevations are 1110, 1120, 1130, and 1140 NGVD. The elevation duration differences are shown in the following tables. The species of concern for 1110, 1120, & 1130 NGVD was the endangered gray bat and its habitat (Pigeon Roost Cave). Concerns for the Ozark cavefish led to the inquiry about changes at 1120 – 1140 NGVD and were analyzed.

Considering the duration differences for the current operation plan and the alternative plans the effects are considered insignificant on the habitat of concern.

Beaver Lake

Annual Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
1110	91.20	86.65	86.92	86.74
1120.4	45.86	42.69	42.83	42.79
1121	38.19	35.98	36.59	35.26
1121.2	36.87	34.50	35.28	33.93
1121.9	30.77	28.52	28.98	27.94
1130	0.34	0.31	0.33	0.29
1140	0.00	0.00	0.00	0.00

Beaver Lake

Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
1110	-4.54	-4.28	-4.45
1120.4	-3.17	-3.03	-3.07
1121	-2.21	-1.61	-2.93
1121.2	-2.37	-1.60	-2.94
1121.9	-2.25	-1.79	-2.84
1130	-0.04	-0.02	-0.05
1140	0.00	0.00	0.00

Beaver Lake

January - March Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
1110	85.30	81.25	81.59	81.27
1120.4	49.03	44.26	44.43	44.30
1121	34.41	31.37	33.62	29.75
1121.2	32.96	29.81	32.24	28.49
1121.9	28.17	25.78	27.10	24.48
1130	0.19	0.19	0.19	0.17
1140	0.00	0.00	0.00	0.00

Beaver Lake

Differences in January - March Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
1110	-4.05	-3.71	-4.03
1120.4	-4.77	-4.60	-4.73
1121	-3.05	-0.79	-4.67
1121.2	-3.15	-0.72	-4.47
1121.9	-2.39	-1.07	-3.69
1130	0.00	0.00	-0.02
1140	0.00	0.00	0.00

Beaver Lake

April - June Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
1110	96.85	94.29	94.59	94.40
1120.4	78.80	76.01	76.54	76.29
1121	71.64	69.78	70.37	68.93
1121.2	70.03	67.79	68.32	66.86
1121.9	56.19	53.95	54.40	53.17
1130	1.06	0.97	1.04	0.93
1140	0.00	0.00	0.00	0.00

Beaver Lake

Differences in April - June Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
1110	-2.56	-2.26	-2.45
1120.4	-2.79	-2.26	-2.51
1121	-1.86	-1.27	-2.70
1121.2	-2.24	-1.71	-3.17
1121.9	-2.24	-1.80	-3.02
1130	-0.08	-0.02	-0.13
1140	0.00	0.00	0.00

Beaver Lake

July - September Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
1110	95.71	93.39	93.67	93.60
1120.4	31.98	29.95	30.64	30.27
1121	27.82	25.96	26.28	26.17
1121.2	26.25	24.31	24.81	24.69
1121.9	22.05	20.13	20.34	20.30
1130	0.04	0.04	0.04	0.04
1140	0.00	0.00	0.00	0.00

Beaver Lake

Differences in July - September Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
1110	-2.32	-2.05	-2.11
1120.4	-2.03	-1.34	-1.71
1121	-1.86	-1.55	-1.65
1121.2	-1.94	-1.44	-1.57
1121.9	-1.92	-1.71	-1.76
1130	0.00	0.00	0.00
1140	0.00	0.00	0.00

Beaver Lake

October - December Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
1110	86.87	77.65	77.82	77.68
1120.4	24.06	20.92	20.11	20.71
1121	19.19	17.10	16.39	16.45
1121.2	18.52	16.35	16.03	15.93
1121.9	16.91	14.44	14.34	14.01
1130	0.08	0.02	0.04	0.02
1140	0.00	0.00	0.00	0.00

Beaver Lake

Differences in October - December Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
1110	-9.22	-9.05	-9.20
1120.4	-3.14	-3.95	-3.34
1121	-2.09	-2.80	-2.74
1121.2	-2.17	-2.49	-2.59
1121.9	-2.47	-2.57	-2.91
1130	-0.06	-0.04	-0.06
1140	0.00	0.00	0.00

Table 4. Dependability of the target minimum flow

Beaver Lake				
Target Flow (cfs)	**Percentage of time the target is met or exceeded (Pool Outflow - Duration)**			
136	**ACTUAL LOAD (existing condition)**	**CONSERVATION**	**FLOOD**	**SPLIT 50/50**
ANNUAL	27%	79.7%	85.8%	82.8%
JANUARY	26%	66.0%	87.2%	79.1%
FEBRUARY	28%	66.0%	88.9%	75.2%
MARCH	29%	79.7%	87.0%	83.4%
APRIL	36%	82.9%	90.0%	86.7%
MAY	32%	87.5%	92.4%	88.8%
JUNE	35%	85.1%	85.8%	84.2%
JULY	30%	83.0%	82.8%	82.1%
AUGUST	30%	83.2%	81.5%	81.4%
SEPTEMBER	23%	82.8%	81.0%	81.0%
OCTOBER	19%	83.6%	82.3%	82.0%
NOVEMBER	16%	82.9%	85.6%	85.4%
DECEMBER	15%	72.4%	85.7%	84.1%
JANUARY - MARCH	28%	70.7%	87.7%	79.4%
APRIL - JUNE	34%	85.2%	89.5%	86.6%
JULY - SEPTEMBER	28%	83.0%	81.8%	81.5%
OCTOBER - DECEMBER	17%	79.6%	84.5%	83.8%

Beaver Lake Alternatives

Nine plans for implementing minimum flows at Beaver Lake were analyzed. Each plan was evaluated based on economic impacts to recreation, hydropower, and flood control; Table 4.8-3 is a summary of economic impacts by plan. As part of the NEPA process, SWL shared minimum flows reallocation and release plans with the U.S. Fish & Wildlife Service (USF&W). USF&W indicated that any flood pool reallocation at Beaver Lake could cause significant negative ecological impacts due to the cumulative impacts of previous water supply reallocations, and identified the most environmentally friendly reallocation plan as a conservation pool reallocation. The previous water supply storage reallocations have resulted in raising the top of Beaver Lake's conservation pool 0.43 feet from 1120.0 NGVD

to 1120.43 NGVD. This has reduced Beaver's flood control capacity and impacted karst topography. The U.S. Fish & Wildlife Service considers any new encroachment into the flood pool unacceptable. Based on USF&W coordination, conservation pool reallocations are the only environmentally acceptable storage reallocation at Beaver Lake.

Table 5: Beaver Lake Costs and Benefits Summary

Beaver Lake Summary*

Flood Pool Reallocation	First Costs	Annual Costs[4]	Hydropower Benefits	% Change of Hydro Benefits	Flood Benefits[3]	Tailwater & In-Pool Rec. Benefits	Total Annual Benefits	Net Benefits	B/C Ratio
BV1	$ 827,000	$ 50,000	$ (75,000)	-0.6%	$ (10,000)	$ 340,000	$ 255,000	**$ 205,000**	**5.10**
BV2	$ 5,615,000	$ 338,000	$ 66,000	0.5%	$ (10,000)	$ 340,000	$ 396,000	**$ 58,000**	**1.17**
BV3	$ 713,000	$ 43,000	$ (216,000)	-1.6%	$ (10,000)	$ 340,000	$ 114,000	**$ 71,000**	**2.65**
Conservation Pool Reallocation									
BV4[1]	$ 827,000	$ 50,000	$ (49,000)	-0.4%	$ 2,000	$ 363,000	$ 316,000	**$ 266,000**	**6.32**
BV5[2]	$ 5,615,000	$ 338,000	$ 92,000	0.7%	$ 2,000	$ 363,000	$ 457,000	**$ 119,000**	**1.35**
BV6	$ 713,000	$ 43,000	$ (191,000)	-1.4%	$ 2,000	$ 363,000	$ 174,000	**$ 131,000**	**4.05**
Split Pool Reallocation									
BV7	$ 827,000	$ 50,000	$ (44,000)	-0.3%	$ (1,000)	$ 356,000	$ 311,000	**$ 261,000**	**6.22**
BV8	$ 5,615,000	$ 338,000	$ 97,000	0.7%	$ (1,000)	$ 356,000	$ 452,000	**$ 114,000**	**1.34**
BV9	$ 713,000	$ 43,000	$ (184,000)	-1.4%	$ (1,000)	$ 356,000	$ 171,000	**$ 128,000**	**3.98**

[1] NED Plan

[2] Alternate Plan

[3] Includes Downstream and In-Pool Flood Benefits

[4] Annual Costs are the annualized first costs and used in calculating the b/c ratio. First costs are comprised of construction costs. O&M and interest during construction will need to be computed and incorporated into the annual costs prior to implementation.

* This table summarizes the benefit and cost tables shown in Appendix A. All cost and benefit data is derived from the tables in Appendix A. All other data in this table is for information only.

Table Rock Lake (Affected Environment)

Table Rock Dam is located on the main stem of the White River at river mile 528.8 adjacent to the city limits of Branson, Missouri. The dam was closed in June of 1959, and impounds approximately 80 miles of the main stem White River. The lake, at conservation pool, has 39,652 surface acres in Missouri and 3,448 surface acres in Arkansas. Table Rock Lake at full flood pool impounds a surface area of 52,300 acres of water to within about 3 miles of Beaver Dam. Originally designed for flood control and hydropower, the project is authorized for flood control, hydropower, water supply, recreation, and fish/wildlife. Four generating units are capable of providing 200,000 kilowatts of power.

The dam is a straight concrete gravity structure 1,602 feet long with embankment sections 3,798 feet long on the left bank and 1,023 feet long on the right bank, each with crest elevation 947. The concrete dam includes a non-overflow section on the left side, 769.5 feet long, an overflow section with a spillway controlled by ten 45- by 37-foot tainter gates located over the streambed and part of the right bank, and a non-overflow section 301.5 feet long on the right side. The crest of the spillway is at elevation 896. A 26-foot-wide roadway extends across the top of the dam with the portion over the spillway carried by a bridge. Four 4- by 9-foot conduits pass under the spillway section, each controlled by two slide gates in tandem. The four penstocks are equipped with gates and hoists.

The reinforced concrete powerhouse is located on the left bank adjoining the toe of the dam and extending stream ward across the four-penstock monoliths. The hydroelectric power installation includes four 50,000-kilowatt generating units. Two station service units are provided to supply power for operation of the dam and powerhouse. The station service penstocks pass through in the dam in the non-overflow monolith to the left of the power penstock monoliths. The switchyard is located on the left bank downstream from the powerhouse.

Table Rock Lake is a multi-purpose power generation and flood control project. It has a surface area of 52,300 acres and a shoreline of 857 miles at the top of the flood control pool (elevation 931' NGVD), a surface area of 43,100 acres and a shoreline of 745 miles at conservation pool (elevation 915' NGVD). The reservoir has a total storage capacity of 3,462,000 acre-feet of which 760,000 acre-feet is flood control capacity above conservation pool elevation. The length of the main stem of the river between Table Rock Dam and Beaver Dam is 80.2 miles. The shoreline is extremely irregular.

The lake is an impoundment that extends far up its three main branches of the White River, Long Creek, Kings River, and James River. These major streams, and numerous creeks and branches that are tributary to them or that enter the lake directly, drain a watershed of 4,020 square miles. The lake and its tributaries sprawl across Stone, Taney, and Barry counties in Missouri and extend into Carroll and Boone counties in Arkansas. The general direction of flow of the river is northeasterly; however, the winding meander of the main stream is such that there are short reaches within the Table Rock Lake reach, which flow in practically every direction. The flow of Long Creek is generally south to north; the James River flows generally north to south and the Kings River flows south to north.

Tributary streams to Table Rock Lake are generally clear with little nutrient concentrations. When Table Rock began filling, the area of the White River flooded by the lake began to change from a flowing water environment to one of standing water. Near oxygen depletion in the deep portions of the lake during the summer restricts the benthic community to those organisms adapted to low dissolved oxygen concentrations, or to organisms able to migrate to oxygenated water. Because fish are unable to survive in water with very low dissolved oxygen concentrations, they are restricted to areas of the lake containing sufficient dissolved oxygen concentrations during seasons when stratification occurs. Table Rock Lake is characterized as a warm water lake.

Natural and recreational resources at the Table Rock Lake provide social, economic, and environmental benefits for all Americans. Following are facts related to the Corps' role managing natural and recreational resources in Table Rock Lake (Table 3.5-4).

Figure 1: Table Rock Lake

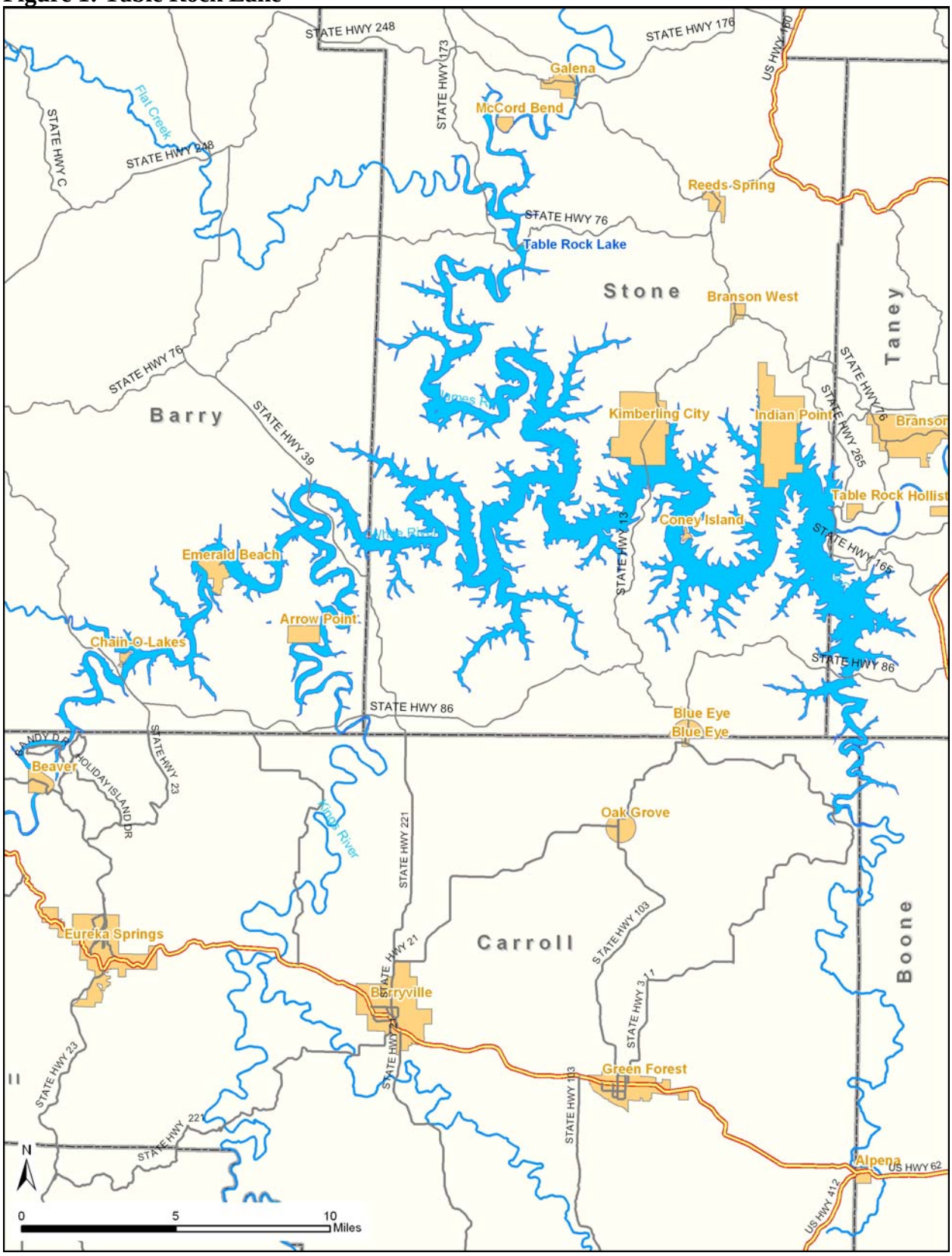


Table 1: Natural and recreational resource benefits at Table Rock Lake.

Social Benefits		
Facilities	**Visits (person-trips)**	**Benefits in Perspective**
- 212 recreation areas	- 5,161,800 in total	
- 94 picnic sites	- 154,854 picnickers	By providing opportunities for active recreation, Corps lakes
- 1,518 camping sites	- 72,204 campers	help combat one of the most significant of the nation's health
- 14 playgrounds	- 722,652 swimmers	problems: lack of physical activity.
- 22 swimming areas	- 258,090 water skiers	
- 5 trail miles	- 877,506 boaters	
- 0 fishing docks	- 2,013,102 sightseers	Recreational programs and activities at Corps lakes also help
- 208 boat ramps	- 825,888 fishermen	strengthen family ties and friendships; provide opportunities
- 13 marinas	- 0 hunters	for children to develop personal skills, social values, and
- 2,804 marina slips	- 1,342,068 others	self-esteem; and increase water safety.
Economic Benefits		
5,161,800 visits per year resulted in:		**Benefits in Perspective**
- $77.59 million in visitor spending within 30 miles of the Corps lake.		The money spent by visitors to Corps lakes on trip expenses
- 66% of the spending was captured by local economy as direct sales effects.		adds to the local and national economies by supporting jobs and generating income. Visitor spending represents a sizable component of the economy in many communities
With multiplier effect, visitor trip spending resulted in:		around Corps lakes.
- $90.53 million in total sales.		
- $47.44 million in total income.		
- Supported 2,345 jobs in the local community surrounding the lake.		
Environmental Benefits		
		Benefits in Perspective
- 24,946 land acres		
- 43,100 water acres		Recreation experiences increase motivation to learn more
- 745 shoreline miles		about the environment; understanding and awareness of
- 410 acres reforested		environmental issues; and sensitivity to the environment.
- 124,000 environmental education contacts		

Source: Value to the Nation web site at www.CorpsResults.us. Use Fast Facts to view this and other reports.

Topography

Table Rock Lake is on the southwestern flank of the Ozark Plateau. The highest ridges in the area surrounding the lake are a part of the Springfield Plateau, the middle level of the plateau province, which in this region rises to an elevation of about 1,400 feet above sea level. The river and its tributaries have entrenched themselves about 700 feet below the plateau surface resulting in narrow stream valleys which are flat-bottomed, steep-sided, and roughly symmetrical in profile. Dolomite is the dominant rock type, with subordinate amounts of chert, quartzite, sandstone, and shale.

Vegetation

The project area surrounding the lake is heavily forested. Approximately, 75 percent of the lake lies within the administrative boundary of Mark Twain National Forest; however, only a relatively small portion of the National Forest lands lies adjacent to project lands. Approximately 1,835 acres of National Forest lands were inundated by the formation of the lake. Trees and shrubs around the shoreline include persimmon, honey locust, hawthorn, dogwood, redbud, coralberry, snowberry, and sumac. Red cedar, the principal evergreen, is dispersed throughout the region and found in many large, scattered groups.

Fish and Wildlife

Table Rock Lake is a clear, deep, upland lake and is characterized as a warm water lake supporting warm water game and pan fish such as black bass, crappie, white bass, walleye, catfish, and numerous species of sunfish. Non-game sport fish such as carp, carpsucker, hogsucker, drum, and red horse are also present. Other vertebrate aquatic inhabitants include snakes and turtles. Lake Taneycomo directly below the dam is heavily stocked with rainbow trout on a put and take basis. The trout are primarily provided by a state fish hatchery operated by the Missouri Department of Conservation located just below the dam and the U.S. Fish and Wildlife Service Neosho National Fish Hatchery provides more than 200,000 rainbow trout annually. The Missouri Department of Conservation annually stock paddlefish in Table Rock Lake and a large number are caught in the James River arm. Enforcement of state fishing laws is the sole responsibility of the Missouri Department of Conservation and the Arkansas Game and Fish Commission.

Project lands support populations of white-tailed deer, wild turkeys, mourning doves, bobwhite quail, fox and gray squirrels, cottontail rabbits, raccoon, red and gray fox, opossum, mink, bobcat, skunk, coyote, and song birds. Table Rock project has a relatively narrow band of fee land available for public hunting. Hunting is allowed on fee land outside of parks within the regulations of the Missouri Department of Conservation and the Arkansas Game and Fish Commission. Fox, raccoon, mink, muskrat, and beaver are the most important fur-bearers of the area. Migratory waterfowl such as ducks and geese are attracted to the lake during the spring and fall flights.

Threatened and Endangered Species

Table2: Table Rock Lake Threatened and Endangered Species

Common Name	Scientific Name	Status
Gray bat	*Myotis grisescens*	endangered
Indiana bat	*Myotis sodalis*	endangered
Ozark cave fish	*Amblyopsis rosae*	threatened
Missouri bladderpod	*Lesquerella filiformis*	endangered
Bald eagle	*Haliaeetus leucocephalus*	threatened

Water Supply

The King's River Golf Course is currently the only municipal and industrial water supply user on Table Rock Lake. They are only under agreement for 95 acre-feet of surplus water supply annually. Over 49,900 acre-feet of Corps of Engineers discretionary storage remains in this lake. Table Rock Lake continues to provide a safe and dependable public drinking and industrial water supply, as well as aquatic habitat, and recreational opportunities. Safeguarding the water quality of the lake is of utmost importance. The cooperation of all individuals, federal, state, and local agencies is necessary in this effort.

Park Facilities

Table 3: Table Rock Lake Recreation Areas and Amenities

Recreation Area	Corps Managed	Corps Fee Collected	Camping	Lodging	Showers	Boat Ramps	Marina	Gas	Picnic Area / Shelter	Playground	Swimming Area	Fishing Facilities	Trails	Golf Course	Amphitheater	Grocery / Snack Bar
- Aunts Creek	X	X	**ET**	X	X	X			**AGS**	X	**B**					
- Baxter	X	X	**EN**	X	X	X	X			X	**B**					
- Big Indian	X					X										
- Big M	X	X	**EN**	X	X	X	X	X	**A**	X	**B**					
- Campbell Point	X	X	**ENT**	X	X	X	X		**GS**	X	**B**					
- Cape Fair	X	X	**ENT**	X	X	X	X		**AGS**	X	**B**					
- Coombs Ferry	X					X										
- Cricket Creek	X	X	**ENT**	X	X	X	X		**A**	X	**B**					
- Dewey Short Visitor Center	X								**A**				**H**			
- Eagle Rock	X	X	**ENT**	X	X	X	X		**A**	X	**B**					
- Indian Point	X	X	**ENT**	X	X	X	X		**GS**	X	**B**				X	
- Joe Bald	X					X										
- Kings River	X					X										
- Long Creek	X	X	**EN**	X	X	X	X		**GS**	X	**B**					
- Mill Creek	X	X	**ENT**	X	X	X			**AGS**	X	**B**					
- Moonshine Beach	X	X				X			**AGS**		**B**					
- Old Hwy 86	X	X	**EN**	X		X			**AGS**	X	**B**					
- Viney Creek	X	X	**ENT**	X	X	X			**A**	X	**B**					
- Viola	X	X	**ENT**	X	X	X	X			X	**B**					

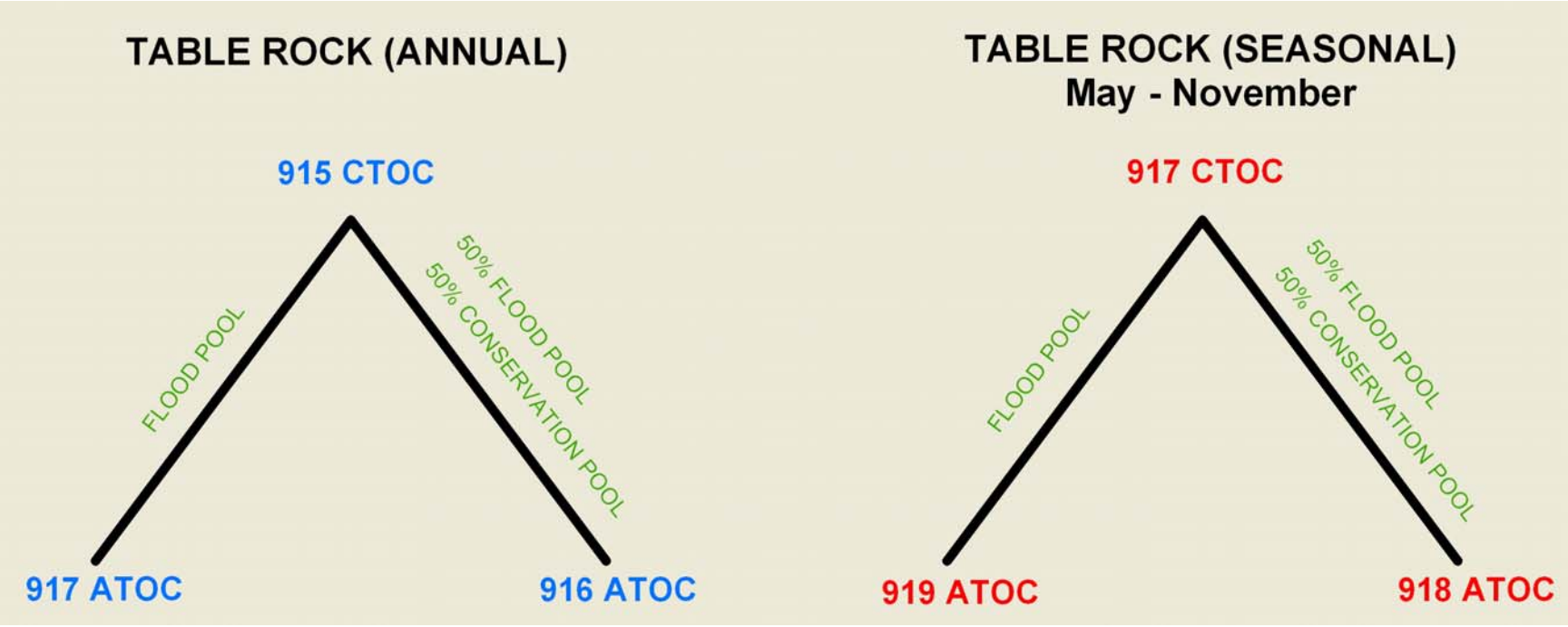
A: Picnic Area GS: Group Picnic Shelters N: Non-Electric Campsites
B: Beach H: Hiking Trails T: Pull Through Campsites
E: Electric Campsites

Taneycomo

The next main stem dam is Powersite Dam located at RM 506.1. Powersite Dam is a Federal Energy Regulatory Commission licensed hydroelectric project and is a considerably smaller mainstem hydroelectric dam owned and operated by Empire District Electric Company (EDEC). Powersite Dam was closed in 1913 creating 2,080-acre, Lake Taneycomo. Lake Taneycomo impounds 22 miles of the White River, and the top of the overflow dam has an elevation of 701.2 feet NGVD. Water releases from Table Rock Dam vary hourly and daily and keep Lake Taneycomo in a somewhat riverine state.

Table Rock Lake Annual Pool Elevation-Duration for Pool Elevations of Interest				
Elevation	Current	Conservation	Flood	Split 50/50
915	56.66	45.02	69.92	61.41
916	33.33	30.43	62.97	48.40
917	14.91	9.54	47.34	31.19
918	6.00	5.44	31.52	9.90
919	4.63	4.09	10.16	5.62

Table Rock Lake Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)			
Elevation	Conservation	Flood	Split 50/50
915	-11.64	13.26	4.74
916	-2.91	29.63	-8.27
917	-5.38		16.27
918	-0.56	25.53	3.90
919	-0.54	5.53	0.99



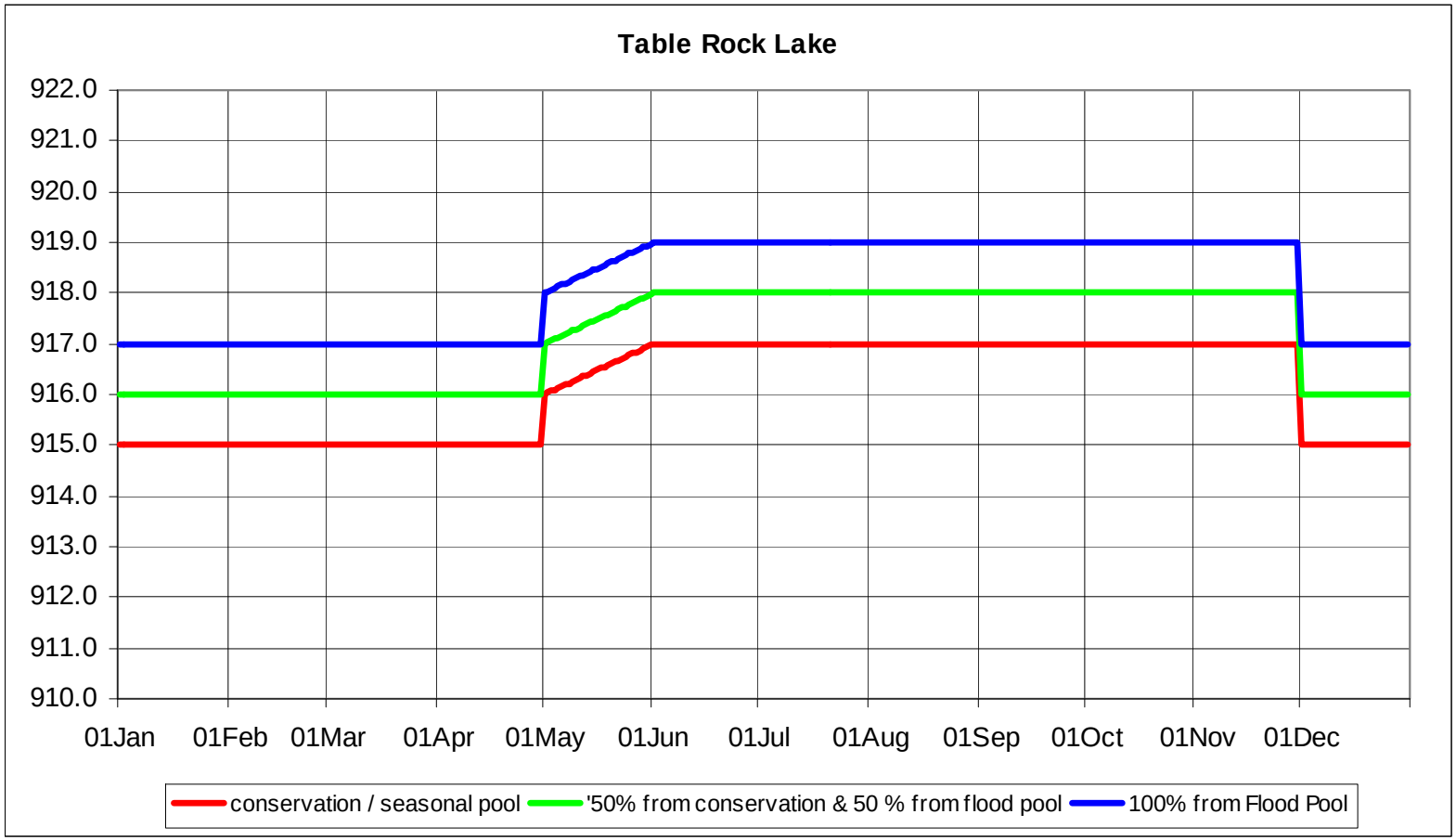


Table Rock Lake
922.0
921.0
920.0
919.0
918.0
917.0
916.0
915.0
914.0
913.0
912.0
911.0
910.0
01Jan
01Feb
01Mar
01Apr
01May
01Jun
01Jul
01Aug
01Sep
01Oct
01Nov
01Dec
conservation / seasonal pool
'50% from conservation & 50 % from flood pool
100% from Flood Pool

Table Rock Lake

January - March Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
915	52.08	29.28	69.91	61.33
916	9.18	8.37	62.73	35.65
917	4.30	3.86	31.17	8.50
918	2.92	2.51	7.78	3.62
919	1.92	1.49	3.32	2.26

April - June Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
915	86.28	77.18	91.99	88.52
916	63.06	59.55	89.62	80.68
917	27.56	18.58	79.61	60.42
918	13.67	12.68	61.18	19.02
919	11.16	9.81	19.27	12.79

July - September Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
915	48.27	43.16	65.18	53.30
916	36.35	32.98	54.74	44.27
917	14.46	9.11	45.34	33.84
918	5.23	4.58	34.41	10.37
919	3.93	3.76	10.99	5.54

Table Rock Lake

Differences in January - March Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
915	-22.80	17.84	9.25
916	-0.81	53.55	-16.43
917	-0.45	-20.90	4.20
918	-0.40	4.86	0.70
919	-0.43	1.41	0.34

Differences in April - June Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
915	-9.11	5.71	2.24
916	-3.51	26.56	-5.60
917	-8.98	52.05	32.86
918	-0.99	47.51	-8.54
919	-1.35	-8.28	1.63

Differences in July - September Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
915	-5.10	16.91	5.04
916	-3.37	18.39	7.92
917	-5.35	30.87	19.38
918	-0.65	29.18	-4.10
919	-0.17	-3.47	1.61

October - December Pool Elevation-Duration for Pool Elevations of Interest				
Elevation	Current	Conservation	Flood	Split 50/50
915	40.26	30.52	52.84	42.77
916	24.60	20.69	45.05	33.09
917	13.25	6.58	33.30	21.86
918	2.19	2.01	22.60	6.56
919	1.55	1.32	7.02	1.92

Differences in October - December Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)			
Elevation	Conservation	Flood	Split 50/50
915	-9.74	12.58	2.51
916	-3.91	20.44	8.49
917	-6.67	20.05	8.61
918	-0.19	20.40	-6.69
919	-0.23	-6.23	0.38

Table Rock Elevations of Concern (T&E Species)

The USFWS identified 940, 960, & 1100 NGVD as critical elevations for T & E species around the lake. These elevations are above the top of the flood pool and will not be affected by any of the reallocation alternatives

Table Rock Lake Tailwater

Wadeability of steady turbine discharges for 20 to 1000 cfs was evaluated using the product of cross sectional mean velocity and mean depth. The results suggested that steady flows up to about 700 cfs are safely wadeable in the first 2.7 miles below the dam (dam to Fall Creek). Flows up to 1,000 cfs are safely wadeable in the same reach, except in pools deeper than 4 or 5 ft (Hauser and Julian).

Table 4. Dependability of the target minimum flow

Table Rock Lake				
Target Flow (cfs)	**Percentage of time the target is met or exceeded (Pool Outflow - Duration)**			
400	**ACTUAL LOAD**	**CONSERVATION**	**FLOOD**	**SPLIT 50/50**
ANNUAL	46%	83.0%	88.3%	86.1%
JANUARY	45%	68.3%	83.6%	76.2%
FEBRUARY	50%	66.8%	78.8%	73.5%
MARCH	64%	81.6%	83.8%	83.9%
APRIL	62%	89.8%	89.8%	90.1%
MAY	51%	90.7%	92.7%	91.6%
JUNE	46%	92.0%	92.8%	92.5%
JULY	53%	89.2%	91.1%	90.0%
AUGUST	46%	90.8%	91.0%	90.9%
SEPTEMBER	31%	87.6%	89.4%	88.5%
OCTOBER	27%	86.7%	88.6%	88.5%
NOVEMBER	33%	79.0%	89.0%	85.9%
DECEMBER	34%	72.4%	87.9%	80.8%
JANUARY - MARCH	53%	72.4%	82.2%	78.0%
APRIL - JUNE	53%	90.8%	91.8%	91.4%
JULY - SEPTEMBER	43%	89.2%	90.5%	89.8%
OCTOBER - DECEMBER	31%	79.4%	88.5%	85.1%

Table Rock Lake Alternatives

Nine plans for implementing minimum flows at Table Rock Lake were analyzed. Each plan was evaluated based on economic impacts to recreation, hydropower, and flood control; Table 4.8-4 is a summary of economic impacts by plan.

Table 5: Table Rock Lake Costs and Benefits Summary

Table Rock Lake Summary*

Flood Pool Reallocation	First Costs	Annual Costs[4]	Hydropower Benefits	% Change of Hydro Benefits	Flood Benefits[3]	Tailwater & In-Pool Rec. Benefits	Total Annual Benefits	Net Benefits	B/C Ratio
TR1	$ 2,727,000	$ 164,000	$ (533,000)	-1.7%	$ (40,000)	$ 896,000	$ 323,000	**$ 159,000**	**1.97**
TR2	$ 11,643,000	$ 700,000	$ (101,000)	-0.3%	$ (40,000)	$ 896,000	$ 755,000	**$ 55,000**	**1.08**
TR3	$ 2,316,000	$ 140,000	$ (727,000)	-2.3%	$ (40,000)	$ 896,000	$ 129,000	**$ (11,000)**	**0.92**
Conservation Pool Reallocation									
TR4	$ 1,762,000	$ 106,000	$ (705,000)	-2.2%	$ 5,000	$ 1,005,000	$ 305,000	**$ 199,000**	**2.88**
TR5[1]	$ 10,678,000	$ 642,000	$ (147,000)	-0.5%	$ 5,000	$ 1,005,000	$ 863,000	**$ 221,000**	**1.34**
TR6	$ 1,351,000	$ 82,000	$ (922,000)	-2.9%	$ 5,000	$ 1,005,000	$ 88,000	**$ 6,000**	**1.07**
Split Pool Reallocation									
TR7	$ 2,727,000	$ 164,000	$ (601,000)	-1.9%	$ (18,000)	$ 954,000	$ 335,000	**$ 171,000**	**2.04**
TR8[2]	$ 11,643,000	$ 700,000	$ (95,000)	-0.3%	$ (18,000)	$ 954,000	$ 841,000	**$ 141,000**	**1.20**
TR9	$ 2,316,000	$ 140,000	$ (810,000)	-2.5%	$ (18,000)	$ 954,000	$ 126,000	**$ (14,000)**	**0.90**

[1] NED Plan

[2] Alternate Plan

[3] Includes Downstream and In-Pool Flood Benefits

[4] Annual Costs are the annualized first costs and used in calculating the b/c ratio. First costs are comprised of construction costs. O&M and interest during construction will need to be computed and incorporated into the annual costs prior to implementation.

* This table summarizes the benefit and cost tables shown in Appendix A. All cost and benefit data is derived from the tables in Appendix A. All other data in this table is for information only.

Greers Ferry Lake (Affected Environment)

Greers Ferry Lake is an impoundment located in Cleburne County in central Arkansas, on the Little Red River, about three miles northeast of Heber Springs, Arkansas (Figure 3.5-5). The reservoir is 31,500 surface acres, receiving water from the surrounding 1,146 square mile watershed. Greers Ferry Lake has an average depth of 60 feet (DPCE, 1996). It is located in the Boston Mountains Ecoregion, and was constructed primarily for flood control and the generation of hydroelectric power and is authorized for water supply, recreation, and fish/wildlife. Construction of the dam commenced in March 1959, and was completed in December 1962. The powerhouse and switchyard were completed in July 1964. Overall construction costs were approximately $46.5 million.

Greers Ferry Project Office has ultimate responsibilities in the overall management of natural resources on project-owned lands and waters. The overall objective is to allow maximum utilization within the limits of this multiple resource project. Progressive natural resource management programs will be initiated wherever feasible to maintain the project in a productive state. Manipulation of the resources to serve the needs of an expanding human population will be carried out in a sensible manner.

Natural and recreational resources at the Greers Ferry Lake provide social, economic, and environmental benefits for all Americans. Following are facts related to the Corps' role managing natural and recreational resources in Norfork Lake (Table 3.5-13).

Figure 1: Greers Ferry Lake

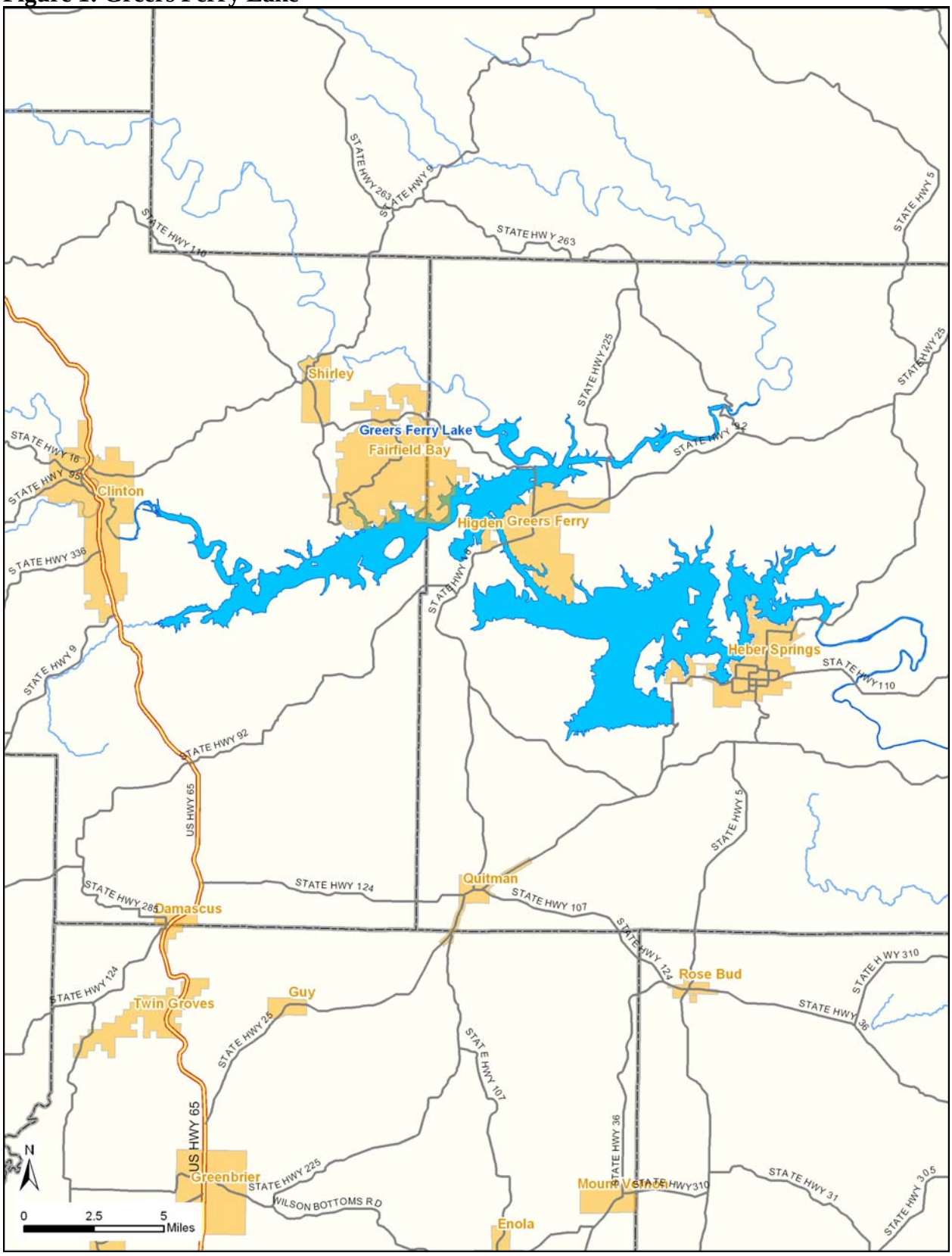


Table 1: Natural and recreational resource benefits at Greers Ferry Lake.

Social Benefits		
Facilities	**Visits (person-trips)**	**Benefits in Perspective**
- 43 recreation areas	- 5,583,800 in total	
- 66 picnic sites	- 725,894 picnickers	By providing opportunities for active recreation, Corps lakes
- 1,325 camping sites	- 75,731 campers	help combat one of the most significant of the nation's health
- 7 playgrounds	- 1,619,302 swimmers	problems: lack of physical activity.
- 17 swimming areas	- 335,028 water skiers	
- 3 trail miles	- 1,228,436 boaters	
- 0 fishing docks	- 725,894 sightseers	Recreational programs and activities at Corps lakes also help
- 53 boat ramps	- 837,570 fishermen	strengthen family ties and friendships; provide opportunities
- 9 marinas	- 0 hunters	for children to develop personal skills, social values, and
- 2,876 marina slips	- 2,791,900 others	self-esteem; and increase water safety.
Economic Benefits		
5,583,800 visits per year resulted in:		**Benefits in Perspective**
- $86.25 million in visitor spending within 30 miles of the Corps lake.		The money spent by visitors to Corps lakes on trip expenses
- 64% of the spending was captured by local economy as direct sales effects.		adds to the local and national economies by supporting jobs and generating income. Visitor spending represents a sizable component of the economy in many communities
With multiplier effect, visitor trip spending resulted in:		around Corps lakes.
- $94.47 million in total sales.		
- $47.89 million in total income.		
- Supported 2,657 jobs in the local community surrounding the lake.		
Environmental Benefits		
		Benefits in Perspective
- 14,078 land acres		
- 31,500 water acres		Recreation experiences increase motivation to learn more
- 276 shoreline miles		about the environment; understanding and awareness of
- 898 acres reforested		environmental issues; and sensitivity to the environment.
- 12,100 environmental education contacts		

Source: Value to the Nation web site at www.CorpsResults.us. Use Fast Facts to view this and other reports.

Topography

Greers Ferry Lake is on the southern flank of the Ozark Plateau. Much of the south shore of the lake is an east-west, northward facing escarpment that marks the edge of the Pennsylvanian Atoka Formation. The lake lies at the foot of this escarpment in a valley eroded in the underlying Pennsylvanian Bloyd Shale. Both formations are composed of alternating layers of shale, siltstone, and sandstone, and both tilt upward to the north with minor local variations. Flat-topped mountains surrounding the lake are dissected remnants of these two plateaus. Mountain tops range from 600 feet above sea level to 1,000 feet above sea level. Local highways follow winding divides between deeply entrenched narrow valleys. Durable sandstones cap the mountaintops and broad divides. Massive sandstone layers form the sheer bluffs of valley walls.

Vegetation

Prior to creation of Greers Ferry Lake, the original forest was a shortleaf pine-hardwood type. Early settlers cleared the rich bottomlands for farming. In 1909 the Missouri and North Arkansas Railway was completed and the forests were harvested for timber. Since the

creation of the lake, the upland vegetation above the normal flood pool has remained relatively unchanged. Those areas below the normal flood pool have been subject to a change in vegetation types. During several high flood pools, those upland species that were not flood tolerant were destroyed. These species included mainly shortleaf pine and upland oaks.

Where there is sufficient soil, several plants such as buck brush, black willow, and river birch have become established in place of the original upland vegetation. The vegetation density within compartments varies from relatively open old fields to dense stands of pine and hardwood. The old upland field sites are gradually being invaded by cedar, sweetgum, persimmon, and elm. Broom sedge is the predominant grass found on the old field sites. The only true bottomland areas are found immediately below the dam and in the upper areas of the three river tributaries of the lake. Here can be found typical species such as river birch, willow, sweetgum, and lowland oaks.

Fish and Wildlife

Greers Ferry Lake is a clear, deep, upland lake blessed with a rich fish community. The 1,146 square mile watershed is home to 82 of Arkansas' 215 fish species. One species, the yellow cheek darter, is endemic to the area. The main gamefish species include largemouth bass, smallmouth bass, spotted bass, walleye, white bass, hybrid striped bass, lake trout, crappie, and catfish. Greers Ferry is the location for the annual Fairfield Bay Walleye Tournament. The world record walleye and state record hybrid striped bass were caught out of Greers Ferry Lake.

The AGFC is responsible for fisheries management on Greers Ferry. The AGFC maintains one nursery pond on the project. At this nursery, alternate crops of walleye and bass are raised and released directly into the lake. Enforcement of state fishing regulations is the sole responsibility of Game and Fish personnel. The Commission has placed numerous "fish attractor" structures in the lake to provide cover and habitat. Two types of structures were utilized; one composed of wooden pallets and the other of trees.

The Greers Ferry Lake area supports populations of white-tailed deer, turkeys, doves, quail, squirrels, rabbits, and songbirds. On occasion, black bear have been seen in the area. While bobwhite quail populations are low, the number of turkeys is increasing. Greers Ferry has a relatively narrow band of fee land. Wildlife food plots are placed on project lands for wildlife enhancement via contracts, project personnel, or cooperative agreements with the AGFC or adjacent landowners. Hunting is allowed on fee land outside park areas within the regulations of the AGFC. The AGFC has a license for the management of fish and wildlife resources on 37,525 acres of land and water at Greers Ferry.

Threatened and Endangered Species

Table 2: Greers Ferry Lake Threatened and Endangered Species

Common Name	Scientific Name	Status
Bald eagle	*Haliaeetus leucocephalus*	threatened
Speckled Pocketbook mussel	*Antrobia culveri*	endangered
Yellow cheek darter	*Etheostoma moorei*	candidate

The Speckled Pocketbook Mussel (*Lampsilis streckeri*) is endemic to the Little Red watershed. Its stationary, filter-feeding life-style makes it an important indicator of environmental quality. The Yellow Cheek Darter is endemic to the tributary streams of the Greers Ferry Lake watershed. It is currently listed as a Category 2 species by the U.S. Fish and Wildlife Service, which conveys a proposed-for-listing status under the Endangered Species Act. Bald eagle sightings are frequent in the Greers Ferry Lake area.

Water Supply

There are currently three water utilities and three golf courses that utilize Greers Ferry Lake as a municipal and industrial water supply source. The utilities are the City of Clinton, The City of Heber Springs, and Community Water System. The three golf courses are the Tannenbaum Golf Course, Thunderbird Golf Course, and Red Apple Inn. There are currently studies for other utilities to purchase water supply storage in Greers Ferry Lake. Greers Ferry Lake continues to provide a safe and dependable public drinking and industrial water supply, as well as aquatic habitat, and recreational opportunities. Safeguarding the water quality of the lake is of utmost importance. The cooperation of all individuals, federal, state, and local agencies is necessary in this effort.

Park Facilities

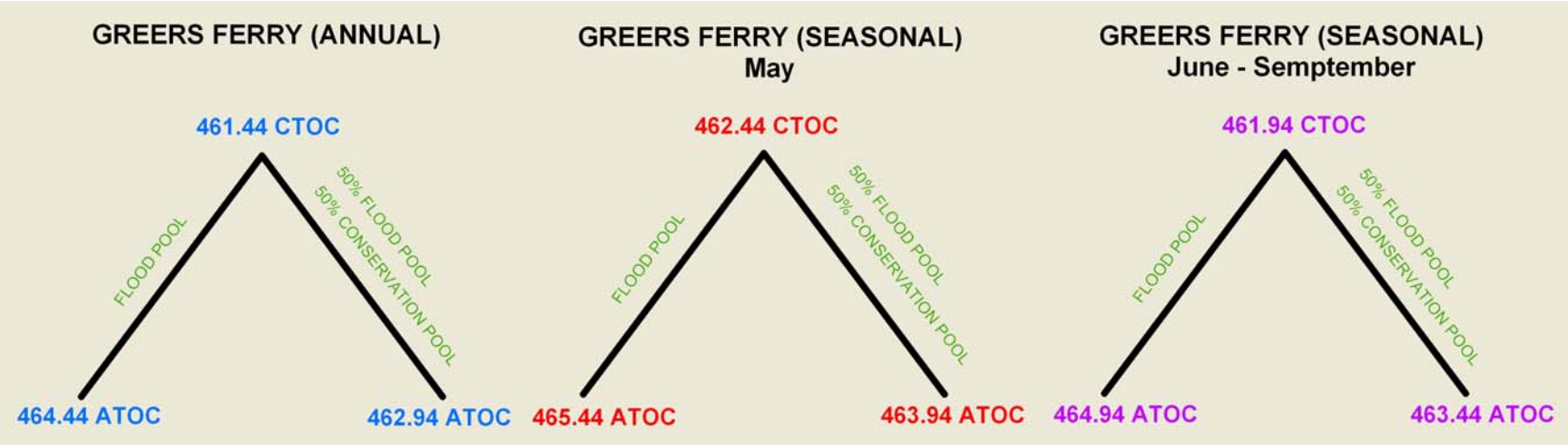
Table 3: Greers Ferry Lake Recreation Areas and Amenities

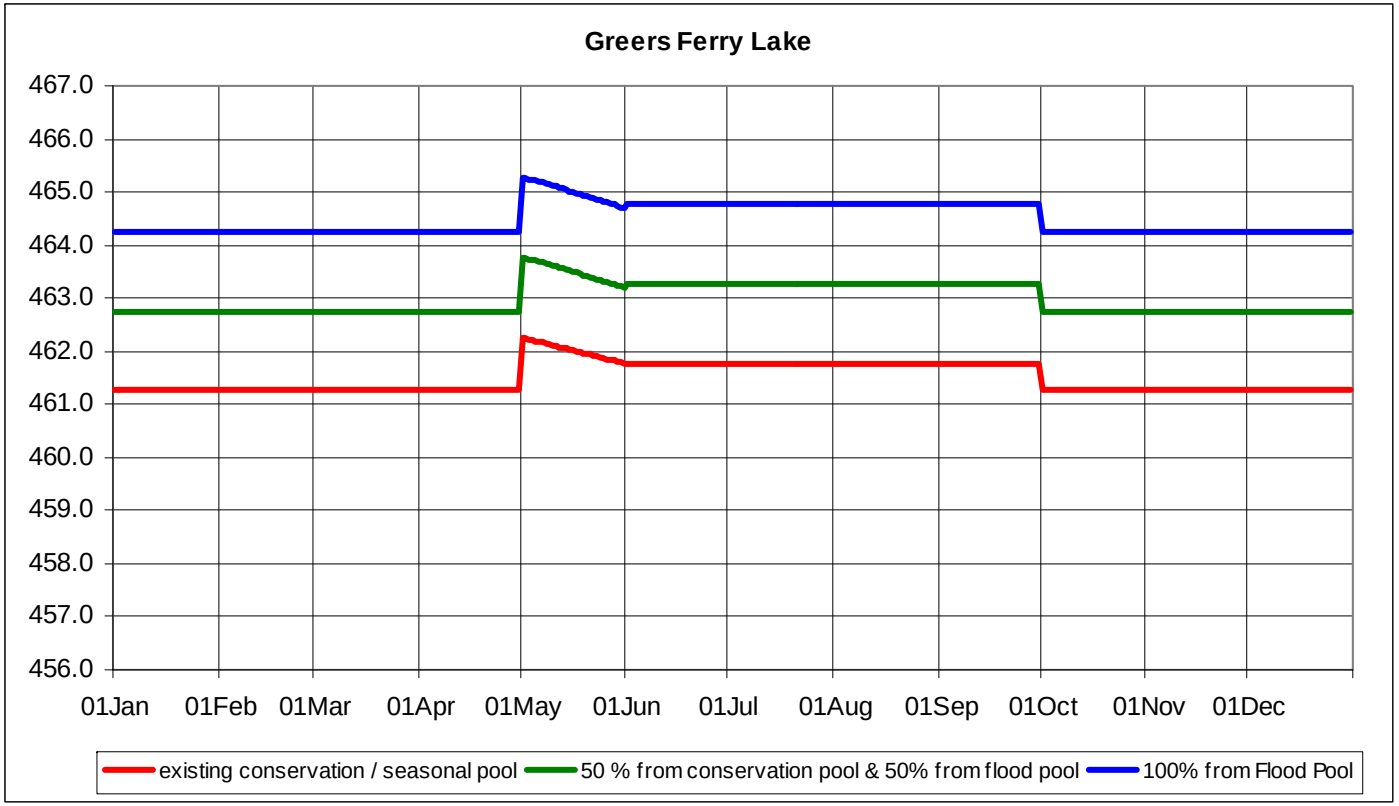
Recreation Area	Corps Managed	Corps Fee Collected	Camping	Lodging	Showers	Boat Ramps	Marina	Gas	Picnic Area / Shelter	Playground	Swimming Area	Fishing Facilities	Trails	Golf Course	Amphitheater	Grocery / Snack Bar
- Cherokee	X	X	**EN**	X		X										
- Choctaw	X	X	**EN**	X		X	X	X	**A**	X	**B**					
- Cove Creek	X	X	**EN**	X		X			**A**		**B**					
- Dam Site	X	X	**ENT**	X		X	X	X	**A**	X	**B**					
- Devils Fork	X	X	**EN**	X		X			**AGS**	X	**B**					
- Heber Springs	X	X	**EN**	X		X	X	X	**A**	X	**B**					
- Hill Creek	X	X	**EN**	X		X	X	X	**A**		**B**					
- JFK Overlook	X															
- John F. Kennedy	X	X	**E**	X		X			**A**	X		**C**	**H**			
- Mill Creek Park	X		**N**	X		X			**GS**		**B**					
- Narrows	X	X	**EN**	X		X	X	X	**A**							
- Old Highway 25	X	X	**EN**	X		X			**A**	X	**B**					
- Shiloh	X	X	**EN**	X		X	X	X	**A**	X	**B**					
- South Fork Park	X					X										
- Sugar Loaf	X	X	**EN**	X		X	X	X	**A**	X	**B**					

A: Picnic Areas E: Electric Campsites N: Non-Electric Campsites
B: Beach GS: Group Picnic Shelters T: Pull Through Campsites
C: Fish Cleaning Stations H: Hiking Trails

Greers Ferry Annual Pool Elevation-Duration for Pool Elevations of Interest				
Elevation	Current	Conservation	Flood	Split 50/50
461.44	33.09	29.69	64.74	52.63
461.94	22.55	20.74	61.16	48.30
462.44	16.16	15.05	57.70	44.04
462.94	14.56	13.47	54.44	29.47
463.44	13.29	12.49	50.78	20.51
463.94	12.57	11.78	46.08	15.03
464.44	11.76	10.90	30.52	13.54
464.94	11.03	10.23	21.14	12.53
465.44	10.15	9.32	15.13	11.77

Greers Ferry Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)			
Elevation	Conservation	Flood	Split 50/50
461.44	-3.40	31.65	19.54
461.94	-1.81	38.61	25.75
462.44	-1.11	41.54	27.88
462.94	-1.09	39.87	-3.62
463.44	-0.81	37.49	7.22
463.94	-0.79	33.51	2.46
464.44	-0.86	-2.57	1.78
464.94	-0.80	10.11	1.50
465.44	-0.82	4.99	1.63




Greers Ferry Lake
467.0
466.0
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463.0
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459.0
458.0
457.0
456.0
01Jan
01Feb
01Mar
01Apr
01May
01Jun
01Jul
01Aug
01Sep
01Oct
01Nov
01Dec
existing conservation / seasonal pool
50 % from conservation pool & 50% from flood pool
100% from Flood Pool

January - March Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
461.44	32.58	28.94	74.41	61.07
461.94	24.70	22.10	70.38	57.21
462.44	13.91	12.83	66.97	53.42
462.94	12.40	11.21	63.75	29.17
463.44	11.53	10.29	60.58	21.86
463.94	10.80	9.67	56.57	12.51
464.44	10.12	8.95	30.34	11.25
464.94	9.67	8.44	22.99	10.23
465.44	9.06	7.93	12.74	9.55

Differences in January - March Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
461.44	-3.64	41.83	28.49
461.94	-2.60	45.69	32.52
462.44	-1.09	53.06	39.51
462.94	-1.19	51.35	-3.41
463.44	-1.24	49.05	10.33
463.94	-1.13	45.77	1.70
464.44	-1.17	-2.24	1.13
464.94	-1.24	13.32	0.55
465.44	-1.13	3.69	0.49

April - June Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
461.44	70.35	64.14	95.25	91.57
461.94	46.37	43.53	94.89	88.10
462.44	34.89	33.07	94.42	84.15
462.94	31.93	30.07	93.85	63.69
463.44	29.61	27.96	92.03	42.88
463.94	28.04	26.46	87.64	33.33
464.44	26.10	24.56	65.93	30.28
464.94	24.26	22.89	44.40	28.15
465.44	22.15	20.35	33.75	26.50

Differences in April - June Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
461.44	-6.21	24.89	21.22
461.94	-2.83	48.52	41.74
462.44	-1.82	59.53	49.26
462.94	-1.86	61.92	-6.66
463.44	-1.65	62.43	-3.49
463.94	-1.58	59.59	-1.56
464.44	-1.54	-4.42	4.18
464.94	-1.37	-1.97	3.89
465.44	-1.80	-1.14	4.35

July - September Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
461.44	16.16	14.65	53.91	31.79
461.94	8.57	8.38	47.09	25.54
462.44	7.94	7.71	39.84	19.98
462.94	7.27	7.11	33.13	14.05
463.44	6.75	6.69	26.36	8.36
463.94	6.38	6.27	20.48	7.71
464.44	5.98	5.83	14.30	7.17
464.94	5.69	5.54	8.17	6.81
465.44	5.33	5.23	7.59	6.48

Differences in July - September Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
461.44	-1.51	37.75	15.64
461.94	-0.19	38.52	16.97
462.44	-0.23	31.90	12.04
462.94	-0.17	25.86	6.77
463.44	-0.06	19.61	-0.21
463.94	-0.10	14.11	1.34
464.44	-0.15	8.32	1.19
464.94	-0.15	-0.40	1.13
465.44	-0.10	2.26	1.15

October - December Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
461.44	13.67	11.39	35.93	26.67
461.94	10.87	9.22	32.82	22.95
462.44	8.05	6.75	30.14	19.21
462.94	6.79	5.64	27.61	11.33
463.44	5.43	5.14	24.79	9.22
463.94	5.18	4.83	20.28	6.71
464.44	4.95	4.37	11.89	5.60
464.94	4.62	4.16	9.30	5.04
465.44	4.16	3.89	6.61	4.68

Differences in October - December Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
461.44	-2.28	22.26	13.00
461.94	-1.65	21.95	12.08
462.44	-1.30	22.09	11.16
462.94	-1.15	20.82	-2.34
463.44	-0.29	19.36	3.78
463.94	-0.36	15.09	1.53
464.44	-0.59	-1.78	0.65
464.94	-0.46	4.68	0.42
465.44	-0.27	2.45	0.52

Greers Ferry Lake Elevations of Concern (T&E Species)

The USFWS identified 480, 490, & 500 NGVD as elevations of concern relative to the potential impacts on the endangered yellow cheek darter in the Archey Fork arm. The elevation duration differences are shown in the following tables. The percent difference

between the current condition and each alternative plan is less than 1% on an annual or seasonal basis; therefore, there is no significant effect at the elevations of concern.

Greers Ferry

Annual Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
461.26	44.46	39.14	66.08	53.83
462	21.66	20.00	60.80	47.89
462.76	15.13	13.94	55.73	32.48
464.26	11.98	11.19	40.78	14.01
480	0.98	0.81	1.22	0.94
487	0.16	0.13	0.18	0.16
490	0.00	0.00	0.00	0.00
500	0.00	0.00	0.00	0.00

Greers Ferry

January - March Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
461.26	54.95	47.45	75.67	62.03
462	23.46	21.10	70.00	56.79
462.76	12.96	11.74	65.22	32.30
464.26	10.33	9.14	50.59	11.78
480	0.02	0.02	0.32	0.02
487	0.00	0.00	0.00	0.00
490	0.00	0.00	0.00	0.00
500	0.00	0.00	0.00	0.00

Greers Ferry

Differences in Annual Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
461.26	-5.32	21.61	9.37
462	-1.65	39.14	26.23
462.76	-1.19	40.60	17.35
464.26	-0.79	28.80	2.03
480	-0.17	0.24	-0.04
487	-0.03	0.02	0.00
490	0.00	0.00	0.00
500	0.00	0.00	0.00

Greers Ferry

Differences in January - March Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
461.26	-7.50	20.71	7.07
462	-2.37	46.54	33.33
462.76	-1.21	52.27	19.35
464.26	-1.19	40.25	1.45
480	0.00	0.30	0.00
487	0.00	0.00	0.00
490	0.00	0.00	0.00
500	0.00	0.00	0.00

Greers Ferry

April - June Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
461.26	85.33	77.16	95.58	92.29
462	44.23	41.99	94.84	87.91
462.76	32.92	30.96	94.17	69.34
464.26	26.65	25.11	80.41	31.13
480	3.23	2.62	3.80	3.15
487	0.63	0.53	0.72	0.63
490	0.00	0.00	0.00	0.00
500	0.00	0.00	0.00	0.00

Greers Ferry

July - September Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
461.26	18.65	16.41	56.75	34.01
462	8.53	8.34	46.32	24.87
462.76	7.50	7.25	35.58	16.03
464.26	6.06	5.98	16.26	7.34
480	0.67	0.59	0.63	0.59
487	0.00	0.00	0.00	0.00
490	0.00	0.00	0.00	0.00
500	0.00	0.00	0.00	0.00

Greers Ferry

Differences in April - June Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
461.26	-8.18	10.25	6.95
462	-2.24	50.61	43.68
462.76	-1.97	61.24	36.41
464.26	-1.54	53.76	4.48
480	-0.61	0.57	-0.08
487	-0.11	0.08	0.00
490	0.00	0.00	0.00
500	0.00	0.00	0.00

Greers Ferry

Differences in July - September Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
461.26	-2.24	38.11	15.36
462	-0.19	37.79	16.35
462.76	-0.25	28.07	8.53
464.26	-0.08	10.20	1.28
480	-0.08	-0.04	-0.08
487	0.00	0.00	0.00
490	0.00	0.00	0.00
500	0.00	0.00	0.00

Greers Ferry

October - December Pool Elevation-Duration for Pool Elevations of Interest

Elevation	Current	Conservation	Flood	Split 50/50
461.26	19.57	16.12	36.81	27.57
462	10.68	8.84	32.57	22.58
462.76	7.27	5.94	28.53	12.65
464.26	5.02	4.66	16.49	5.94
480	0.00	0.00	0.15	0.02
487	0.00	0.00	0.00	0.00
490	0.00	0.00	0.00	0.00
500	0.00	0.00	0.00	0.00

Greers Ferry

Differences in October - December Pool Elevation-Duration for Pool Elevations of Interest (Alternative minus Current)

Elevation	Conservation	Flood	Split 50/50
461.26	-3.45	17.24	8.01
462	-1.84	21.89	11.89
462.76	-1.34	21.26	5.37
464.26	-0.36	11.48	0.92
480	0.00	0.15	0.02
487	0.00	0.00	0.00
490	0.00	0.00	0.00
500	0.00	0.00	0.00

Table . Dependability of the target minimum flow

Greers Ferry Lake				
Target Flow (cfs)	**Percentage of time the target is met or exceeded (Pool Outflow - Duration)**			
200	**ACTUAL LOAD (existing condition)**	**CONSERVATION**	**FLOOD**	**SPLIT 50/50**
ANNUAL	33%	99.0%	99.7%	99.4%
JANUARY	28%	97.5%	98.8%	98.0%
FEBRUARY	40%	99.4%	99.4%	99.4%
MARCH	52%	100.0%	100.0%	100.0%
APRIL	38%	100.0%	100.0%	100.0%
MAY	38%	100.0%	100.0%	100.0%
JUNE	43%	100.0%	100.0%	100.0%
JULY	37%	100.0%	100.0%	100.0%
AUGUST	29%	100.0%	100.0%	100.0%
SEPTEMBER	18%	100.0%	100.0%	100.0%
OCTOBER	16%	98.2%	100.0%	100.0%
NOVEMBER	13%	96.8%	99.7%	97.9%
DECEMBER	31%	96.7%	98.3%	97.3%
JANUARY - MARCH	40%	99.0%	99.4%	99.1%
APRIL - JUNE	40%	100.0%	100.0%	100.0%
JULY - SEPTEMBER	28%	100.0%	100.0%	100.0%
OCTOBER - DECEMBER	20%	97.2%	99.3%	98.4%

Greers Ferry Lake Alternatives

Nine plans for implementing minimum flows at Greers Ferry Lake were analyzed. Table 4.8-7, below, identifies each plan. Each plan was evaluated based on economic impacts to recreation, hydropower, and flood control; Table 17 in the Study Report is a summary of economic impacts by plan. There are 74 acres of property around Greers Ferry Lake that the Corps does not own or have flood easements. Any reallocation plan that requires raising the conservation pool would result in an effort to acquire easements or purchase the property. The Real Estate Plan cannot be completed until reallocation plans are finalized. In addition, due to the cumulative impacts of previous and future water supply reallocations, and with

regards to the possibility of negative environmental impacts resulting from raising the top of conservation pool, the most environmentally friendly reallocation plan is a conservation pool reallocation.

Table 4.8-7 Greers Ferry Lake Costs and Benefits Summary

Greers Ferry Lake Summary*

Flood Pool Reallocation	First Costs	Annual Costs[4]	Hydropower Benefits	% Change of Hydro Benefits	Flood Benefits[3]	Tailwater & In-Pool Rec. Benefits	Total Annual Benefits	Net Benefits	B/C Ratio
GF1	$ 1,523,000	$ 91,000	$ (82,000)	-0.6%	$ (36,000)	$ 1,149,000	$ 1,031,000	**$ 940,000**	**11.33**
GF2	$ 7,275,000	$ 438,000	$ 140,000	1.1%	$ (36,000)	$ 1,149,000	$ 1,253,000	**$ 815,000**	**2.86**
GF3	$ 1,366,000	$ 82,000	$ (188,000)	-1.4%	$ (36,000)	$ 1,149,000	$ 925,000	**$ 843,000**	**11.28**
Conservation Pool Reallocation									
GF4[1]	$ 959,000	$ 57,000	$ (228,000)	-1.8%	$ 4,000	$ 1,373,000	$ 1,149,000	**$ 1,092,000**	**20.16**
GF5[2]	$ 6,711,000	$ 404,000	$ 45,000	0.3%	$ 4,000	$ 1,373,000	$ 1,422,000	**$ 1,018,000**	**3.52**
GF6	$ 802,000	$ 48,000	$ (351,000)	-2.7%	$ 4,000	$ 1,373,000	$ 1,026,000	**$ 978,000**	**21.38**
Split Pool Reallocation									
GF7	$ 1,523,000	$ 91,000	$ (156,000)	-1.2%	$ (13,000)	$ 1,261,000	$ 1,092,000	**$ 1,001,000**	**12.00**
GF8	$ 7,275,000	$ 438,000	$ 105,000	0.8%	$ (13,000)	$ 1,261,000	$ 1,353,000	**$ 915,000**	**3.09**
GF9	$ 1,366,000	$ 82,000	$ (276,000)	-2.1%	$ (13,000)	$ 1,261,000	$ 972,000	**$ 890,000**	**11.85**

[1] NED Plan

[2] Alternate Plan

[3] Includes Downstream and In-Pool Flood Benefits

[4] Annual Costs are the annualized first costs and used in calculating the b/c ratio. First costs are comprised of construction costs. O&M and interest during construction will need to be computed and incorporated into the annual costs prior to implementation.

* This table summarizes the benefit and cost tables shown in Appendix A. All cost and benefit data is derived from the tables in Appendix A. All other data in this table is for information only.