



Reply to
Attention of:

DEPARTMENT OF THE ARMY
MEMPHIS DISTRICT, CORPS OF ENGINEERS
167 NORTH MAIN STREET B-202
MEMPHIS, TENNESSEE 38103-1894

CEMVM-PM-P (1105-2-10c)

9 August 2001

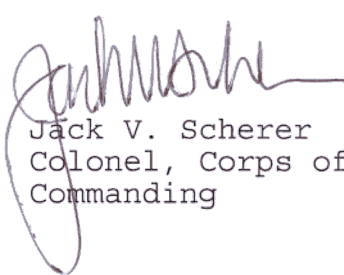
MEMORANDUM THRU COMMANDER, MISSISSIPPI VALLEY DIVISION, ATTN:
CEMVD-MD-PM

FOR COMMANDER, U.S. ARMY CORPS OF ENGINEERS, ATTN: CECW-BC

SUBJECT: 905(b) Analysis for the White River Comprehensive Study
and the Draft Cost Share Agreement

1. Attached for your review and approval is the 905(b) analysis for the White River Comprehensive Study, authorized by Section 729 of WRDA 1986. This is required by a memorandum dated 29 May 01, subject: Implementation Guidance for Section 202 of the Water Resources Development Act (WRDA) 2000, Watershed and River Basin Assessments, which Amends Section 729, WRDA 86, Study of Water Resources Needs of River Basins and Regions.
2. Also attached is the draft cost share agreement for your approval.
3. Recommend that the White River Basin Comprehensive Study proceed to the feasibility phase. Further, I recommend that the draft cost sharing agreement submitted with this 905(b) analysis be approved and study funds be provided as soon as possible
4. If you have questions, contact, Jim Bodron, Project Manager, at (901) 544-3639 or e-mail James.A.Bodron@mvm02.usace.army.mil.

2 Encls
(4 cys - CECW-AR)
(4 cys - CEMVD-PM-E)


Jack V. Scherer
Colonel, Corps of Engineers
Commanding



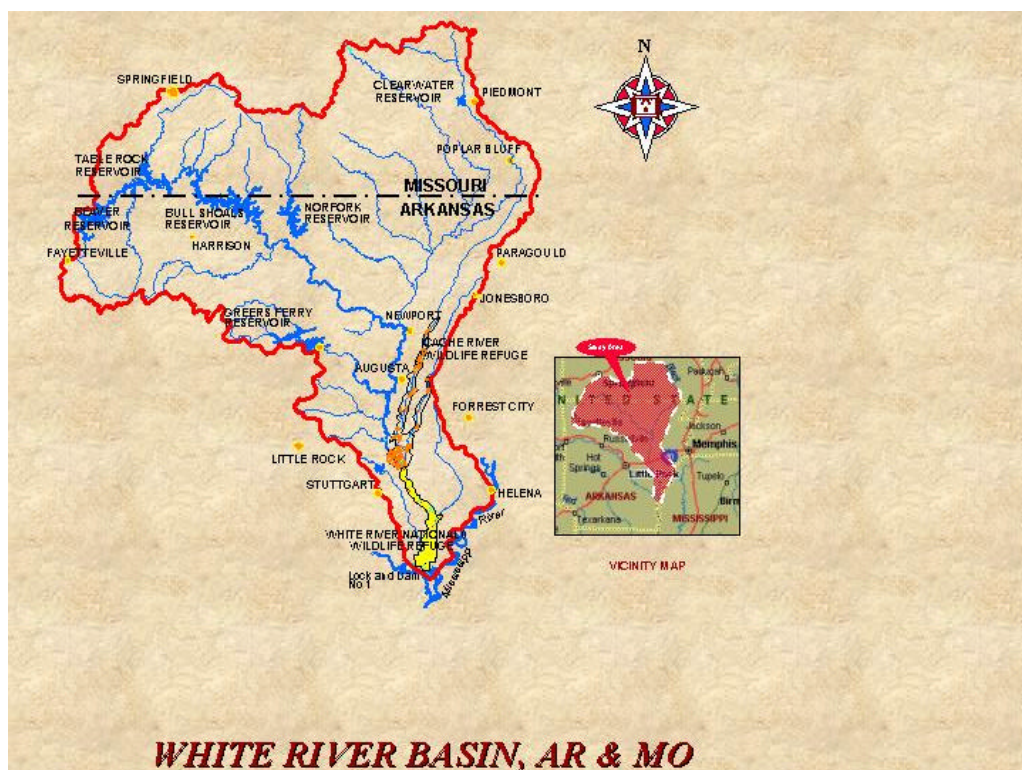
**US Army Corps
of Engineers®**
Memphis District

WHITE RIVER BASIN COMPREHENSIVE STUDY


A Section 729 of WRDA 1986 Study

905(b) Analysis

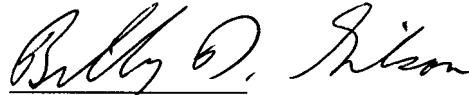
September 2001



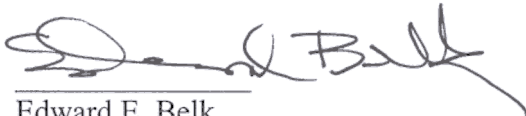
The 905b Analyses, an expedited reconnaissance report, for the White River Comprehensive Study appears to have been prepared in accordance with applicable policy and regulation including ER1105-2-100.


Ken G. Williams
Chief
Project Management Branch

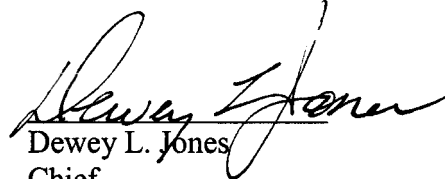
7/30/01
Date


Billy D. Gibson
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7/30/01
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7/31/01
Date


Hubert H. Logan
Chief
Civil Design Branch

8/3/01
Date

The 905b Analyses, an expedited reconnaissance report, for the White River Comprehensive Study appears to have been prepared in accordance with applicable policy and regulation including ER1105-2-100.

A handwritten signature in blue ink, appearing to read 'R. C. Hicklin', written over a horizontal line.


Roger C. Hicklin
Chief
Plan Formulation Section

A handwritten date '8/4/01' in blue ink, written over a horizontal line.

CERTIFICATION OF LEGAL REVIEW

The feasibility cost share agreement for the White River Basin Comprehensive Study has been fully reviewed by the Office of Counsel, Memphis District, and is approved as legally sufficient.

8/6/00
Date


DAVID E. SIRMANS
District Counsel

White River Basin Comprehensive Section 905(B) (WRDA of 1986) Analysis

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WHITE RIVER BASIN COMPREHENSIVE

SECTION 905(B) (WRDA of 1986) ANALYSIS

September 2001

1. STUDY AUTHORITY

a. The White River Basin Comprehensive Study is being carried out under the Corps of Engineers' General Investigations (GI) Program. This Section 905(b) Analysis was prepared as an initial response to Section 729 of the Water Resources Development Act (WRDA) of 1986, as modified by Section 202 of WRDA 2000, which reads as follows:

"SEC 202. WATERSHED RIVER BASIN ASSESSMENTS.

Section 729 of the Water Resources Development Act of 1986 (100 Stat. 4164) is amended to read as follows:

SEC. 729. WATERSHED AND RIVER BASIN ASSESSMENTS.

(a) IN GENERAL. –The Secretary may assess the water resources needs of river basins and watersheds of the United States, including needs relating to-

- (1) ecosystem protection and restoration;
- (2) flood damage reduction;
- (3) navigation and ports;
- (4) watershed protection;
- (5) water supply; and
- (6) drought preparedness.

(b) COOPERATION. – An assessment under this subsection (a) shall be carried out in cooperation and coordination with-

- (1) the Secretary of the Interior;
- (2) the Secretary of Agriculture;
- (3) the Secretary of Commerce;
- (4) the Administrator of the Environmental Protection Agency; and
- (5) the heads of other appropriate agencies.

(c) CONSULTATION. – In carrying out an assessment under subsection (a), the Secretary shall consult with Federal, tribal, State, interstate, and local government entities.

(d) PRIORITY RIVER BASINS AND WATERSHEDS. - In selecting river basins and watersheds for assessment under this section, the Secretary shall give priority to ---

- (1) the Delaware River basin;
- (2) the Kentucky River basin;
- (3) the Potomac River basin;
- (4) the Susquehanna River basin; and
- (5) the Willamett River basin.

(e) ACCEPTANCE OF CONTRIBUTIONS. --- In carrying out an assessment under subsection (a), the Secretary may accept contributions, in cash or in kind, from Federal, tribal, State, interstate, and local governmental entities to the extent that the Secretary determines that the contributions will facilitate completion of the assessment.

(f) COST-SHARING REQUIREMENTS.---

(1) NON-FEDERAL SHARE.---The non-Federal share of the cost of an assessment carried out under this section shall be 50 percent.

(2) CREDIT.---

(A) IN GENERAL.--Subject to subparagraph (B), the Secretary may credit toward the non-Federal share of an assessment under this section the cost of services, materials, supplies, or other in-kind contributions provided by the non-Federal interests for assessment.

(B) MAXIMUM AMOUNT of CREDIT.---The credit under subparagraph (A) may not exceed an amount equal to 25 percent of the costs of the assessment.

(g) AUTHORIZATION OF APPROPRIATIONS.--- There is authorized to be appropriated to carry out this section \$15,000,000."

b. Funds in the amount of \$375,000 were allocated in Fiscal Year 2001 to conduct the reconnaissance phase of the study.

2. STUDY PURPOSE

The study purpose is to develop a comprehensive watershed plan for the White River Basin. The comprehensive plan will serve as a framework for the environmentally sustainable development of water resources within the White River Basin. The problems and potential solutions will be examined in a comprehensive manner because of the interrelationships of the problems and potential solutions to all of the significant resources in the basin.

The primary objectives of the study are to comprehensively analyze the basin problems and opportunities and find possible solutions to these needs. The comprehensive study may or may not recommend further Corps studies or projects. Some alternatives may be identified that will be implemented by other Federal, state, or local agencies. In order to accomplish this, the significant resources in the basin will be identified. A conceptual "model" will be developed to describe the interrelationships of the significant resources in the basin to provide a framework for evaluation of alternatives. This model will be descriptive and likely diagram various functions and processes in the basin. This will serve as a guide in determining the completeness of the studies and allow information gaps to be filled prior to completing studies. The structure, functions, and processes of the ecosystem will be identified under the framework of this conceptual model.

The existing conditions of the resources will be examined and projections made of the future conditions of the resources. Information produced by the study will be utilized during analysis of ongoing projects and studies. Likewise, information gathered from ongoing studies will be incorporated into the comprehensive study. The comprehensive study will be used in evaluating operation of existing projects.

3. LOCATION OF PROJECT/CONGRESSIONAL DISTRICTS

The White River Basin comprises approximately 27,765 square miles, of which 10,622 square miles are in the southern part of Missouri and the remaining 17,143 square miles are in northern and eastern Arkansas. The White River basin contains 5 large Corps multi-purpose lakes: Beaver, Table Rock, Bull Shoals, Norfolk, and Greers Ferry (see Section 11 below, study area map). Clearwater Lake is also operated by Little Rock District Corps of Engineers, however, it is a smaller lake primarily used for flood control. The White River basin includes over 150 miles of flood control levees along the White River and its tributaries.

Interest in the basin includes flood control, water supply, hydropower, navigation, environmental restoration and protection, and recreation. The lower portion of the basin is significant as a migratory waterfowl wintering area and includes several Federal wildlife refuges and state management areas that comprise one of the largest remaining areas of bottomland hardwood forest in the Mississippi Valley.

The White River Basin is comprised of the following congressional districts: Berry, AR-01; Snyder, AR-02; Hutchinson, AR-3; Ross, AR-04; Blunt, MO-07; Emerson, MO-08; Skelton, MO-4

4. DISCUSSION OF PRIOR STUDIES, REPORTS, AND EXISTING WATER PROJECTS.

The White River Basin has been recognized for the importance of its resources to the States of Arkansas and Missouri and the nation and a corresponding large number of studies or projects have been completed and are underway in the basin. The comprehensive study will not halt other ongoing Corps of Engineers efforts in the basin. Information produced by the study will be utilized during analysis of ongoing projects and studies. Likewise, information gathered from ongoing studies will be incorporated into the comprehensive study. Information will be exchanged with the present and future study efforts to capitalize on the synergism of the work efforts.

Ongoing Federal projects in the basin include in the Little Rock District: Beaver Lake, Arkansas; Bell Foley Lake, Arkansas; Black River at Highway 69 Bridge, Arkansas; Bull Shoals, Arkansas; Clearwater Lake, Missouri; Table Rock Lake, Missouri; Greers Ferry Lake, Arkansas; Hurricane Lake Wildlife Management Area, Arkansas; Little Red River Agricultural Water Supply, Arkansas; Lake Taneycomo, Missouri; and White River Minimum Flows, Arkansas and Missouri. Memphis District projects and studies include: Grand Prairie Area Demonstration Project, Arkansas; White River Navigation, Arkansas; Boydsville, Arkansas; Little Red River, Arkansas; and White River Maintenance, Augusta to DeValls Bluff, Arkansas.

Many Federal agencies (EPA, USFWS, NRCS, USGS, SWPA, etc.) have ongoing efforts in the basin. Full use will be made of any information developed from these efforts. Any state efforts will also be utilized fully.

Comprehensive studies will complement the water resource planning activities currently underway. Information available from these prior studies will be reviewed and utilized as appropriate.

5. PLAN FORMULATION

The primary emphasis of plan formulation activities will be on identification of the basin's water resources related problems and opportunities. However, where local interest is sufficient to address identified concerns, the planning process will continue until recommended solutions are developed. A basin conceptual model of the significant resources and uses in the basin will be developed. This model will be used throughout the study to tie the relationships of the uses and significant resources into a comprehensive view of the basin. This model will be used in development and evaluation of the comprehensive plan to ensure that all effects on the uses and significant resources in the basin are considered. These potential solutions will be developed into a comprehensive plan of improvement for the basin and evaluated to determine Federal interest in implementation. If Federal interest in implementation is determined, authorities will be examined to determine the appropriate method of optimization and implementation. Some alternatives may be identified that will be implemented by other Federal, state, or local agencies. Planning steps after identifying problems and opportunities are: inventory and forecast; formulation of alternative plans; evaluating alternative plans; comparing alternative plans; and finally selecting a plan.

a) Identified Problems

(1) Existing Conditions

Historically the basin's natural ecosystem condition was primarily forested. The construction of the Corps lakes for flood control resulted in water related recreation in the upper basin or mountain area. Tailwater trout fishing has become a major industry. The population of northwest Arkansas and southwest Missouri has increased greatly over the years. Animal feeding operations have become very numerous in the upper basin and contribute greatly to the local economy. Most of the economy in the lower basin revolves around agriculture. In order to move their commodities to market, the use of barges has become very important. The White River is seasonally navigable for approximately 250 miles.

The Corps lakes in the upper basin and construction of levees in the lower basin have provided flood control for the basin. These lakes also provide recreation, hydropower and water supply for the area. The lakes provide a very unique environment for enhancing fish and wildlife values in the basin. Much of the historically bottomland forested areas in the basin was cleared and farmed for agricultural production. However, the lower end of the White River has one of the largest remaining tracts of seasonally flooded bottomland hardwoods left in the Mississippi Alluvial Valley.

Groundwater in the Grand Prairie area of the basin meets the criteria for being designated a critical aquifer. Agriculture is a major user of the groundwater in the lower basin.

The "existing conditions" for the various significant resources will be examined through the study. A GIS will be developed to contain spatial data on significant resources in the basin. The level of detail will be determined for each significant resource as appropriate. During the study, one or more units of measure will be determined for each significant resource in the basin. These units of measure will likely be determined based upon some measurable and describable effect on the resource.

(2) Expected Future Conditions

The future without project conditions for the significant resources will be examined to aid in the determination of problems and needs of the basin. Trends will be identified that relate to significant resources and predicting future conditions. Population, energy demand, water supply, and conditions of the aquifers will be among the many areas the study will examine. A scenario-based analysis will be performed and alternatives will be developed. This will ensure that the potential problems and opportunities are identified for the various uses and significant resources. The conceptual model will be used to tie the various potential changes into a comprehensive view of the future conditions.

(3) Problems and Opportunities Overview - Problems warranting Federal participation in the study.

The problems and opportunities in the basin were examined to develop a scope of studies to identify and determine their extent. One of the first problems is in developing a complete understanding to the interactions of the significant water uses and resources in the basin as changes in the uses and resources occur. Once an overall understanding of the interactions is gained, the problems could be divided into the upper basin and the lower basin because of the significant geographic differences.

Upper basin problems – Rapid population growth and development are increasing the amount of municipal and industrial water use and wastewater generated. While increased water needs, increased wastewater discharge, and agricultural uses are contributing to decreased water quality, the capability of the water resources to sustain these loading increases is not known. Studies are needed to determine the effects of the increased runoff on the ecosystem and to determine if the problems will affect the lakes and water based recreation in the future.

Lower basin problems – In the lower basin, much of the previously forested area has been converted to cropland. The alluvial and Sparta aquifers are being depleted in some areas. The counties suffer from the problems common to the Mississippi Delta and some have lost population in recent years. The lower portion of the river is seasonally navigable, but during low flows, shipments must be diverted to other ports. Water quantity has become a major concern since flows in the river are controlled and water is being used for a variety of purposes. In contrast to the upper basin, the primary concerns expressed in the lower basin relate to water quantity, not quality. The wetlands in the lower basin are not only nationally significant, but also recognized internationally. Studies are necessary to identify the effects of the current flow regime and the impacts that the future flow regimes could have on wetlands.

The primary goal of the comprehensive study is to develop a basin-wide comprehensive plan of improvement. To determine this, we formed an interagency planning team consisting of Federal and State agencies from both Missouri and Arkansas and stakeholders from the basin. The interagency planning team met on several occasions to identify the needs of potential sponsors and to further define what is necessary for a basin-wide comprehensive study. Every effort was made to accommodate the sponsors' needs; however, cost constraints limited the detail in some cases.

A conceptual model will be developed to attempt to describe the interrelationships of the various significant resources and forces affecting them. This model will be descriptive and likely

diagram various functions and processes in the basin. This will serve as a guide in determining the completeness of the studies and allow information gaps to be filled prior to completing studies. The structure, functions, and processes of the ecosystem will be identified under the framework of this conceptual model.

(b) Alternative Plans

The water resources related problems, needs, and opportunities of the basin will be examined in a comprehensive and holistic manner. The conceptual model will be reexamined to determine if the studies have captured the interrelationships of the various significant resources and processes affecting them. Existing, future without, and the natural ecosystem conditions, where appropriate, for each significant resource will be examined concurrently to determine problems and opportunities.

Alternatives will be formulated to address the problems and opportunities identified in the study. These alternatives will be examined to determine their effects on the significant resources.

c) Identification of Basin Comprehensive Plan

The alternatives formulated will be developed using the basin conceptual model to tie the alternatives together into a comprehensive basin plan of improvement. The comprehensive basin plan will be evaluated to determine Federal interest in implementation. The comprehensive basin plan developed during the feasibility phase may or may not recommend further Corps studies or projects. If Federal interest is found, each alternative will be examined for implementation authority. Many of the alternatives recommended for implementation under the comprehensive examination may be implemented under existing authorities, including the continuing authorities program. For those alternatives that cannot be implemented under existing authorities, the normal authorization process will be followed. The study time and cost estimates in this report do not reflect processing of decision documents seeking authority for construction of identified alternatives.

(1) Projects that may be implemented under existing authority

Existing Corps authorities will be examined to determine if projects could be modified to implement measures recommended by the comprehensive study. If modifications to existing projects are proposed, further analysis will likely be conducted under Section 216, Review of Completed Projects.

(2) Projects that may be implemented under the continuing authorities program

The Corps has several delegated authorities for projects meeting certain criteria. If projects are identified under the comprehensive study, use of these authorities may provide more rapid implementation of the measures. The authorities and requirements are summarized below.

- a) Section 205 of the Flood Control Act of 1948 - This provides the same complete project and adequate degree of protection as would be provided under specific Congressional authorization.

b) Section 206 of the Water Resources Development Act of 1996 Aquatic Ecosystem - This provides for planning, design, and construction of aquatic ecosystem restoration and protection projects, when it is found that the project will improve the quality of the environment, is in the public interest and is cost effective.

c) Section 208 of the Flood Control Act of 1954 - Clearing and Snagging Projects. This allows for the removal of obstructions, including sediment from channels.

d) Section 1135 of the Water Resources Development Act of 1986 Fish and Wildlife Restoration - This provides for constructing environmental restoration projects where a Corps project contributed to the degradation of the environment.

e) Emergency Streambank and Shoreline Protection, Section 14 of the Flood Control Act of 1946 - This provides protection from streambank or shoreline erosion to public facilities by the construction or repair of protection works.

f) Section 107 of the River and Harbor Act of 1960 - Small Navigation Projects. This authorizes construction, operation and maintenance of small river and harbor improvement projects.

(3) Comprehensive projects requiring further authorization by Congress

Alternative evaluation may yield needed projects to address the problems and opportunities that are beyond the scope of existing authorities and the continuing authorities program. Potential solutions, outside the mission of the Corps, will be recommended for implementation by others. The study will identify the necessary actions for implementation by the Corps and provide a time and cost estimate. Some possible examples would be an environmental corridor along the White River and major tributaries, and comprehensive wastewater treatment to protect and restore aquatic ecosystems.

(4) Evaluation tools for future use

The study will develop models that could be used by others in the evaluation of future actions. These tools could include a geographic information system, detailed water quality models of Beaver Lake, Table Rock Lake and Lake Taneycomo, an overall basin model that would account for water quality, and other models that could be transferred to the sponsor at the conclusion of the study effort.

(5) Comprehensive Study Report

The comprehensive report would present the results of the studies in a concise manner.

(6) Significant Resources

The following is a list of significant resources and water uses in the basin that will be examined in the study.

- 1) Basin Ecosystem and uses relationships (a conceptual model)
- 2) Environmental Resources
 - a) Aquatic Ecosystem
 - i) Upper basin streams
 - ii) Lakes and Reservoir
 - iii) Tailwater
 - iv) Transition zone
 - v) Main Stem
 - vi) Lower tributaries
 - b) Terrestrial Ecosystem
- 3) Migratory Birds
- 4) Groundwater/Agriculture
- 5) Water supply/Wastewater
- 6) Recreation
- 7) Endangered Species
- 8) Navigation/Transportation
- 9) People and Economy
- 10) Hydropower/Power generation
- 11) Flood Control

The following describe assumptions, questions to be answered, and studies necessary to analyze these significant resources.

1) Basin Ecosystem and Uses Relationships (a conceptual model)

A conceptual model of the basin's ecosystems and uses will be developed that will include several models of how changes or uses in an area effects other areas. The interagency planning team will be involved in the development with the sponsor receiving credit for their participation. Memphis District will be responsible for the model presentation and write-up.

2) Environmental Resources

a. Aquatic Ecosystems

The aquatic ecosystems will be defined as the water body and its immediate area of influence including riparian zone and floodplain.

Various types or categories of aquatic ecosystems in the basin will be developed. These types will be categorized as follows: 1) Upper basin streams, 2) /Lakes and Reservoirs, 3) Tailwaters, 4) Transition zone, 5) main stem and oxbows, and 6) Lower tributaries. The key factors affecting the aquatic habitat would be determined including water quality, sediment loads, temperatures, water levels and flows, and other factors.

i. Upper basin streams

The upper basin streams will be examined to determine the degradation of the aquatic habitat. The same hydrologic unit codes as the U.S. Geological Survey will be used. These upper basin streams include a Wild and Scenic River and a National River. These streams include the James

River, Crooked Creek, and the Strawberry River and other streams in the Ozark area. A sub-basin assessment will be performed to determine which streams are experiencing losses in aquatic habitat. A method will be developed to translate the decreases in water quality and changes in the riparian zone into losses in aquatic habitat. The trends in development and population growth will be examined to determine likely changes in the aquatic habitat of the upper basin streams and the parameters affecting the habitat including water quality.

To facilitate assessment of watershed conditions and health, the White River Basin will be divided into smaller sub-basins. Factors such as water temperature, nutrient levels, contaminants and dissolved oxygen, which are deemed significant, will be quantified for each sub-basin and a condition and risk assessment (trend analysis) will be developed. Condition assessments will include a discussion of habitat and abiotic parameters and how they are or eventually may affect the aquatic ecosystem. Assessing watersheds at a finer scale will help to identify localized problems and facilitate development of solutions. An Interagency Working Group will focus the study on the factors and landscape parameters, which are most important.

ii. Lakes and Reservoirs

The lakes to be examined include the main flood control and multipurpose reservoirs in the basin. Historical conditions will be assumed to be the condition of the lakes when they were first filled. Population projections will directly relate to the development around the lakes and the use for water supply and wastewater discharge. Given that water quality is one of the main factors influencing the lakes, water quality parameters will be examined to determine their effects on the aquatic habitat of the lakes. Habitat suitability index for the Habitat Evaluation Procedure (HEP) model including water quality will be examined. Other models will be examined to find best fishery model to account for likely changes in conditions.

Beaver Lake – A detailed water quality model will be developed.

Table Rock Lake – A detailed water quality model will be developed

Bull Shoals Lake - Water quality trends and their effects on the aquatic ecosystem will be determined

Norfolk Lake – Water quality trends and their effects on the aquatic ecosystem will be determined

Greers Ferry Lake – Water quality trends and their effects on the aquatic ecosystem will be determined

Clearwater – Water quality trends and their effects on the aquatic ecosystem will be determined

Taneycomo – A detailed water quality model will be developed

The objective of the studies on Beaver, Table Rock, and Taneycomo Lakes is to obtain the necessary information (temperature, nutrients, algae, and dissolved oxygen parameters) for use in calibrating a numerical model of hydrodynamics and water quality. The model will then be developed and used to predict water quality trends. Due to funding limitations, it was decided by the Interagency Planning Team that modeling on Bull Shoals, Norfolk, Greers Ferry, and Clearwater Lakes would be postponed for a possible phase two if the desired interest develops by a potential sponsor.

Major potential outputs of the comprehensive study include ecosystem restoration by protecting the watersheds that enter into the lakes and potential environmental infrastructure improvements to improve the quality of water entering the lakes. Improvements to the water quality of upper basin tributaries that enter into the lakes, such as the James River, would have a direct impact on the lakes themselves.

iii. Tailwaters

Most trout fisheries in the southern U.S. are located in cold tailwaters below dams with hypolimnetic releases. Harsh conditions that are often present in these systems can inhibit growth potential and reduce survival of trout stocked into these systems. Since most tailwater trout fisheries are managed for put-and-take losses of fish due to inhospitable conditions can be expensive. Return rates for stocked trout vary due to water quality and quantity in the receiving water. Stocking rates and fishing pressure can also be major factors in determining trout survival. The minimum flow data will develop assessment techniques. Existing data will be examined to determine existing conditions and future trends. Problems and needs will be determined from this data and recommendations made accordingly.

iv. Transition zone

The transition zone is the area of the main stem below the tailwaters where the river temperature is too warm for cold water species but is not warm enough to be highly productive for warm water species. Existing data will be examined to determine existing conditions and future trends. Problems and needs will be determined from this data.

v. Main Stem

Existing data will be examined to determine existing conditions and future trends. Problems and needs will be determined from this data.

vi. Lower tributaries

The lower basin tributaries are the tributaries that enter into the White River below the tailwaters. These include the Cache River, Bayou de View, Village Creek, Big Creek, and other streams. Existing data will be examined to determine existing conditions and future trends. Problems and needs will be determined from this data.

b) Terrestrial Ecosystem

Ecosystem analyses will be conducted in the delta portion of the study area to include the watershed of the tributaries and mainstem wetlands. A complete examination of the delta area will be conducted by major watershed to include ecosystem restoration options.

Existing data will be examined to determine existing conditions and future trends. Problems and needs will be determined from this data.

3) Migratory Birds

A literature search will be performed to identify historic and current conditions for neotropical migratory birds, waterfowl, and other migratory species to determine their population status within the basin. The current extent of habitat loss and degradation, and its affect on migratory bird populations will be determined. Future habitat and population trends will be projected, and migratory bird habitat improvement and restoration measures will be identified.

4) Groundwater-Agricultural water supply

Existing information will be used to examine the existing and future trends in ground water and agricultural water supply. A literature search will be performed in the upper basin to determine the relationship between the surface water quality and the danger of contamination of the aquifers due to the Karst topography. The study description of the aquifers and current water use will be examined. The draw on the aquifers for water use in the study area for agriculture, municipal, and industrial use will be examined. Potential threats to the aquifers from contamination will also be examined. The potential irrigation project in the area will be included in the future conditions. Existing groundwater models will be examined for inclusion in the basin-wide model.

5) Water Supply/Wastewater

Existing municipal and industrial water supply will be examined. Current wastewater treatment plants will be examined to determine their adequacy. The current effect of wastewater and pollution on the water supply will be examined. The project will predict, using population projections, the demands of the municipal and industrial water in the basin and the wastewater discharges. It will predict the water quality issues that threaten the lakes and identify possible solutions that can be investigated to determine its feasibility. Studies include examining population predictions to determine the demand of existing facilities and to determine the need for additional water supply and waste water treatment.

6) Recreation

A complete recreation analysis of the basin will be performed. Studies will include examining population predictions to determine the demand on existing facilities and to determine the need for additional facilities. The economic value of recreation will be computed.

7) Endangered Species

Existing data will be examined to determine existing conditions and future trends of Federally listed threatened and endangered species as well as state species of special concern. Problems and needs will be determined from this data. The existing endangered or threatened species (State and Federal) will be inventoried.

8) Navigation/Transportation Needs

The transportation needs of the basin will be examined to determine problems and opportunities. The majority of the effort will include incorporation of existing studies and data by others and the navigation studies to characterize the complete range of transportation needs in the basin including road, railroad, airport, and waterborne traffic. Projections of the future transportation needs will be gathered and related to the projections of future development and population growth. Transportation studies performed by the states' highway departments will be incorporated. An inventory of existing transportation facilities and uses will be included. Navigation data will be incorporated for existing studies including the number of tons that are being transported on the White River. Projections of future growth of these numbers will be made.

The effect of future transportation will be related to other significant resources and uses including fragmentation of forest due to bisecting roads or highways.

9) People and Economy

Examining the population and economic trends is essential in gaining an understanding of the likely future conditions and water resource problems and needs of the basin. Many of the current water resource related problems relate to economic and population growth in the basin. County population and economic trends for the existing and future without project conditions will be estimated using projections from existing data sources. Trends in agriculture and other sectors of the economy will also be examined.

10) Hydropower/Power Generation Needs

The existing power sources that use hydropower or the river for cooling will be inventoried. From existing literature sources, the power needs of the basin will be examined and existing water needs for power generation and cooling will be examined. Estimates from existing sources on the future power generation trends for hydropower/power generation in the basin will be examined. Estimates will be made on the long-term trends in the demand for power and the likelihood of adding additional power plants with associated water needs.

11) Flood Control Needs

Flooding in the basin will be examined to determine the flood control needs and opportunities including non-structural opportunities to reduce flooding and gain additional ecosystem restoration benefits. Work being done for the minimum flow study will be incorporated and expanded to develop a better understanding of the flood control needs and opportunities in the area immediately influenced by the reservoirs. In other areas in the basin, a literature search and existing information will be gathered to determine areas where flooding in the basin is occurring or likely to increase in the future.

6. FEDERAL INTEREST

The upper White River Basin contains 5 large Corps multi-purpose lakes: Beaver, Table Rock, Bull Shoals, Norfork, and Greers Ferry and one Corps reservoir, Clearwater Lake, which is primarily used for flood control, (see Section 11 below, study area map). The water in the upper basin is controlled through this system of lakes. The basin includes over 150 miles of flood control levees along the White River and its tributaries. Interest in the basin includes flood control, water supply, hydropower, navigation, environmental restoration and protection, and recreation. The lower portion of the basin is significant as a migratory waterfowl wintering area. The basin includes three National Forest (Mark Twain, Clark, and Ozark), one national river (Buffalo), two national scenic rivers (Eleven Point and Ozark) and eight state wildlife management areas that comprise one of the largest remaining areas of bottomland hardwood forest in the Mississippi Valley.

Because of the significance of the resources, there is Federal interest in conducting the comprehensive study. Though this study will concentrate on identification and quantification of the problems and opportunities, it is likely that alternatives will be identified for flood control, navigation, and/or ecosystem restoration. The alternatives formulated will be developed, using

the basin conceptual model to tie the alternatives together into a comprehensive basin plan of improvement. The comprehensive watershed plans will be evaluated to determine Federal interest in implementation. The comprehensive basin plan developed during the feasibility phase may or may not recommend further Corps studies or projects. If Federal interest is found, each alternative will be examined for implementation authority. Many of the alternatives recommended for implementation under the comprehensive examination may be implemented under existing authorities, including the continuing authorities program. For those alternatives that cannot be implemented under existing authorities, the normal authorization process will be followed. Ecosystem restoration projects that may result include riparian restoration corridors, watershed restoration, waterfowl habitat restoration, aquatic habitat restoration, wetlands restoration, and other nationally significant outputs.

The lower White River Basin contains the largest remaining concentration of seasonally flooded bottomland hardwood forest in the Mississippi Alluvial Valley, and it provides critical habitat for wintering waterfowl and other migratory birds. In fact, the lower White River wetlands and associated Grand Prairie region to the west comprise the most important wintering area for mallards in North America. In 1990, wetlands along the Cache and lower White Rivers received special designation as a "Wetlands of International Importance" under the Ramsar Convention. The lower White River Basin contains three major national wildlife refuges (White River, Cache River, and Bald Knob). Also, the lower basin contains numerous state wildlife management areas and natural areas.

7. PRELIMINARY FINANCIAL ANALYSIS

The State of Arkansas has stated its intent to sponsor the study through the Arkansas Soil and Water Conservation Commission, the Arkansas Game and Fish Commission, and the Arkansas Department of Natural Heritage. The State of Missouri has stated its intent to sponsor the study through the Missouri Department of Natural Resources. Appendix B contains letters of intent from these agencies. The Missouri Department of Conservation and The Nature Conservancy have also expressed an interest in participating.

WRDA 2000 specifies cost sharing requirements for sponsors to be 50% non-Federal contributions, with up to 25% of total project costs being in-kind services.

8. SUMMARY OF FEASIBILITY STUDY ASSUMPTIONS

- a) The study will focus on identifying the water resource problems and opportunities. While possible solutions will be identified, all implementation studies and optimization will likely be conducted through subsequent efforts including continuing authorities, existing authority for other projects, or as specifically authorized studies resulting from the comprehensive study. An environmental assessment will be conducted as part of the comprehensive study. It will determine if the comprehensive study is a major Federal action having a significant impact on the human environment. Working with MVD staff the appropriate level of NEPA documentation will be determined. If necessary a programmatic EIS will be prepared. .
- b) The comprehensive study will benefit from work conducted for ongoing studies and projects in the White River Basin. Information produced by the study will be utilized during analysis of ongoing projects and studies. The results obtained from the comprehensive study will be used in evaluating operation of existing projects.

- c) Cultural resources associated with projects that may develop as a result of this comprehensive study will be coordinated fully in compliance with applicable laws and regulations.
- d) The USFWS will provide a Draft Coordination Act Report.
- e) Alternatives will not be developed to the level of detail for an MCACES cost estimate.
- f) The schedule assumes concurrent approval of the cost sharing agreement and the Section 905(B) Analysis report.

9. FEASIBILITY PHASE MILESTONES

Initiate Interagency Planning Team Meetings/Scoping Meetings	1/1/01
Initiate FCSA Negotiations	6/1/01
Submit 905(b) Analysis	7/30/01
905(b) Approval	9/30/01
PMP Approval by PRB	9/30/01
Complete FCSA Negotiations	8/30/01
Execute FCSA	9/15/01
Public Hearing	3/1/02
Public Hearing	4/1/02
Alternative Formulation Briefing	4/1/05
Draft Report	6/1/05
Final Report	10/1/05
DE Notice	10/1/05
Complete Basin-Wide Comprehensive Study	10/1/05

10. FEASIBILITY PHASE COST ESTIMATE

See Appendix A.

11. PROJECT AREA MAP



WHITE RIVER BASIN, AR & MO

12. POTENTIAL ISSUES EFFECTING INITIATION OF FEASIBILITY PHASE


There are currently no issues affecting initiation of the study effort.

13. VIEWS OF OTHER RESOURCE AGENCIES

In general, views toward the study are positive. Collectively, the agencies with interest in the White River feel that more information is needed prior to making decisions with regard to watershed management. To date, formal coordination has been conducted with other resource agencies to determine the areas of study required. An interagency planning team was formed. A list of invited participants is attached in Appendix C. The purpose of the interagency planning team was to coordinate the development of the scope of studies. The interagency planning team met on several occasions. Attached are letters written in support of the project in Appendix D.

14. RECOMMENDATIONS

I recommend that the White River Basin Comprehensive Study proceed to the feasibility phase. Further, I recommend that the draft Feasibility Cost Sharing Agreement submitted with this 905(b) Analysis be approved and study funds be provided as soon as possible.



JACK V. SCHERER
Colonel, Corps of Engineers
District Commander

Activity Number	Appendix A Line Item Cost Estimate			
		Cost Estimate	Sponsor In-Kind	
1100	Basin Ecosystem Resources and users Relationships (A conceptual model)	81,000	30,000	
	BASIN ENVIRONMENTAL RESOURCES			
1200	Literature /Data Search	91,000	45,000	
1300	Environmental Coordination	75,000		
1400	Environmental Appendix	32,000		
1500	Aquatic Ecosystems Sub-Basin Assessments	161,000	135,000	
1600	Watershed Restoration Plans	495,000	200,000	
1700	Aquatic Ecosystem-Wild & Scenic River and National Rivers	6,500		
1800	FWS Coordination	72,000		
1900	Hydrologic Effects on Lower Basin Wetlands (King Study)			
	Data required for the King Study	561,500		
1900.1	Satellite Imagery			
1900.2	Elevation Surveys 15 transects along the White, 3 along Bayou de View and 3 along the Cache River	200,000		
1900.3	Hydraulic modeling efforts	170,000		
1900.3	Stage/discharge on Cache River and Bayou DeView.	15,000		
1900.4	10-day average MSL stage on the Mississippi at the mouth of the White	8,000		
1900.5	Gather MSS or TM imagery on White River main stem, Cache River, and Bayou DeView	15,000		
	Other Environmental Resource Studies			
2000	Terrestrial Habitat Evaluation	40,000	30,000	
2100	Wetlands Evaluation	40,000	30,000	
2200	Migratory Birds	40,000	30,000	
2300	Endangered/Threatened Species	40,000	30,000	
2350	Evaluation of Permanent Wetlands in the Lower White River	205,000		
2400	Evaluation Of Ecosystem Restoration Options Within Lower White River Basin (Heitmeyer Study)	915,000		
2500	Navigation/Transportation Needs	235,000	215,000	
2600	People and Economy	55,000		
2700	Recreation	250,000	210,000	
	Hydraulic Studies			
2800	Groundwater-Agricultural Water Supply	182,000	162,500	
2900	Water Supply/Wastewater Treatment	80,000	40,000	
	GIS			
3000	Data Acquisition			
3000.3	Data Queries / Assistance from GIS - 11 Major Areas of Study	100,000		
	Contractors Communication / Assistance /Interaction			
	Administrative GIS Items (Presentations, Explanations, Coordination)			

Activity Number	Appendix A Line Item Cost Estimate			
		Cost Estimate	Sponsor In-Kind	
3000.4	Pilot Project			
	Generate data and sample queries for one county within the project area	26,000		
3000.5	Data Management			
	Perform data integration of downloaded data to USACE Standards			
	Acquire one Computer data server / storage server including upgrades and maintenance for 4 years of project	67,000		
	Water Uses			
3100	Hydropower/Power Generation Needs			
	A compilations of the existing data a studies involving hydropower and power generation needs in the basin will be made.	50,000		
3200	Flood Control Assessment			
	The existing data on basin flooding will be evaluated and literature sources including newspapers will be used to document the flooding potential in the basin.	400,000	60,000	
3300	Aquatic Ecosystem -Lakes/Reservoirs			
3300.1	Quantify water quality in the Beaver Lake.	376,500	276,500	
3300.2	Quantify water quality in the Table Rock Lake.	1,148,000		
3300.3	Quantify Water quality in Lake Taneycomo	330,000		
3300.4	Development of Hydrodynamic models of Beaver and Table Rock Lakes	147,600	147,600	
3300.5	Aquatic Ecosystem Fishery Studies (Kilgore Study)	182,000		
	Habitat Improvement Bulls Shoals and Table Rock Lakes			
100	PLANNING, AND PROJECT MANAGEMENT			
100.1	Public Involvement	105,600	40,000	
100.2	Study Management	405,400	167,925	
100.3	Budget Preparation & Support	165,600	40,000	
100.4	Plan Formulation and Evaluation	302,600	60,000	
100.5	Prepare Draft of modern historic conditions, exisitng conditions, and future without project conditions portions of the Report.	40,200		
100.6	Preliminary Draft of Main Report	80,000		
100.7	Assemble/Print Preliminary Draft Report	8,000		
100.8	Technical Review	60,000		
100.9	Sponsor Review.	60,000	60,000	
100.10	Revise/Print Preliminary Draft Report - CEMVD/OCE Review.	5,000		
100.11	Review Support	50,000	50,000	
100.12	Prepare draft Study Plan	100,000		
100.13	Revise/Print Draft Report/PSP	20,000		
100.14	Prepare and Print Final Report	12,000		
100.15	Budget Preparation &Support	160,000		
100.16	Supervision and Review - Supervise all budget request	65,600		
100.17	Revise Draft Appendix - CEMVD/HQUSACE Review.	12,000		
100.18	Revise Draft Appendix - Public Review	2,000		
100.19	Final Appendix	2,000		
	Total	8,548,100	2,059,525	
	Sponsor Cash 25%		2,137,025	
	Federal Cash 50%		4,274,050	

Appendix B

Non-Binding Letter of Intent from potential Sponsors

Arkansas Game & Fish Commission
2 Natural Resources Drive Little Rock, Arkansas 72205



Hugh C. Durham, IV
Director

July 16, 2001

Colonel Jack V. Scherer
District Engineer
Memphis District Corps of Engineers
167 North Main Street
Memphis, TN 38103-1894

Re: White River Basin Wide Comprehensive Study – Letter of Intent

Dear Colonel Scherer:

The Arkansas Game and Fish Commission (AGFC) intends to participate as a project sponsor in the White River Basin Wide Comprehensive Study provided an acceptable plan of study and cost-sharing agreement is negotiated. We have reviewed the draft feasibility cost-share agreement and are prepared to meet the requirements of project sponsorship.

The AGFC understands that the cost share requirements for non-federal sponsors is to be 50% of the total study cost with up to 25% of total project costs being in-kind services. Representatives from the AGFC have been working closely with your district to develop a project study plan and a cost estimate for the study. We look forward to continuing to work with you on this study in the future.

If you have any questions regarding the above, please contact Dr. Scott Yaich or me. Thank you.

Sincerely,

A handwritten signature in dark ink, appearing to read "Hugh C. Durham".

Hugh C. Durham
Director



Arkansas Soil and Water Conservation Commission

J. Randy Young, P.E.
Executive Director

101 EAST CAPITOL
SUITE 350
LITTLE ROCK, ARKANSAS 72201

PHONE 501-682-1611
FAX 501-682-3991

July 17, 2001

Colonel Jack V. Scherer
District Engineer
Memphis District Corps of Engineers
167 North Main Street
Memphis, Tennessee 38103-1894

Dear Colonel Scherer:

The Arkansas Soil and Water Conservation Commission (the "Commission") intends to participate as a project sponsor in the White River Basin Wide Comprehensive Study provided an acceptable plan of study and cost-sharing agreement is negotiated. We have reviewed the draft feasibility cost-share agreement and are prepared to meet the requirements of project sponsorship.

The Commission understands that the cost share requirements for non-Federal Sponsors is to be 50% of the total study cost with up to 25% of total project costs being in-kind services. Representatives from the Commission have been working closely with your district to develop a project study plan and a cost estimate for the study. We look forward to continue working with you on this study in the future.

If you have any questions regarding the above, please contact Earl Smith, Mark Bennett, or me

Sincerely,

A handwritten signature in black ink, appearing to read "J. Randy Young".

J. Randy Young, P.E.
Executive Director

JRY/ES/ddavis

Cc: Mr. Hugh Durham, Arkansas Game and Fish Commission
Mr. Stephen Mahfood, Missouri Department of Natural Resources
The Honorable Mike Huckabee, Governor - State of Arkansas



STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Bob Holden, Governor • Stephen M. Mahfood, Director

— OFFICE OF THE DIRECTOR —
P.O. Box 176 Jefferson City, MO 65102-0176

July 31, 2001

Colonel Jack V. Scherer
District Engineer
Memphis District Corps of Engineers
167 North Main Street
Memphis, Tennessee 38103-1894

Dear Colonel Scherer:

The Missouri Department of Natural Resources intends to participate as a project sponsor in the White River Basin Wide Comprehensive Study provided an acceptable plan of study and cost-sharing agreement is negotiated.

Representatives from the DNR have been working closely with your district, as well as staff of the Arkansas Soil and Water Conservation Commission and the Arkansas Game and Fish Commission, in order to develop a project study plan and a cost estimate for the study. Thank you for working with my staff to revise the study scope. I am optimistic we can reach agreement on the scope, cost and cost-share for the study. We look forward to continue working with you on this study in the future.

If you have any questions regarding the above, please contact Ed Knight at 573-751-8398.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

Stephen Mahfood
Director

SM:jm

Appendix C

Agencies that were invited to participate on the Interagency Planning Team

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

Ms. Karen Smith, Director
Arkansas Natural Heritage Commission
1500 Tower Bldg., 323 Center St.
Little Rock, AR 72201

Mr. Allan J. Mueller
Field Supervisor
U.S. Fish and Wildlife Service
Ecological Services
1500 Museum Road, Suite 105
Conway, AR 72032

Ms Jane M. Ledwin,
Acting Field Supervisor
U.S. Fish and Wildlife Service
Ecological Services
608 Cherry St No 212
Columbia, MO 65201-7712

Mr. Gregg A. Cooke
Regional Administrator
EPA Region 6
1445 Ross Ave.
Dallas, TX 75202-2733

Mr. Dennis Grams,
Regional Administrator
EPA Region 7
901 N 5th St
Kansas City, KS 66101

Mr. J. Randy Young
Ark. Soil and Water Conservation Comm.
101 East Capitol, Suite 350
Little Rock, AR 72201

Mr. Jerry Conley, Director
Missouri Department Of Conservation
P. O. Box 180
Jefferson City, MO 65102-0180

Mr. Robert Ludwin
USGS
401 Hardin Road
Little Rock, AR 72211

Mr. Calvin L. Trice
State Conservationist
Natural Resources Conservation Service
Room 3416, Federal Bldg.
700 W. Capitol Ave.
Little Rock, AR 72201

Mr. Roger A. Hansen,
State Conservationist
Natural Resources Conservation Service
Parkade Center, Suite 250
601 Business Loop 70 West
Columbia, MO 65203

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

Mr. Paul Revis, Executive Director
Arkansas Waterways Commission
101 E. Capitol, Suite 370
Little Rock, AR 72201

Mr. Bethel Herrold
Southwest Power Administration
P. O. Box 1619
Tulsa, OK 74101

Ms. Cathie Matthews, Acting SHPO
Arkansas Historic Preservation Program
1500 Tower Bldg., 323 Center St.
Little Rock, AR 72201

Ms. Claire Blackwell, SHPO
MODNR Parks REC & Historic Prop
P O Box 176
Jefferson City, MO 65102-0176

Mr. Stephen Mahfood, Director
Missouri Dept. of Natural Resources
Post Office Box 176
Jefferson City, MO 65102

Mr. Richard Davies, Executive Director
Arkansas Dept. of Parks and Tourism
#1 Capitol Mall, Forth Floor
Little Rock, AR 72201

Mr. John Shannon, Director
Arkansas Forestry Commission
3821 West Roosevelt Road
Little Rock, AR 72204

Appendix D

Letters of Support from Agencies or Organizations Requesting the Study.



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108
27 SEP 1999

REPLY TO
ATTENTION OF

Ms. Judy Henderson
President, Arkansas Chapter
Sierra Club
Post Office Box 22446
Little Rock, Arkansas 72221

.Dear Ms. Henderson:

I am replying to your letter of July 15, 1999, citing authorized and planned projects in the White River basin and calling for a comprehensive study to assess the entire ecosystem. I agree with you on the importance of the White River basin ecosystem.

The Army Corps of Engineers may conduct a study of the White River basin under Section 729 of Public Law 99-662, the Water Resources Development Act of 1986, as amended. Subject to the Congress providing funding, this office would support undertaking comprehensive watershed studies in many basins nationwide, including the White River basin.

I am asking Mr. David Reece, Chief of the Environmental and Economic Analysis Branch, in the Corps Memphis District, to contact you to explain more fully our process for initiating a new study. I trust that this explanation is helpful.

Sincerely,

Joseph W. Westphal
Assistant Secretary of the Army
(Civil Works)

CF: CRC
CECW-PC
SACW: FILE, READ, SIGN
J:\SHARED\SMITH,C\WHITERIVER.DOC

SA9072306



ARKANSAS CHAPTER
SIERRA CLUB

P.O. Box 22446
Little Rock, Arkansas 72221
(501) 224-2582

July 15, 1999

Joseph Westphal, Assistant Secretary of the Army for Civil Works
U.S. Army Corps of Engineers
108 Army Pentagon
Washington, DC 20310

Dear Mr. Westphal,

On behalf of the Arkansas Chapter of the Sierra Club, I am writing to you to express our concern about several major projects proposed for the Lower White River in Arkansas. We believe these projects, designed to promote navigation and provide irrigation water in the region, threaten an important ecosystem. The U.S. EPA, U.S. Fish and Wildlife Service and Audubon Society have all expressed opposition to these projects, and have asked for a comprehensive study to be done of the ecosystem. We would like your support in ensuring that such a study is completed before any major projects are undertaken on the river.

The Lower White River is a wonderfully diverse area. It contains the largest contiguous tract of bottomland hardwoods in North America. It has historically been referred to as "the Big Woods," and is all that remains of the original 24 million acres of floodplain forests in the seven states in the Mississippi River Alluvial Plain ecosystem. It is home to at least 240 bird species, including endangered bald eagles and least terns, and is a major migratory area. Endangered mussels also live here, along with our state's only native bears. There are rare plant species, also.

The current proposals would involve channelization, irrigation projects and the possibility of a new dam. We are concerned about the negative aspects of all of these projects. We would not like to see any go forward, and believe that before any are given further consideration, a comprehensive study should be done of the entire ecosystem.

We appreciate your help and assistance in this matter.

Sincerely,

Judy Henderson
President Arkansas Chapter of the Sierra Club



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108
27 SEP 1999

REPLY TO
ATTENTION OF

Mr. Steven J. Shimberg
Vice-President
Office of Federal and International Affairs
National Wildlife Federation
1400 16th Street, N.W., Suite 501
Washington, D.C. 20036

Dear Mr. Shimberg:

I am replying to your letter of June 25, 1999, co-signed by seven other environmental interest groups. I am replying also to those co-signatories. Your letter cites several major projects in the White River basin and calls for a comprehensive study to assess the entire ecosystem and the needs of the people and wildlife that inhabit the basin. You indicate that the comprehensive study would provide the basis for an equitable, compatible water-use management plan for the basin.

The Army Corps of Engineers may conduct a study of the White River basin under Section 729 of Public Law 99-662, the Water Resources Development Act of 1986, as amended. Subject to the Congress providing funding, this office would support undertaking comprehensive watershed studies in many basins nationwide, including the White River basin.

I am asking Mr. David Reece, Chief of the Environmental and Economic Analysis Branch, in the Corps Memphis District, to contact you to explain more fully our process for initiating a new study. I trust that this explanation is helpful.

Sincerely,

Joseph W. Westphal
Assistant Secretary of the Army
(Civil Works)

CRC
CECW-PC
SACW (FILE, READ, SIGN)
KENNEDY/761-8529/22 SEP 99
MULTIPLE - SA9070804

SIMILAR LETTERS SENT TO:

Ms. Nancy S. DeLamar
Arkansas State Director and Vice President
The Nature Conservancy
601 North University Avenue
Little Rock, Arkansas 72205

Mr. Robert Dewey
Director, Habitat Conservation
Defenders of Wildlife
1101 14th Street, N.W., #1400
Washington, D.C. 20005

Mr. Rollin D. Sparrowe
President
Wildlife Management Institute
1101 14th Street, N.W., Suite 801
Washington, D.C. 20005

Mr. Evan Hirsche
Director, Wildlife Refuge Campaign
National Audubon Society
1901 Pennsylvania Avenue, N.W.
Suite 1100
Washington, D.C. 20006-3405

Mr. David Tobin
President and CEO
National Wildlife Refuge Association
1776 Massachusetts Avenue, N.W., Suite 200
Washington, D.C. 20036

Mr. Charles Clusen
Senior Policy Analyst
Natural Resources Defense Council
1200 New York Avenue, N.W., Suite 400
Washington, D.C. 20005

Mr. Jim R. Waltman
Director
Refuges and Wildlife
The Wilderness Society
900 17th Street, N.W.
Washington, D.C. 20006

5A9070804

**National Audubon Society • Defenders of Wildlife
National Wildlife Federation • National Wildlife Refuge Association
The Nature Conservancy • Natural Resources Defense Council
Wildlife Management Institute • The Wilderness Society**

June 25, 1999

The Honorable Dr. Joseph W. Westphal
Assistant Secretary of the Army (Civil Works)
U.S. Army Corps of Engineers
108 Army Pentagon
Washington, DC 20310

Dear Dr. Westphal:

We are writing to express the serious concerns of our organizations regarding several major water projects planned for the Lower White River in Arkansas. We believe that these projects, to promote navigation and draw irrigation water from the Lower White River, threaten the integrity of this important ecosystem. The U.S. EPA and U.S. Fish and Wildlife Service have expressed serious concerns regarding these projects and are calling for completion of a comprehensive study of the White River Basin. We request your assistance in ensuring that such a study is undertaken prior to initiation of any major activities on the river.

The lower White River Basin of Arkansas stands as the largest contiguous tract of bottomland hardwoods in North America. This area constitutes a national natural treasure -- half a million acres of forested wetlands in a region that has otherwise been mostly cleared and drained for agricultural purposes. The "Big Woods," as it is called, is the "best that is left" of the original 24 million acres of floodplain forests in the seven states of the Mississippi River Alluvial Plain ecosystem. It includes the Cache River and White River National Wildlife Refuges, seven state wildlife management areas, a Nature Conservancy preserve, and many forested tracts held by private landowners. The public lands in the Big Woods have been designated as "Wetlands of International Importance" by the Ramsar Convention. Numerous public and private initiatives are working in the Basin to conserve, restore, expand and connect the forested wetlands and river corridors.

The White River Basin provides habitat for a huge variety of birds, mammals, and other terrestrial and aquatic species, including habitat for some 240 bird species. It is the #1

wintering area in North America for mallards; the endangered interior least tern and bald eagle nest here; and many neotropical migratory bird species use the forested wetlands as vital breeding grounds. The swallow-tailed kite was observed during breeding season in 1998 for the first time in 100 years. These forested wetlands also support a population of Arkansas's only native bears, for which tests are currently being conducted to determine if the population is the endangered Louisiana black bear (*Ursus americanus luteolus*).

In addition, more than 100 species of fish inhabit the White River Basin. The White River is one of a minority of rivers in the world where paddlefish spawn successfully, and the Basin supports one of the largest populations of paddlefish in the world. The river system also boasts the state's largest populations of shovelnose sturgeon and crappie, as well as important commercial fisheries of buffalo and catfish. Several species of endangered mussels also live here.

A massive Corps navigation project is being proposed for the White River that would increase the current 5 feet by 100 feet channel to 9 feet by 200 feet to accommodate barge traffic. The dredging project would cut through two National Wildlife Refuges and would benefit a very few business interests at the expense of the health of the White River ecosystem and its associated wetlands. Increased dredging would increase the entrenchment of the river, cutting it off from its floodplains, and further reducing fish spawning habitat and habitat for mussels and other aquatic species. The proposed project would lead to decreased water quality, increased flow rates, and other hydrologic modifications damaging to both in-stream and bottomland habitats.

Several other projects also threaten the White River and its surrounding ecosystem. Four Corps-assisted irrigation projects are being proposed which would remove water from the White River or its tributaries, potentially affecting water supply downstream. Water allocation plans are currently being developed for the Basin. These projects and water reallocations could greatly exacerbate current problems with upriver dams that are releasing water in unnatural pulses. In addition to the water projects, new highways and bridges are also being planned that could cut through existing forest lands, threatening birds -- such as the swallow-tailed kite -- and bears that need large expanses of unfragmented habitat.

Major questions exist about the cumulative impacts of all these projects on these "Wetlands of International Importance." A Comprehensive Study is needed of the White River Basin that will assess the entire ecosystem and the needs of both the people and wildlife that inhabit it. An equitable, compatible water-use management plan could then be developed. Any impacts to the basin's national wildlife refuges must also be found compatible with the management of these areas pursuant to the National Wildlife Refuge System Improvement Act of 1997.

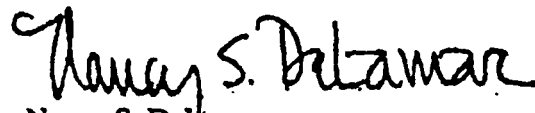
The key to the future viability of this great ecosystem is a more natural hydrologic function. Current and future projects that impact the Lower White River should maintain and/or restore natural values. President Clinton, in his radio address on May 29, 1999, announced several initiatives to improve our nation's waters, including "... directing all

federal agencies to adopt a comprehensive strategy to better safeguard rivers and other bodies of water on federal lands." A comprehensive study is essential prior to moving forward with navigation or irrigation projects. We urge your support for a Comprehensive Study of the White River Basin.

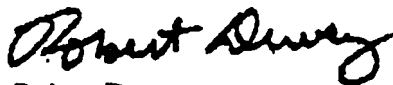
Sincerely,



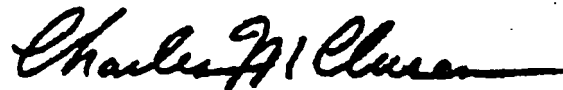
Evan Hirsche
Director, Wildlife Refuge Campaign
National Audubon Society



Nancy S. Delamar
Arkansas State Director and
Vice President
The Nature Conservancy



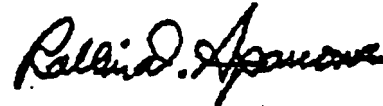
Robert Dewey
Director, Habitat Conservation
Defenders of Wildlife



Charles Clusen
Senior Policy Analyst
Natural Resources Defense Council



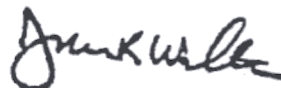
Steve Shimberg
Vice President for Federal and
International Affairs
National Wildlife Federation



Rollin D. Sparrowe
President
Wildlife Management Institute



David Tobin
President and CEO
National Wildlife Refuge Association



Jim R. Waltman
Director, Refuges and Wildlife
The Wilderness Society

cc: Hon. Carol M. Browner
Hon. Jamie Rappaport Clark
Hon. George T. Frampton
Hon. Bruce Babbitt
Hon. Michael L. Davis



United States Department of the Interior

FISH AND WILDLIFE SERVICE

1500 Museum Road, Suite 105

Conway, Arkansas 72032



IN REPLY REFER TO:

June 11, 1999

Colonel Daniel W. Krueger
U.S. Army Corps of Engineers
167 North Main Street, Suite 590
Memphis, Tennessee 38103-1894

Dear Col. Krueger:

Recently several agencies have proposed a number of development activities in the White River basin. These proposals include flood control works, navigation projects, irrigation projects, bridge and highway projects, land acquisition for national wildlife refuges, reregulating reservoir releases, minimum stream flow determinations, and harbor development. A variety of federal and state agencies are examining the feasibility of these proposals. The large number of proposals and the number of different agencies working on them generates a concern over potential conflicts and unanticipated cumulative effects. The decisions made on these proposals will determine the quality of life, economic vitality, and environmental health of the basin well into the 21st century.

A comprehensive study of the economic, social, and environmental impacts of basin developments would be a valuable tool to guide decisions. Without this kind of coordinated approach, decisions could be based on an inadequate understanding of the interactions between actions which may superficially appear to be unrelated.

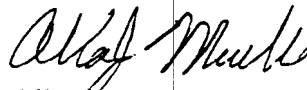
Attached is a proposed plan for a comprehensive study of the White River basin in Arkansas and Missouri. This document is intended to begin discussions. At this time our vision is that the study would be jointly managed by the Corps of Engineers and the Fish and Wildlife Service, with significant input from all interests in the basin.

A study of this magnitude would likely require a specific Congressional authorization, which is only possible if the study has the support of all interests in the basin. As a first step in generating a wide level of support for a comprehensive study, our agencies should reach basic agreement on the scope and magnitude of any study. At your earliest convenience I would like to initiate meetings between our offices to discuss policy issues, share past experiences with comprehensive studies in other basins, and refine the proposed plan of study.

Colonel Daniel W. Krueger
page 2
June 11, 1999

Please contact me regarding a meeting schedule. I look forward to working with you and your staff in the important effort to develop the resources of the White River basin in a way that will provide continued economic strength and protect and enhance the internationally significant natural resources.

Sincerely,



Allan J. Mueller
Field Supervisor

cc: Arkansas Game and Fish Commission, Little Rock, AR
Attn: Scott Yaich
Missouri Department of Conservation, Jefferson City, MO
Environmental Protection Agency, Dallas, TX
Attn: Barbara Keeler
Corps of Engineers, Little Rock
Attn: Col. Thomas Holden
Fish and Wildlife Service
White River National Wildlife Refuge, DeWitt, AR
Cache River National Wildlife Refuge, Augusta, AR
Steve Thompson, Atlanta, GA
Keith Taniguchi, Atlanta, GA
Columbia Field Office, Columbia, MO
Greers Ferry National Fish Hatchery, Heber Springs, AR
Mammoth Spring National Fish Hatchery, Mammoth Spring, AR
Norfolk National Fish Hatchery, Mountain Home, AR
Arkansas Natural Heritage Commission
Attn: Tom Foti

E + C
Reg.
Planning
Ops.
Memphis
LMVD
SWD

Arkansas Democrat Gazette

House OKs \$300,000 for White River study

Environmental groups oppose navigation project

BY KIM MCGUIRE
ARKANSAS DEMOCRAT-GAZETTE

The U.S. House of Representatives, by approving \$300,000 in funding for the White River Navigation Project study, has taken the issue one small step forward, much to the dismay of local conservation groups.

The House voted overwhelmingly early Wednesday to approve the appropriations bill containing the funding. It will now be sent to a Senate committee for consideration.

The Arkansas Wildlife Federation is extremely disappointed that the House would appropriate \$300,000 for the White River Navigation Project Study," Terry Horton, executive director of the group, said Thursday. "We see this appropriation as a total waste of public funds because this project is not needed. It will damage the lower White River, and only a very few people want it done."

The appropriation still leaves a \$238,000 funding gap to complete the U.S. Army Corps of Engineers' study, which is now estimated to cost about \$2.3 million and is about three-fourths complete.

Environmental groups believe cutting off funding for the study is the key to killing the project. They believe the project will destroy wetlands, threaten commercial

mussel beds and reduce overbank flooding that aids in fish spawning.

Proponents of the project, however, say that it will be a boon to eastern Arkansas by providing reliable commercial navigation and lowering transportation costs for regional industry.

Commissioner Ralph McDonald of the Arkansas Waterways Commission, which supports the project, said he hopes that the study will receive full funding by the end of the year.

"Both sides of this issue need this study finished in order to have meaningful discussion about the project," McDonald said.

McDonald said that the cost of the study has increased because environmental groups have asked the Corps to look at issues not originally in the scope of the plan.

The project calls for installing wing dikes along the river's banks to direct currents to scour the river bottom and maintain a 9-foot depth 95 percent of the year. The project is intended to cost \$30 million, but critics have argued that the price tag is swelling far beyond that amount.

In March the Washington D.C.-based group American Rivers named the White River as one of the nation's top 10 most-endangered waterways.



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108
12 JUL 2000



REPLY TO
ATTENTION OF

Mr. Richard Bishop
Chair
Mississippi Flyway Council
Iowa Department of Natural Resources
Wallace State Office Building
Des Moines, Iowa 50319

Dear Mr. Bishop:

This responds to your letter of April 18, 2000, stressing the importance of the White River Basin, Arkansas, and the need for a comprehensive, basin-wide evaluation of the potential cumulative impacts of projects in the basin. You requested my position on these issues and the status of evaluation efforts.

I whole-heartedly agree that the White River Basin is a unique and important ecosystem. I concur that the basin contains important habitats that are critically important as a wintering area for waterfowl. We included funds in the President's Fiscal Year 2001 budget for the Army Corps of Engineers to initiate a comprehensive study of the White River Basin. This study will identify both the water resources needs of the area and possible solutions to those needs, and will also provide the opportunity to examine the existing conditions of the White River and determine important ecosystem functions and processes. This analysis will also include an evaluation of the potential cumulative impacts of proposed projects. The study will identify options to protect and restore the White River Basin and its wetlands, including the bottomland hardwoods that are so important to this area. The study would be conducted under the authority of Section 729 of the Water Resources Development Act of 1986, and assuming that funds are provided, would be initiated by the end of 2000.

I trust that this information meets your needs. Please do not hesitate to contact me if I can be of further assistance.

Sincerely,

Joseph W. Westphal
Assistant Secretary of the Army
(Civil Works)



CF CRC
CECW-PC
CEMVD-PM-E
CEMVM-PM
SACW (FILE, READ, SIGN)
Prepared: FITZSIMMONS/761-1974/22 MAY 2000
Revised: Jim Smyth/SACW/JUN9 2000
J:Shared/Smyth/Mr. R. Bishop,WhiteRvr.ARK
23 Jun 2000
SA#0042702

MISSISSIPPI FLYWAY COUNCIL

MISSISSIPPI FLYWAY COUNCIL



1952

Iowa Dept. of Natural Resources
Wallace State Office Bldg.
Des Moines, IA 50319

April 18, 2000

Dr. Joseph W. Westphal
Asst. Sec. Of Army (Civil Works)
U.S. Army Corp of Engineers
108 Pentagon
Washington, D.C. 20310

Dear Dr. Westphal:

In August, 1999, I wrote you on behalf of the Mississippi Flyway Council to express the Council's concerns about possible impacts that developments in the White River Basin of Arkansas could have on critical wetland habitats in that region. The proposed projects included flood control, irrigation, navigation, bridge and highway and harbor development. In addition, re-regulation of reservoir releases, minimum stream flow determinations, and water allocation plans were being explored.

The lower White River Basin contains wetlands of regional, national, and international importance. It is one of the most important areas in the Mississippi Flyway for wintering waterfowl. The basin also provides critical habitat for many other wetland-wildlife species. The productivity of this system is inextricably linked to the natural flood events that provide a wide diversity of habitats.

The Council believes a comprehensive, basin-wide evaluation of the potential cumulative impacts of the proposed projects is warranted and urged you to support this effort. To date, we have not heard if an evaluation has been initiated or if your agency even supports such an effort. We would appreciate knowing where you stand on this idea and what, if anything, has been done to evaluate the cumulative impacts of the proposed developments in the White River Basin.

Sincerely,

A handwritten signature in dark ink, appearing to read "Richard Bishop". The signature is fluid and cursive, with a large, sweeping "R" and "B".

Richard Bishop, Chair
Mississippi Flyway Council

cc: Jamie Rappaport Clark, USFWS Director
Steve Wilson, AR Game & Fish
Col. Daniel W. Krueger, USCOE Memphis District
Arkansas Congressional Delegation
Mississippi Flyway Council
Ken Gamble, Service Flyway Rep.



1952

Iowa Dept. of Natural Resources
Wallace State Office Bldg.
Des Moines, IA 50319

August 13, 1999

Dr. Joseph W. Westphal
Asst. Sec. Of Army (Civil Works)
U.S. Army Corp of Engineers
108 Pentagon
Washington, D.C. 20310

Dear Dr. Westphal

The Mississippi Flyway Council is a coalition of 14 states and three Canadian provinces that works in conjunction with the respective federal governments to manage migratory birds and their habitats in the heartland of North America. Mississippi Flyway Council states, cooperating with federal agencies and non-governmental partners, deliver most of the conservation programs for migratory birds in a significant portion of mid-America.

The Mississippi Flyway Council was recently informed of proposals for several development projects in the White River Basin, including flood control, irrigation, navigation, bridge and highway and harbor development projects. In addition, re-regulation of reservoir releases, minimum stream flow determinations, and water allocation plans are being explored. A variety of state and federal agencies are currently examining the feasibility and potential impacts of these projects.

The Mississippi Flyway Council is concerned with the potential impacts these projects could collectively have on the White River basin. The lower White River basin contains wetlands of regional, national, and international importance. It is one of the most important areas in the Mississippi Flyway for wintering waterfowl and contains the largest concentration of mallards in North America. The basin also provides critical habitat for many other wetland dependent wildlife species. The productivity of this system is inextricably linked to the natural flood events that provide the diversity of habitats required by waterfowl and the other species that depend on this habitat.

We believe comprehensive, basin-wide evaluation of the potential cumulative impacts of these proposed projects is warranted. This evaluation would be an invaluable planning tool to help guide future development in the White River basin and would have the full support of state and

Dr. Westphal
Page 2
August 13, 1999

regional conservation organizations. An evaluation of this scope could possibly require specific congressional authorization. We urge your support in this effort.

Sincerely,

A handwritten signature in dark ink, appearing to read "Richard Bishop", followed by a large, stylized flourish or checkmark.

Richard Bishop, Chair
Mississippi Flyway Council

cc Jamie Rappaport Clark, USFWS Director
 Steve Wilson, AR Game & Fish
 Col. Daniel W. Krueger, USCOE Memphis District
 Allen Mueller, FWS ES
 Arkansas Congressional Delegation
 Mississippi Flyway Council members
 Ken Gamble, Service Flyway Rep.



13 JUL 1996

REPLY TO
ATTENTION OF

Planning Division
Program Management Branch

Ms. Ina Mitchell
22301 Cass Avenue
Woodland Hills, California 91364

Dear Ms. Mitchell

Thank you for your recent message to President Clinton concerning potential plans by the U.S. Army Corps of Engineers that may impact the refuges along the White River, Arkansas. Your message was referred to me for a response because I oversee the planning of Corps projects.

We share your concerns for this Nation's water resources. To ensure that our planning process will produce projects that best serve the Nation, the President approved the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G) in 1983. All project proposals are formulated and evaluated in accordance with the P&G. The P&G are intended to ensure proper and consistent planning of water resources projects and enhance our ability to identify and recommend economically feasible and environmentally sound alternatives. Also, Executive Order 11990, Protection of Wetlands, requires project plans to minimize the destruction, loss, and degradation of wetlands. It directs us to avoid new construction in wetlands and to provide for public review of all plans for construction in wetlands. These and other laws and policies, particularly the National Environmental Policy Act (NEPA), call for us to develop alternatives that are sensitive to many different competing interests and desires, and to subject these alternatives to public scrutiny before selecting a plan for recommendation. To further ensure that each recommended plan will best serve the Nation, we subject the supporting analyses to stringent technical and policy reviews before forwarding the recommendation to the Administration and Congress for a final decision. We are following this process in our study of navigation needs on the White River and will fully comply with the P&G, NEPA, and all other applicable laws and policies.

The White River to Batesville, Arkansas, is a congressionally authorized navigable waterway that the Corps currently maintains between an 8-foot and 4.5-foot minimum depth, depending upon location. Each year, we dredge the navigation channel in areas where sediment builds up. Congress, in the Water Resources Development Act of 1996, re-authorized construction of a 200-foot wide and 9-foot deep navigation channel project that would extend from the Arkansas Post Canal (river mile 10) to Newport, Arkansas (river mile 254). Our Memphis District is now conducting the White River Navigation

Study to reevaluate the feasibility of the re-authorized project. The study is addressing the needs for improving navigation as well as protecting or enhancing the environment.

Meetings to define and refine the project scope have been held with local interest groups, and state and federal agencies. The study is addressing the concerns raised in those meetings, including environmental concerns. Also, we have expended considerable manpower and resources to evaluate the existing river ecosystem in an effort to assure that any recommended plans will be environmentally sound. This effort is presently incomplete. All interested parties will be given an opportunity to comment on the draft feasibility report and the draft Supplemental Environmental Impact Statement in about six months. No decision will be made to implement a project until the public, State, and interagency reviews are completed. If the report is favorable, Congress would then have to appropriate funding to initiate construction.

Please be assured that our planning efforts adhere to the applicable laws and policies to ensure that all project proposals, including those along the White River, are environmentally sound. We appreciate your views and concerns, and we will give them full consideration in our planning process.

Sincerely,



Rennie H. Sherman
Acting Chief, Planning Division
Office of Deputy Commanding General
for Civil Works

OSA. WHLO RM 3D656
CECW-P, CECW-ZD TS0062801
CEMVD-PM-E
CEMVM-PM



REPLY TO
ATTENTION OF

r

Planning Division
Program Management Branch

Mr. W. E. Kuster
1034 Memory Lane
Escondido, California 92026-1722

Dear Mr. Kuster:

Thank you for your recent message to President Clinton concerning potential plans by the U.S. Army Corps of Engineers that may impact the refuges along the White River, Arkansas. Your message was referred to me for a response because I oversee the planning of Corps projects.

We share your concerns for this Nation's water resources. To ensure that our planning process will produce projects that best serve the Nation, the President approved the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G) in 1983. All project proposals are formulated and evaluated in accordance with the P&G. The P&G are intended to ensure proper and consistent planning of water resources projects and enhance our ability to identify and recommend economically feasible and environmentally sound alternatives. Also, Executive Order 11990, Protection of Wetlands, requires project plans to minimize the destruction, loss, and degradation of wetlands. It directs us to avoid new construction in wetlands and to provide for public review of all plans for construction in wetlands. These and other laws and policies, particularly the National Environmental Policy Act (NEPA), call for us to develop alternatives that are sensitive to many different competing interests and desires, and to subject these alternatives to public scrutiny before selecting a plan for recommendation. To further ensure that each recommended plan will best serve the Nation, we subject the supporting analyses to stringent technical and policy reviews before forwarding the recommendation to the Administration and Congress for a final decision. We are following this process in our study of navigation needs on the White River and will fully comply with the P&G, NEPA, and all other applicable laws and policies.

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Jim Dolan

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Please be assured that our planning efforts adhere to the applicable laws and policies to ensure that all project proposals, including those along the White River, are environmentally sound. We appreciate your views and concerns, and we will give them full consideration in our planning process.

Sincerely,

Rennie H. Sherman

Rennie H. Sherman
Acting Chief, Planning Division
Office of Deputy Commanding General
for Civil Works

OSA, WHLO RM3D656 /
CECW-P, CECW-ZD, TS0062804
CEMVD-PM-E
CEMVM-PM

10 CHS Hicklin 501-329-5665
Subject: White River Comprehensive Study

Date: Fri, 14 Jul 2000 11:57:36 -0500

From: "David Carruth" <dcarruth@futura.net>

To: "Adam Harris" <chamber@tcac.net>, "Alan Perkins" <aperkins@hgpw.com>, Jim Bodvay

"Allan Mueller" <allan_mueller@fws.gov>,

"Allen Maxwell" <Allen.Maxwell@mail.house.gov>, <ben_noble@lincoln.senate.gov>,

"Bill Pettit" <troutman@neark.net>, <billreed@riceland.com>,

"Dennis Widner" <dennis_widner@fws.gov>, "Don McKenzie" <wmidm@ipa.net>,

"F. G. Courtney" <Courtney@nwf.org>, "Gary Rogers" <grogers@doverdixon.com>,

"Greg Yeatman" <gly@yeatman.com>, "Hank & Cathy Brown" <catsbluff@aol.com>,

<jeb.joyce@mail.house.gov>, "Jeff Stein" <Jeff@taxpayer.net>,

"Jerry Lee Bogard" <jlb@hugit.net>, "Jesse Grantham" <jesse_grantham@centurytel.net>,

"Jim Rankin" <jrankin@catlaw.com>, "Jim Wood" <jrmiajim@arkwest.com>,

"Joe Krystofik" <Joe.Krystofik@fws.gov>

Please read the following article that appeared in today's Arkansas Democrat Gazette:

<http://www.ardemgaz.com/today/ark/A1xtroutf14.html> This is **EXACTLY** why we need a comprehensive study of the White River. This article reflects that the users of the upper White are concerned about (1) lake levels on Bull Shoals lake (Undoubtedly, users of Beaver, Tablerock and Norfork will also share their concern), (2) SWEPCO is concerned about having water to generate electricity and (3) the trout industry is concerned about the water temperature. These are but three of the multiple interests when it comes to use of the White River. This debate does not, however, include the following:

1. Farmers downstream (beginning at Batesville) and their concern about flood control. While I am not saying that a release to placate the trout industry would flood farms, it is clear that the interests of the trout industry, big lake recreation and SWEPCO do not include this factor.

2. It does not address the issue of irrigation water withdrawal

3. It does not address navigation

4. It does not take into account the effect discharge of cold water will have on the lower White which is populated by aquatic specie that are not cold water tolerant.

5. It does not take into account recreational uses of the Lower White.

6. It does not consider waterfowl.

Those of us who live on the lower White have become more and more concerned over the past 15 years that from Batesville south was simply considered the discharge pipe for the big lakes and trout industry. Ironically, trout are not indigenous to the White and were introduced after the dams were built. Man has vastly changed the character of the upper White from its original state. This is all fine and good except no consideration seems to be given to the decimation this has caused to certain aspects of the lower White such as the commercial fishing industry.

am not calling for nor am I attacking the trout Industry. What I am saying is that

management of the White is almost a hodge podge of ad hoc decisions between the Lower White and Upper White. Release of cold water from the dams whether for the trout industry or to generate electricity effects the lower White by dumping cold water on us. This, in turn, changes the nature of the river from a warm water habitat to a cold water one. Just as the trout cannot tolerate warm water, catfish, bass, crapple, bream, gar, etc. cannot tolerate cold water. The long term effect of this has been the loss to Clarendon and the lower White of a vast commercial fishing industry. Literally trainloads of fish used to leave Clarendon for the north and northeast. Now less than five people even fish commercially and they only supplement their income.

This is but one example of how one project (flood control) on the upper White has had a dramatic impact on the rest of the river. Now, we are embroiled in a discussion about a navigation project, a several irrigation projects, electric generation, big lake recreation and trout fishing. Without a comprehensive study to balance the competing interests, we can slowly but surely render the river useless for all purposes, including its original purpose.

Who among our leaders will lead?

David Carruth





DEPARTMENT OF THE ARMY

VICKSBURG DISTRICT, CORPS OF ENGINEERS

4186 CLAY STREET

VICKSBURG, MISSISSIPPI 39180-3436

<http://www.mvdc.usace.army.mil/>

REPLY TO
ATTENTION OF:

CEMVK-DE (420-74j)

18 July 2000

MEMORANDUM FOR CDR, CESWL, Post Office Box 867, Little Rock
AR 72203-0867

SUBJECT: Request for Comprehensive Study of the White River
Basin in Arkansas

1. Reference is made to the enclosed letter from
Dr Jim Bednarz, Arkansas State University, SAB (encl 1
2. Since the White River Basin is not under my jurisdiction, I
am forwarding the letter to you for response. Dr. Bednarz has
been advised of this action.
3. If I may be of further assistance, please contact me.

Encl

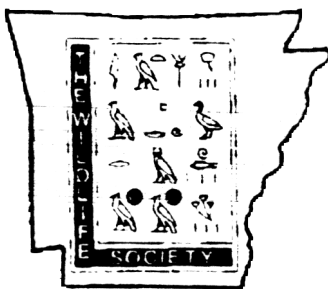
ROBERT CREAR
Colonel, Corps of Engineers
Commanding

OPTIONAL FORM 99 (7-99)	
FAX TRANSMITTAL	
# of pages 3	
To Jim Bodron	From Brenda Puloma
Dept./Agency	Phone #
Fax #	Fax #
NSN 7540-01-317-7368 5098-101 GENERAL SERVICES ADMINISTRATION	

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THE WILDLIFE SOCIETY
ARKANSAS CHAPTER

DEPT. OF AGRICULTURE
ACTWS
JUN 29 2000
00-M

22 June 2000

Col. Robert Crear
U.S. Army Corps of Engineers
Vicksburg District
4155 Clay Street
Vicksburg, MS 39180

Dear Colonel Crear:

Enclosed is a resolution urging a comprehensive study of the White River Basin within Arkansas and Missouri that was originally passed by the Arkansas Chapter of the Wildlife Society (ACTWS) in October 1999. The Executive Committee of the ACTWS was given authority by the membership to refine the resolution as appropriate, which was completed and approved in May 2000.

The ACTWS is the primary organization that represents professional wildlife biologists employed by federal and state governmental agencies, private industry, and universities throughout Arkansas. We are very concerned about the ecological integrity of the White River system, perhaps, one of the most unique ecosystems occurring in our state. We urge you to promote the undertaking of an objective and comprehensive study on the cumulative impacts of all pending and potential projects affecting the White River Basin.

Conservation and wise stewardship of this unique resource will benefit all Arkansans and users of this system for many centuries into the future.

Thank you for considering our input.

Sincerely,

Jim Bednarz, Ph.D.
President, ACTWS

P.O. Box 599
Dept. of Biological Sciences, ASU
State University, AR 72467
(870) 972-3082

RECEIVED IN CEL MK-00
00 JUN 28 AM 10:51

RESOLUTION URGING A COMPREHENSIVE STUDY OF THE WHITE RIVER BASIN WITHIN ARKANSAS and MISSOURI

WHEREAS, land use within the entire White River basin covers more than 27,765 square miles
and

WHEREAS, the White River basin is one of the most important bottomland hardwood
wetland areas in the world and is designated as a Ramsar Wetland of National Importance, and

WHEREAS, the streams and wetlands of the White River basin overwinter the largest
concentration of mallards in North America, and

WHEREAS, the lower White River basin is home to the only remnant population of black
bear in the Mississippi Alluvial Valley, and

WHEREAS, the White River basin provides habitat for many Neotropical migratory birds of
special concern, and

WHEREAS, the associated drainages and streams of the White River Basin support
several populations of endangered mussels, and

WHEREAS, the White River basin supports a valuable riverine fishery which includes
sturgeon and paddlefish, and

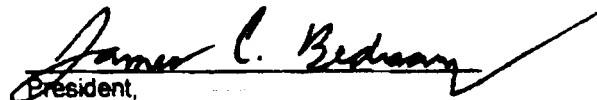
WHEREAS, the White River basin supports many uses including; agriculture water
supplies, hydroelectric generation, commercial navigation, fish and wildlife conservation,
recreational and commercial fishing, waterfowl and other hunting, commercial shelling, and
recreational boating, and

WHEREAS, several management proposals are currently under consideration for the
White River basin including; the white river navigation project, four agriculture irrigation projects,
low water allocation planning, modifying reservoir release operating plans, and extensive
reforestation as defined by the Mississippi Alluvial Valley Migratory Bird Conservation Plan, and

WHEREAS, a comprehensive study to provide a basis for sound management decisions is
proposed for the entire White River basin on the potential benefits and conflicts associated with
the many uses and proposals;

NOW THEREFORE BE IT RESOLVED, that the Arkansas Chapter of The Wildlife Society, on 7
October, 1999, at the annual fall meeting held on the Arkansas Tech University Campus in Russellville,
Arkansas; strongly urge the U.S. Army Corps of Engineers to initiate a comprehensive study of the entire
White River basin and look at the cumulative impacts of all pending and potential projects, and

FURTHERMORE, copies of this resolution will be sent to the U.S. Army Corps of
Engineers, the Secretary of the Interior, the Arkansas Congressional Delegation, Governor Mike
Huckabee, the U.S. Fish and Wildlife Service, and the Arkansas Game and Fish Commission.


President,
Arkansas Chapter of The Wildlife Society