

Appendix F

Part 2

Public and Interagency Coordination

Prior Alternative/Plan Selection

Section 1 – U.S. Fish and Wildlife Service

Section 2 – U.S. Environmental Protection Agency

Section 3 – Mississippi Department of Fisheries, Wildlife, and Parks

Section 4 – Mississippi Department of Environmental Quality

Section 5 - Public Coordination

From: [Carpenter Crowther, Andrea L CIV USARMY CEMVN \(USA\)](#)
To: [Morris, Kelly; FBass@mdeq.ms.gov; Dennis Riecke; larry.long@epa.gov; chantel.davis@usda.gov](#)
Cc: [Pruitt, Bruce ERDC-RDE-EL-MS CIV; Haring, Christopher P CIV \(USA\)](#)
Subject: FW: Desoto County Feasibility Study
Date: Thursday, May 13, 2021 2:37:00 PM
Attachments: [Channel Enlargement.jpg](#)
[DetentionPonds.jpg](#)
[NLCD Footprints on Ecosystem Streams.jpg](#)
[Grade Control Structures.jpg](#)
Importance: High

Hello Interagency Team,

The USACE has reached a tentatively selected plan and are working on getting the draft Integrated Feasibility Report/EIS out for review around the end of May. I would like to set up a coordination meeting with everyone from the IAT and the ERDC group to go through all pertinent information. As the draft Integrated Feasibility Report and EIS is set to release on 28 May 2021, I am proposing a meeting on 17 June 2021 at 10 am to give everyone a chance to review the document prior to meeting. This is tentative, as I have not gathered your schedules and availability. Once the draft report is released, any comments would be due within 45 days of the release. Please feel free to call me any time, at all.

The Study includes a flood risk component which requires compensatory mitigation, as well as an ecosystem restoration component, both are described below.

We have worked/are working with the Engineering Research and Development Center to certify a stream condition index (SCI) model. The purpose of the assessment was to develop a stream condition assessment method that identified existing conditions within the watershed, detailed the major water resources problems and opportunities in the watershed, and recommended tools and a strategic course of action for achieving the desired conditions in the watershed. The SCI, was formulated, tested and refined to determine the existing conditions, identify the problems in the watershed, prioritize stream segments for restoration, recommend structural and non-structural restoration designs, and provide a numerical assessment of alternatives for planning purposes. The SCI is a visual, multi-metric assessment tool using metrics to characterize the hydrologic, geomorphic, water quality, plant habitat and animal habitat of a selected stream reach.

This effort represents a method of assessing ecosystems using multi-attributes across multi-scales, called the "Multi-Scale Watershed Approach" (MSWA) that was first developed and certified through the National Ecosystem Planning Center of Expertise (ECO-PCX) for the Duck River Watershed Plan, located in middle Tennessee. The concept behind the MSWA was to establish a means of utilizing readily available data and surface assessments (i.e., "boots-on-the-ground" observations) to create an overall knowledge base focusing on watershed problems and opportunities. The outcome of MSWA can become the principle component of the decision-making process such that water resource managers have the ability to make scientifically defensible decisions not only at project specific scales, but also beyond the footprint of the project to the entire watershed. From the watershed perspective, the cause and effect relationships between land use, water quality and quantity, in-channel and riparian conditions, and biotic responses culminate at a single outlet from the watershed and are representative of the ecological condition of the watershed. In addition,

assessment at the watershed scale offers advance planning including design, construction, and operation, maintenance, repair, replacement and restoration of aquatic ecosystems.

I am copying in a description of the proposed plans below. Let me know if you have any questions or concerns. I'll send an email out that is similar to this one to the entire team asap.

PROJECT DESCRIPTION.

The current Tentatively Selected Plan (TSP) combines the Locally Preferred Plan (LPP) for flood risk management and the National Ecosystem Restoration (NER) plan. The LPP includes the National Economic Plan with additional features the local sponsor is in favor of retaining. The following is a description of the features proposed in each of the plans.

NED Plan:

A channel enlargement along Horn Lake Creek (HLC) would be constructed downstream of Goodman Rd. in Horn Lake, Mississippi, enlarging the channel bottom from approximately 15-25 feet to approximately 40 feet for approximately 0.8-mile from stream mile 18.6 to Mile 19.41. The creek banks would be constructed for stability at a slope of approximately 3-foot horizontal to 1-foot vertical (3:1). The Horn Lake Creek channel enlargement would require tree clearing of approximately 10 acres along one bank of Horn Lake Creek for access, bank stabilization, and excavation. The enlargement and slope flattening would require approximately 95,000 cubic yards of excavation, all of which would be disposed off-site. Approximately 22,750 tons of riprap would be placed to prevent scour damage. The riprap would be placed in a three-foot deep layer on the bottom and 5 feet up both banks. The riprap would be placed over approximately 6,000 tons of filter material. The upper banks would be protected with 18,780 square yards of turf reinforcing mat. The 0.04 AEP Nonstructural aggregation feature reduces stages during the 0.01 AEP event for 158 structures with an average reduction of 0.75 feet. During the 0.04 AEP event this feature reduces stages for 125 structures with an average reduction of 1 foot.

The Lateral D Detention Basin would be in-line with the stream, a tributary to HLC. The full basin would encompass approximately 22 acres of BLH forested land, while the bottom area of the detention basin is approximately 16 acres. Tree clearing would be required for the full acreage mentioned, and excavation would be required to a depth of approximately 10 with 3-foot horizontal to 1-foot vertical side slopes. A 500-linear foot outlet embankment would be constructed to include a 48-inch reinforced concrete pipe (RCP) outlet with a 100-linear foot overflow spillway armored with approximately 2,000 tons of riprap over approximately 500 tons of filter material on the downstream side. The spillway would operate at elevation 300.0 (the 0.50 annual chance exceedance (ACE) event, or 2-year flood). The maximum storage of 177 acre-feet would require approximately 350,000 CY of excavation. The current design assumes replanting with native vegetation of approximately 10%, or 2.2 acres, of the area that would be cleared.

Locally Preferred Plan:

The comparison of the LPP Plan and the NED Plan is the addition of two detention basins, one Cow

Pen Creek and the other on Rocky Creek. These basins reduce structural damages on each of the tributaries and were retained at the request of the DeSoto County Board of Supervisors (the non-federal sponsor, NFS).

The Rocky Creek in-line detention basin would total approximately 9 acres and would require approximately 7.5 acres of tree clearing and excavation to a depth of approximately 10 feet. The pool bottom area would encompass approximately 6 acres. The dry detention basin would have a single pool elevation of approximately 302.0. Slopes would be constructed at approximately 3H:1V for stability. A downstream embankment would be constructed and extend approximately 500 linear feet. The embankment would include a 48-inch RCP outlet and 100- linear foot overflow spillway armored with approximately 6,000 tons of riprap placed over approximately 1,500 tons of filter material on the downstream side. The current design assumes replanting with native vegetation of approximately 10%, or 0.9 acre, of the area that would be cleared.

The Cow Pen Creek detention basin would total approximately 20 acres in two pools (a 12-acre upstream pool and an 8-acre downstream pool) and would require approximately 8.5 acres of tree clearing (upstream pool only) and excavation to a depth of approximately 10 feet. The upper pool would have a bottom elevation of 262.0 with a bottom area of 10 acres, and slopes would be constructed at 3H:1V back to the existing grade. A 500-linear foot embankment would be constructed on the downstream end of the detention basin and would include a 48-inch RCP outlet and 100-linear foot overflow spillway armored with approximately 2,000 tons of riprap over approximately 500 tons of filter material on the downstream side. The spillway would operate at elevation 272.0, approximately at the 0.50 ACE event. The maximum storage of 108 acre-feet requires approximately 175,000 cubic yards of excavation which would be disposed of off-site within an upland disposal area, no impacts are anticipated. The current design assumes replanting with native vegetation of approximately 10%, or 1.2 acres, of the area that would be cleared.

The downstream Cow Pen detention basin would be offline and encompass approximately 8 acres. The basin would have a bottom elevation of 258.0 with a bottom area of approximately 6 acres. Slopes would be constructed up to the existing grade at 3H:1V. A 500-linear foot embankment would be constructed on the downstream end of the detention basin and would include a 48-inch RCP outlet and 100-linear foot overflow spillway armored with approximately 2,000 tons of riprap over approximately 680 tons of filter material. An inlet sill would require an additional 800 tons of riprap. The 100-foot wide spillway would operate at elevation 268.0, approximately at the 0.50 ACE event. The maximum storage of 68 acre-feet requires approximately 115,000 cubic yards of excavation which would be disposed of off-site. The current design assumes replanting with native vegetation of approximately 10%, or 1.2 acres, of the area that would be cleared.

Active Restoration is the recommended compensatory mitigation plan. A total of approximately 42.5 acres of agricultural land would be reforested by planting native trees, other activities as described below may also be included, as determined necessary by the IAT. A planting plan would be created in coordination with the IAT and included in the release of the final Environmental Impact Statement and Conceptual Mitigation Plan. A site- specific mitigation plan would be developed during PED, further detailing a planting plan. Grade control structures or low-water weirs, strategic placement of coarse woody debris, construction of in-stream habitat, and bench cuts may also be considered for

compensatory mitigation; however, no sites have been identified and detailed analyses have not been conducted.

NER Plan:

The ecosystem restoration goal is to stabilize channels and connect/improve riparian habitat, which would minimize channel degradation and erosion and support aquatic ecosystem form and function along main stem channels and tributaries in the DeSoto County watersheds. Currently, the erosion, head-cutting and stream bed degradation leads to bank failures, sedimentation, and prevents stable habitat from forming. Riparian and potentially reforestable acreages were determined using National Land Cover Data mapping within 328 feet of each stream. Categories assumed to be reforestable include cultivated crops, barren land, hay/pasture, herbaceous, and shrub/scrub. This plan consists of eleven streams that would have a system of grade control structures (GCS) placed in each of the creeks (See Table below). The plan also included a riparian reforestation feature of 25% of the reforestable lands within 100 meters of each stream. Grade control structures were identified as systems of structures paired with various stabilization techniques such as stone toes, channel training structures, and pool and riffle components.

Stream	Alt. ID	# GCS	Riparian Reforestation (acres)	# Average Annual Habitat Units
Camp	CP-5	7	98	98
Cane	CN-5	9	66	54
Hurricane	HN-5	5	160	140
Lick	LC-5	2	36	24
Nonconnah	NO-5	6	107	65
Mussacuna	MC-5	2	57	40
Horn Lake	HL-5	14	64	101
Nolehoe	NL-5	11	32	54
Johnson	JC-5	11	122	113
Red Banks	RB-5	5	48	46
Short Fork	SF-5	9	106	84

Again, please feel free to call me at any time with any questions or concerns.

Thank you,

Andrea L. Carpenter

Biologist

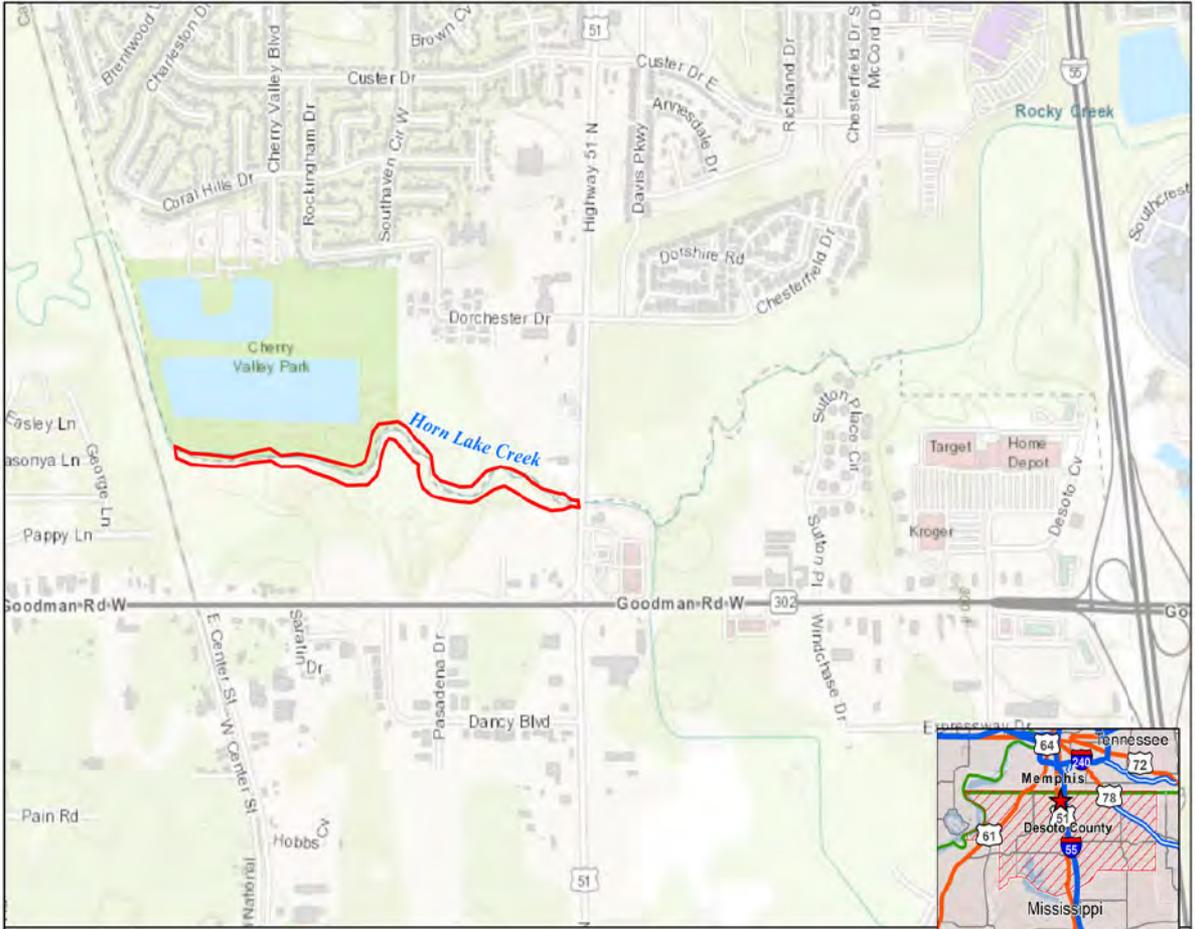
USACE, Regional Planning and Environment Division South

167 N. Main St., Rm. B-202

Memphis, TN 38103

Phone: 901-544-0817

Fax: 901-544-3955

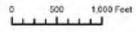


Legend
 Channel Enlargement



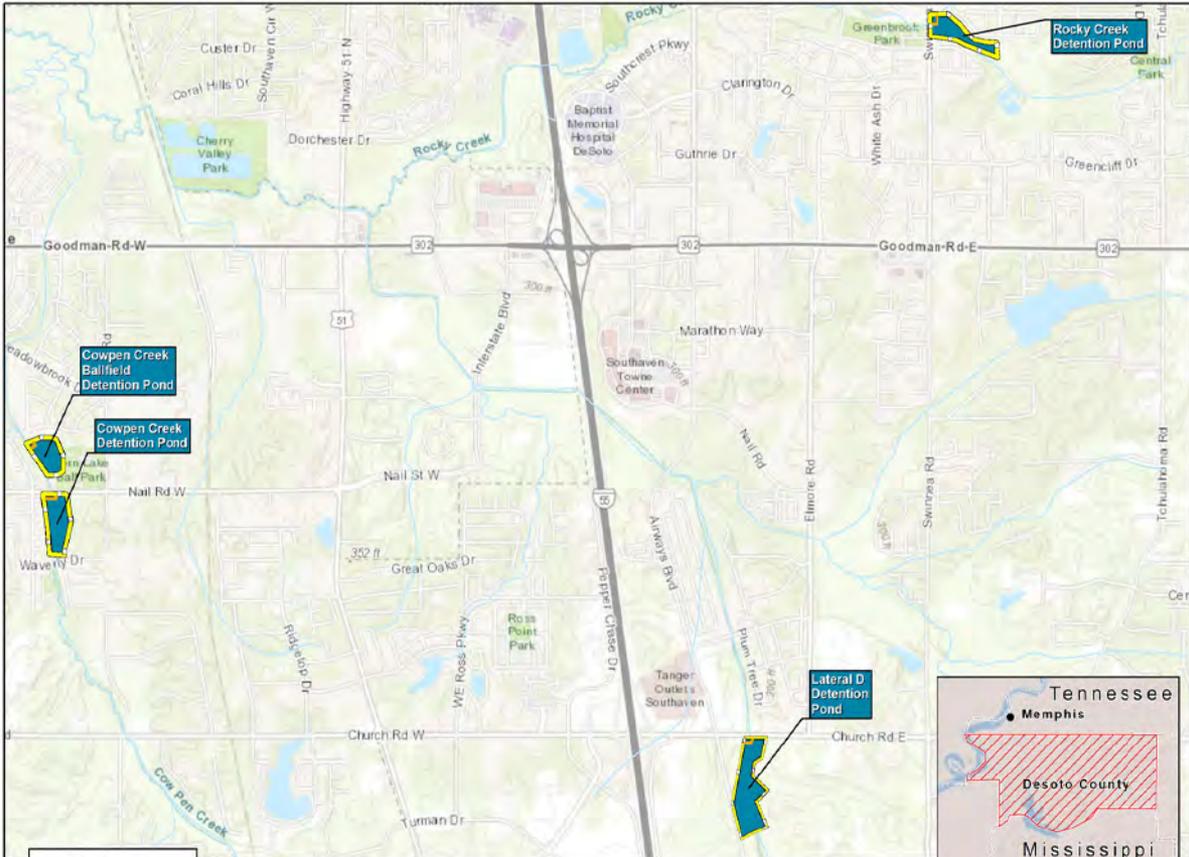
Channel Enlargement - Horn Lake Creek

U.S. Army Corps of Engineers



Date: 4/29/2021





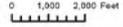
Legend

-  Detention Ponds
-  Right of Ways
-  Embankments



Detention Ponds in North Desoto County

U.S. Army Corps of Engineers



Date: 4/28/2021

Tennessee

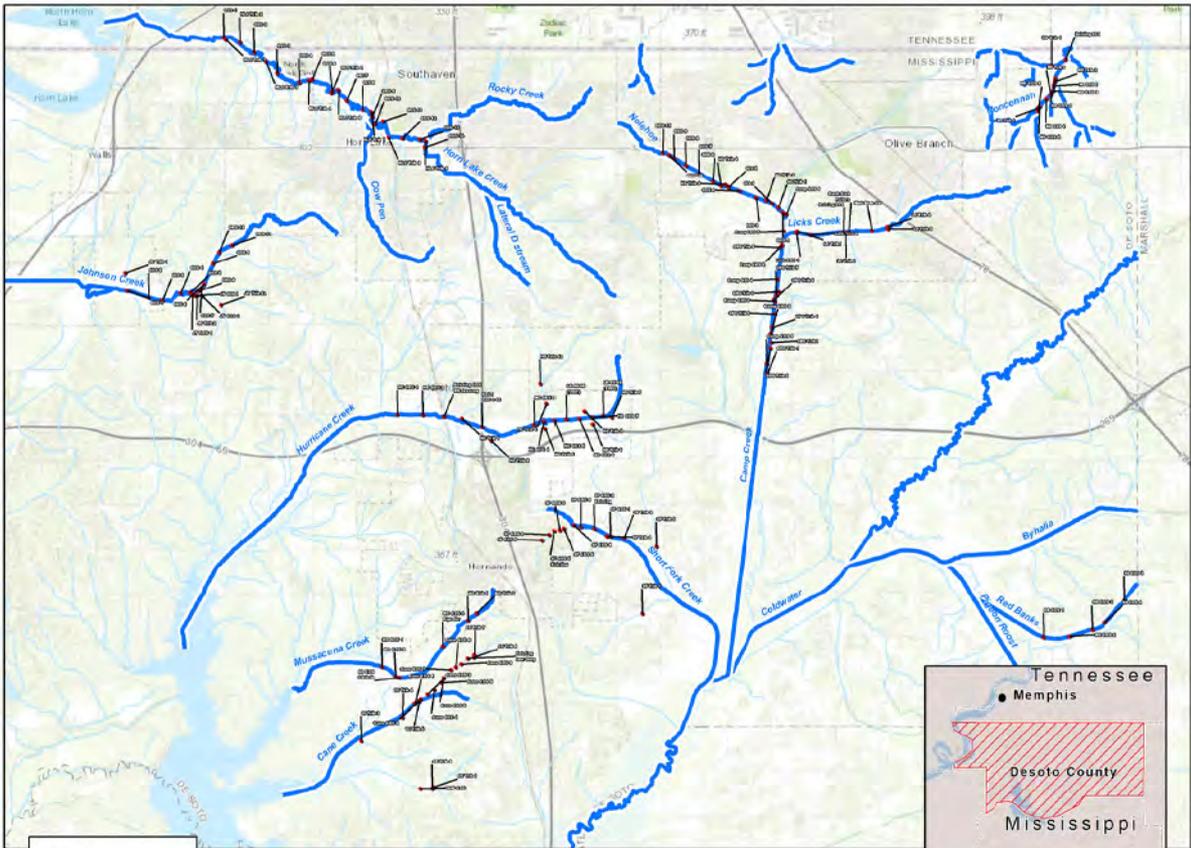
● Memphis

Desoto County

Mississippi

Vicinity Map

Copyright (c) 2014 Esri

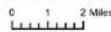


Legend

- Grade Control Structures
- Streams of Interest



Grade Control Structures
 U.S. Army Corps of Engineers

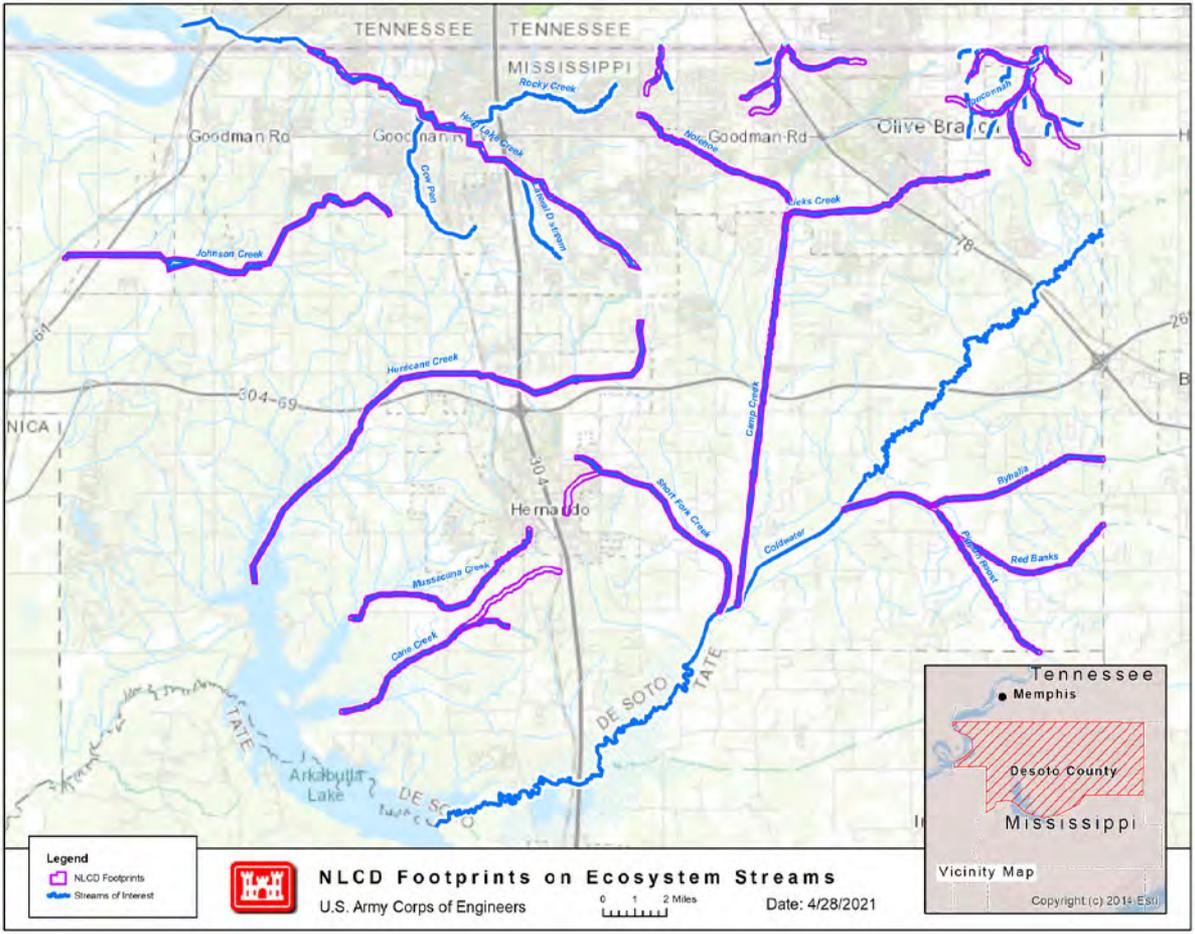
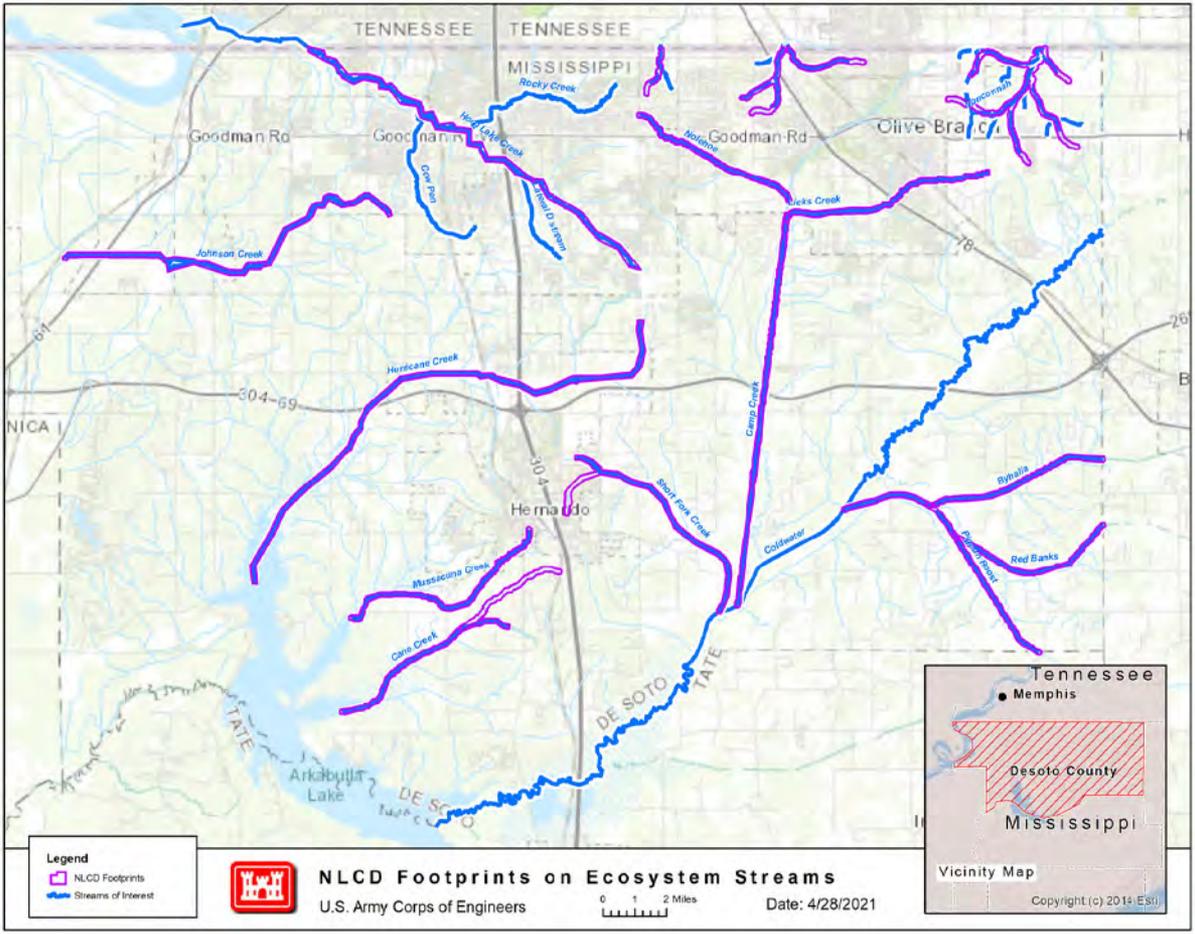


Date: 4/27/2021

Tennessee
 ● Memphis
 Desoto County
 Mississippi

Vicinity Map

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Section 1

U.S. Fish and Wildlife Service



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

September 6, 2019

Kelly Morris
U.S. Fish and Wildlife Service, Region 4
Mississippi Ecological Services Field Office
6578 Dogwood View Parkway
Jackson, MS 39213

Dear Ms. Morris,

The U.S. Army Corps of Engineers (USACE), Memphis District (MVM), thanks the U.S. Fish and Wildlife Service (USFWS) for the informal comments and information provided on the *North DeSoto County, Mississippi Feasibility Study*, thus far.

The USACE MVM is preparing a Draft Integrated Feasibility Report and Environmental Impact Statement (DIFR-EIS) for the Memphis Metropolitan Stormwater Management Project entitled *North DeSoto County, Mississippi Feasibility Study*. The study focuses on the development of multi-purpose features to reduce flood risk and damages in the project area. Flooding inundates major transportation corridors and damages public infrastructure and development, including residential, commercial and industrial properties; isolates neighborhoods and communities; and threatens life safety. Removal of suitable riparian cover, loss of wetlands and floodplains, and an increase in development for residential and commercial purposes have contributed to an altered flow regime and repeated flooding within the City of Horn Lake, Southaven, Olive Branch, and Hernando as well as causing channel instability and further degradation of aquatic and wetland resources. Retention and/or detention basins, channel modifications, floodplain restoration, and other features are being investigated in this study to determine if these options would be effective and feasible in reducing damages from flooding.

The USACE MVM formally invites the USFWS to become a cooperating agency. Per the National Environmental Policy Act (NEPA), 40 CFR 1501.6, a cooperating agency would participate in the NEPA process at the earliest possible time; participate in the scoping process; assume, on request of the lead agency, responsibility for developing information and preparing environmental analyses including portions of the environmental impact statement which the cooperating agency has special expertise; make available staff support at the lead agency's request to enhance the latter's interdisciplinary capability; and would normally use its own funds. The lead agency shall, to the extent available funds permit, fund those major activities or analyses it requests from cooperating agencies.

Project formulation will be in accordance with NEPA and Engineering Regulation 1105-2-100 and will fully consider a range of environmental, economic and social factors. As a cooperating agency, the USFWS would fully consider the views need and benefits of competing interests. A cooperating agency may, in response to a lead agency's request for assistance in

preparing the environmental impact statement, reply that other program commitments preclude any involvement or the degree of involvement requested in the action that is the subject of the environmental impact statement. A copy of this reply shall be submitted to the Council on Environmental Quality.

Please indicate whether the USFWS accepts the formal invitation to become a cooperating agency within 30 days of this letter. If you have questions, please contact Andrea Carpenter by phone at (901) 544-0817 or by email at Andrea.L.Carpenter@usace.army.mil.

Sincerely,



Edward P. Lambert
Chief, Environmental Compliance Branch
Regional Planning and Environment Division South



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Mississippi Ecological Services Field Office
6578 Dogwood View Parkway, Suite A
Jackson, Mississippi 39213
Phone: (601)965-4900 Fax: (601)965-4340

October 15, 2019

Mr. Edward P. Lambert
Department of the Army
Memphis District Corps of Engineers
167 North Main Street B-202
Memphis, Tennessee 38103

Dear Mr. Lambert:

Thank you for contacting the Fish and Wildlife Service (Service) regarding the U.S Army Corps of Engineers, Memphis District's (USACE MVM) plan to prepare a Draft Integrated Feasibility Report and Environmental Impact Statement for the Memphis Metropolitan Stormwater Management Project entitled *North DeSoto County, Mississippi Feasibility Study*. Our comments are submitted in accordance with the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), and the Migratory Bird Treaty Act (16 U.S.C. 703-711, as amended).

The Service looks forward to being a cooperating agency for the *North DeSoto County, Mississippi Feasibility Study* and providing our expertise on trust fish and wildlife resources, federally listed candidate, threatened, and endangered species, and water resource planning.

If you have any questions, please contact Kelly Morris in our office, telephone: (601) 321-1120, or visit our website at <http://www.fws.gov/mississippiES/>.

Sincerely,

Stephen M. Ricks
Field Supervisor
Mississippi Field Office



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Mississippi Ecological Services Field Office
6578 Dogwood View Parkway, Suite A
Jackson, MS 39213-7856

Phone: (601) 965-4900 Fax: (601) 965-4340

<http://www.fws.gov/mississippiES/endsp.html>

In Reply Refer To:

September 02, 2020

Consultation Code: 04EM1000-2020-SLI-0590

Event Code: 04EM1000-2020-E-03030

Project Name: North DeSoto County Feasibility Study_Flood Risk Management_Updated

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office. Submit consultation requests electronically to the following email: msfosection7consultation@fws.gov

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Mississippi Ecological Services Field Office

6578 Dogwood View Parkway, Suite A

Jackson, MS 39213-7856

(601) 965-4900

Project Summary

Consultation Code: 04EM1000-2020-SLI-0590

Event Code: 04EM1000-2020-E-03030

Project Name: North DeSoto County Feasibility Study_Flood Risk Management_Updated

Project Type: DREDGE / EXCAVATION

Project Description: Pursuant to the National Environmental Policy Act (NEPA), the U.S. Army Corps of Engineers (USACE), Memphis District, as the lead agency intends to prepare a Draft Integrated Feasibility Report and Environmental Impact Statement (DIFR-EIS) for the Memphis Metropolitan Stormwater Management Project: North DeSoto County, Mississippi Feasibility Study. The DIFR-EIS seeks to evaluate the effectiveness of existing Federal and non-Federal improvements; to determine the need for additional improvements to reduce the risk of flooding from storm water, restore environmental resources, and improve the quality of water entering the Mississippi River and its tributaries; and to determine if such improvements are technically feasible, environmentally acceptable, and economically justified.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/34.945281715551786N89.95977722657608W>



Counties: DeSoto, MS

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

MIGRATORY BIRD INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

Due to your project's size, the list below may be incomplete, or the acreages reported may be inaccurate. For a full list, please contact the local U.S. Fish and Wildlife office or visit <https://www.fws.gov/wetlands/data/mapper.HTML>.

FRESHWATER EMERGENT WETLAND

- [PEM1A](#)
- [PEM1Ad](#)
- [PEM1Ah](#)
- [PEM1Ax](#)

FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1A](#)
- [PFO1Ad](#)
- [PFO1Ah](#)
- [PFO1Ax](#)
- [PFO1C](#)
- [PSS1A](#)
- [PSS1Ax](#)
- [PSS1C](#)
- [PSS1Cb](#)

FRESHWATER POND

- [PUBF](#)
- [PUBH](#)
- [PUBHh](#)
- [PUBHx](#)
- [PUBKx](#)
- [PUSAh](#)

LAKE

- [L1UBHh](#)

RIVERINE

- [R2UBH](#)
- [R2UBHx](#)
- [R4SBC](#)
- [R4SBCx](#)
- [R5UBH](#)



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Mississippi Ecological Services Field Office
6578 Dogwood View Parkway, Suite A
Jackson, Mississippi 39213
Phone: (601)965-4900 Fax: (601)965-4340

September 22, 2020

IN REPLY REFER TO:
2020-I-1406

Mr. Edward P. Lambert
Department of the Army
Memphis District Corps of Engineers
167 North Main Street B-202
Memphis, Tennessee 38103

Dear Mr. Lambert:

The Fish and Wildlife Service (Service) has reviewed your correspondence dated September 15, 2020, regarding the proposed North DeSoto County, Mississippi Feasibility Study. Our comments are submitted in accordance with the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The proposed project falls within the range of the northern long-eared bat (*Myotis septentrionalis*; NLEB) and the wood stork (*Mycertia americana*). The Service has received the NLEB 4(d) Rule Streamlined Consultation Form for the proposed project and concurs with your determination that the proposed project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule. Additionally, based on the information provided, suitable habitat for the wood stork is not found within the action area. The Service has no additional comments or concerns regarding this project as it relates to the ESA.

No further coordination is required with this office unless there are changes in scope or location of the proposed project. If you have any questions, please contact Kelly Morris in our office, telephone: (601) 321-1120, or visit our website at <http://www.fws.gov/mississippiES/>.

Sincerely,

Stephen Ricks
Stephen M. Ricks
Field Supervisor
Mississippi Field Office

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:

YES **NO**

	YES	NO
1. Does the project occur wholly outside of the WNS Zone ¹ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have you contacted the appropriate agency ² to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant³ (Name, Email, Phone No.): US Army Corps of Engineers, Andrea Car

Project Name: DeSoto County Feasibility Study

Project Location (include coordinates if known): various locations in DeSoto County, Mississippi

Basic Project Description (provide narrative below or attach additional information):

Please see coordination/concurrence request letter.

¹ <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>

² See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>

³ If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion ⁴ ? (if yes, report acreage below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estimated total acres of forest conversion	10	
If known, estimated acres ⁵ of forest conversion from April 1 to October 31	0	
If known, estimated acres of forest conversion from June 1 to July 31 ⁶	0	
Does the project include timber harvest? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: _____

Date Submitted: 22 September 2020

⁴ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).

⁵ If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.

⁶ If the activity includes tree clearing in June and July, also include those acreage in April to October.

From: [Morris, Kelly M](#)
To: [Carpenter Crowther, Andrea L CIV USARMY CEMVN \(US\)](#)
Subject: [Non-DoD Source] Re: [EXTERNAL] RE: North DeSoto County Feasibility Study Tentatively Selected Plan
Date: Wednesday, July 1, 2020 10:21:00 AM

Hey Andrea,

Hope you are doing well. FWS has no specific concerns with the proposed channel enlargement and rip-rap bottom on Horn Lake Creek, in these urbanized streams rip-rap will provide microhabitats suitable for aquatic species found in this area. As far as the modeling approaches, FWS would prefer the Corps uses the SCI model, however HSI models will suffice if the Corps determines the SCI models are not warranted.

I'm not too familiar with certified green spaces, but you might want to try and contact following which I found on the county website: Contact Greenways & Parks at 662-489-9708 about specific greenways, bike trails or walking trails around the I-269 corridor.

Finally, I spoke with the state fish biologist (Matt Wagner, MDWFP) regarding any state species of concern/FWS at-risk species in the Horn Lake and Coldwater River areas. One species of particular concern is the Piebald Madtom (*Noturus gladiator*), this is a candidate species for listing under the ESA, with a high potential for listing. Areas within the Coldwater River where the Piebald Madtom are currently known are ~20 miles of unchannelized river from Highway 305 (34.814037, -89.826300) to Cayce Road (34.907095, -89.617588). This is their last "stronghold" in the Yazoo as they are extirpated from the Tallahatchie River. Any area near or within this reach would be ideal for any restoration/mitigation projects. Potential restoration projects in this type of situation would add instream habitat and contribute to streambank stabilization. We would recommend restoration projects that create riffles using rip-rap and woody debris, strategically sunken coarse woody debris, and creation bank habitat utilizing various structures. There is great example of this in Water Valley which is doing wonders for Yazoo Darters. Additionally, streambank restoration work would be beneficial for this area, involving planting the correct vegetation and properly grading the bank to prevent future erosion. Matt would be the best contact to address any madtom issues/questions, his contact information is: E-mail: matthew.wagner@mmns.ms.gov; Phone: 610-763-9074.

Hopefully I've covered all the bases, please feel free to reach out if you have any additional questions. Hope you have a happy, relaxing 4th!

Kelly

From: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US)
<Andrea.L.Carpenter@usace.army.mil>

Sent: Monday, June 22, 2020 9:51 AM

To: Morris, Kelly M <kelly_morris@fws.gov>

Subject: RE: [EXTERNAL] RE: North DeSoto County Feasibility Study Tentatively Selected Plan

Great, thanks. Feel free to give me a call anytime.

-----Original Message-----

From: Morris, Kelly M [mailto:kelly_morris@fws.gov]

Sent: Monday, June 22, 2020 9:46 AM

To: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US)

<Andrea.L.Carpenter@usace.army.mil>

Subject: [Non-DoD Source] Re: [EXTERNAL] RE: North DeSoto County Feasibility Study Tentatively Selected Plan

Hey Andrea, thanks for the update. Planning to get you comments this week, I'll give you a call if I have any questions.

From: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US)

<Andrea.L.Carpenter@usace.army.mil>

Sent: Monday, June 15, 2020 1:50 PM

To: Morris, Kelly M <kelly_morris@fws.gov>; Dennis Riecke <Dennis.Riecke@wfp.ms.gov>;

FBass@mdeq.ms.gov <FBass@mdeq.ms.gov>; larry.long@epa.gov <larry.long@epa.gov>; Stacey

Ricks <sricks@mema.ms.gov>; Everitt, Jared H CIV USARMY CEMVN (US)

<Jared.H.Everitt@usace.army.mil>; Price, Jaybus J ERD-MS <Jaybus.J.Price@usace.army.mil>;

Felder, David <david_felder@fws.gov>; Garreth DeKlerk <gdeKlerk@mema.ms.gov>; Angela

Matthews <amatthews@mema.ms.gov>; Berkowitz, Jacob F CIV USARMY CEERD-EL (USA)

<Jacob.F.Berkowitz@usace.army.mil>; Killgore, Jack ERDC-EL-MS

<Jack.Killgore@erdc.dren.mil>

Subject: [EXTERNAL] RE: North DeSoto County Feasibility Study Tentatively Selected Plan

Hello everyone,

It's been a while since I was able to send out an update in the feasibility study in DeSoto County, Mississippi, and I would like to correct that.

As you know, USACE delayed the Tentatively Selected Plan (TSP) milestone date. The current National Economic Development (NED) plan includes a 0.5 mile channel enlargement with a full riprap bottom. The channel bottom would be widened to approximately 40 feet. Tree clearing would be required for access, bank excavation, etc. I have attached an aerial map of the site that is proposed for enlargement, it isn't detailed, but it will give you an idea of the site. In addition, there is a non-structural component that would potentially raise or relocate residential structures and/or dry floodproof commercial structures in the 25-year floodplain (0.04 annual exceedance probability floodplain) of Horn Lake Creek and the Coldwater River.

The USACE is currently working with the Sponsor to ensure that the identified alternatives are suitable to meet the needs of the public.

As a reminder, the final array of alternatives includes the following (NED plan is 3B):

No Action

1A 3 detention sites (Cow Pen, Lateral D and Rocky)

1B 3 detention sites (Cow Pen, Lateral D and Rocky), plus 50 YR Nonstructural

2A 3 detention sites (Cow Pen, Lateral D, and Rocky) plus HLC Channel Enlargement 18.86-

19.41

- 3A Channel Enlargement RM 18.86-19.41
- 3B Channel Enlargement RM 18.86-19.41 plus 25 YR Nonstructural
- 4A 0.04 AEP "25 YR" Nonstructural Aggregation
- 4B 0.02 AEP "50 YR" Nonstructural Aggregation

I'm working to determine the modeling that will be used to determine impacts and compensatory mitigation for this action, and I need your input.

The USACE has identified the Hydrogeomorphic Method to model wetland functions. Some field work has been conducted, and initial modeling indicates that wetlands in the project area produce moderate levels of functionality. During a preliminary survey of potential project areas, data was collected from the review of satellite imagery and site surveys to determine the functional capacity of wetlands and terrestrial habitat in the area, as well as potential impacts to those resources. The preliminary data on wetland functional conditions within the project area suggest that the wetlands in the vicinity of the project area provide functions at a moderate level (average functional capacity index [FCI] = 0.65). We don't expect to incur impacts to wetlands due to the NED plan, but we haven't had boots on the ground out there.

Currently, the pdt is determining if the development of an ecological model using a Stream Condition Index (SCI) is appropriate and warranted. This approach would evaluate the cause and effect relationship between stream and watershed conditions and aquatic biota at an appropriate scale. The SCI can also be used to plan and conduct site-specific, intensive ecosystem studies, and assess ecosystem outcomes (i.e., ecological lift) applicable to future with and without restoration actions including alternative, feasibility, and cost/benefit analyses and adaptive management. Please see the attached Tech Note from our Engineering Research and Design Center. If a determination is made that using SCI for ecological modelling is not appropriate due to cost or time restraints, the Habitat Evaluation Procedures (using Habitat Suitability Index models) are expected to be utilized to determine potential impacts and the mitigation required to offset those impacts. An appropriate guild of species will be selected to evaluate any habitat types that may be impacted.

Finally, I am tracking that Horn Lake Creek and possibly some reaches of the Coldwater River, are on the 303(d) list for sedimentation, and that we have a likely HTRW site adjacent to our proposed action. This proposed plan occurs within the range of the wood stork and northern long-eared bat, federally listed (threatened) species, and we are not likely to adversely affect these species. This is also within or adjacent to a 'certified green space'. I haven't dealt with this issue before. Does anyone have insight? What else do we have either in the vicinity, County, or NED project area that I need to know about and address in the report that we will eventually release to the public?

I'm looking forward to your input, if you have any questions, please let me know. I can set up a call or teleconference at your request, if needed.

Thanks for taking time to look at this with me, Andrea

-----Original Message-----

From: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US)

Sent: Wednesday, April 1, 2020 10:40 AM

To: Morris, Kelly <kelly_morris@fws.gov>; Dennis Riecke <Dennis.Riecke@wfp.ms.gov>; FBass@mdeq.ms.gov; larry.long@epa.gov; Stacey Ricks <sricks@mema.ms.gov>; Everitt, Jared H CIV USARMY CEMVN (US) <Jared.H.Everitt@usace.army.mil>; Price, Jaybus J ERD-MS <Jaybus.J.Price@usace.army.mil>; David Felder <david_felder@fws.gov>; Garreth DeKlerk <gdeKlerk@mema.ms.gov>; Angela Matthews <amatthews@mema.ms.gov>; Berkowitz, Jacob F CIV USARMY CEERD-EL (USA) <Jacob.F.Berkowitz@usace.army.mil>

Good Morning,

The North DeSoto project development team has arrived at a tentatively selected plan (TSP) to Reduce flood damages to businesses, residents, and infrastructure in DeSoto County; Reduce risks to critical infrastructure; Reduce risk to human life from flooding and rainfall events throughout the county.

Measures that were evaluated include channel improvement measures such as enlargement, concrete lining, riprap stabilization, and diversion; levees and floodwalls; detention basins; constriction removal; and non-structural measures such as raising residences and flood-proofing commercial properties.

The TSP identified from the final array is a combination of the Horn Lake Creek Channel Enlargement (RM 18.86-19.41) and an optimized nonstructural plan aggregated by floodplain. The 25 or 50 yr. nonstructural aggregation will be refined by assessing the channel enlargement as the new base condition for the hydrology. The TSP is also the National Economic Development (NED) Plan. The net annual benefits for the Channel Enlargement with 50 YR nonstructural aggregation are \$2,793,178 and the BCR is 1.77. This plan has the greatest economic net benefit and is consistent with protecting the Nation's environment.

You are invited to attend the TSP meeting to be held on 2 April 2020 at 2:30pm. Please see the following teleconference information, as well as the supporting documentation pertaining to the meeting. I do apologize for the tardiness of this message. The USACE is hopeful that you can attend the meeting. If any further discussion is required prior to the meeting, please give me a call at (901) 544-0817 or (901) 489-2257, or contact me by email at Andrea.L.Carpenter@usace.army.mil <<mailto:Andrea.L.Carpenter@usace.army.mil>> .

Conf/Webinar

- BlockedBlockedhttps://usace.webex.com/meet/mvd_planning
- No. - 877-402-9757
- Access - 7067116
- Host - 3515
- Security - 1111

Thank you for attention to this matter,

Andrea L. Carpenter
Biologist
USACE, Regional Planning and Environment Division South
167 N. Main St., Rm. B-202
Memphis, TN 38103
Phone: 901-544-0817
Fax: 901-544-3955
Email: Andrea.L.Carpenter@usace.army.mil

Section 2

U.S. Environmental Protection Agency



DEPARTMENT OF THE ARMY

MEMPHIS DISTRICT CORPS OF ENGINEERS

167 NORTH MAIN STREET B-202
MEMPHIS TN 38103-1894

September 6, 2019

Christopher A. Militscher
U.S. Environmental Protection Agency
Region 4
Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia 30303-8960

Dear Mr. Militscher,

The U.S. Army Corps of Engineers (USACE), Memphis District (MVM), thanks the U.S. Environmental Protection Agency (USEPA) for the scoping comments provided August 22, 2019 regarding the *North DeSoto County, Mississippi Feasibility Study*. The USACE MVM is working to incorporate the comments and will utilize the information provided, thus far.

The USACE MVM is preparing a Draft Integrated Feasibility Report and Environmental Impact Statement (DIFR-EIS) for the Memphis Metropolitan Stormwater Management Project entitled *North DeSoto County, Mississippi Feasibility Study*. The study focuses on the development of multi-purpose features to reduce flood risk and damages in the project area. Flooding inundates major transportation corridors and damages public infrastructure and development, including residential, commercial and industrial properties; isolates neighborhoods and communities; and threatens life safety. Removal of suitable riparian cover, loss of wetlands and floodplains, and an increase in development for residential and commercial purposes have contributed to an altered flow regime and repeated flooding within the City of Horn Lake, Southaven, Olive Branch, and Hernando as well as causing channel instability and further degradation of aquatic and wetland resources. Retention and/or detention basins, channel modifications, floodplain restoration, and other features are being investigated in this study to determine if these options would be effective and feasible in reducing damages from flooding.

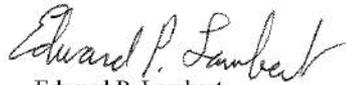
The USACE MVM formally invites the USEPA to become a cooperating agency. Per the National Environmental Policy Act (NEPA), 40 CFR 1501.6, a cooperating agency would participate in the NEPA process at the earliest possible time; participate in the scoping process; assume, on request of the lead agency, responsibility for developing information and preparing environmental analyses including portions of the environmental impact statement which the cooperating agency has special expertise; make available staff support at the lead agency's request to enhance the latter's interdisciplinary capability; and would normally use its own funds. The lead agency shall, to the extent available funds permit, fund those major activities or analyses it requests from cooperating agencies.

Project formulation will be in accordance with NEPA and Engineering Regulation 1105-2-100 and will fully consider a range of environmental, economic and social factors. As a

cooperating agency, the USEPA would fully consider the views need and benefits of competing interests. A cooperating agency may, in response to a lead agency's request for assistance in preparing the environmental impact statement, reply that other program commitments preclude any involvement or the degree of involvement requested in the action that is the subject of the environmental impact statement. A copy of this reply shall be submitted to the Council on Environmental Quality.

Please indicate whether the USEPA accepts the formal invitation to become a cooperating agency within 30 days of this letter. If you have questions, please contact Andrea Carpenter by phone at (901) 544-0817 or by email at Andrea.L.Carpenter@usace.army.mil.

Sincerely,

A handwritten signature in cursive script that reads "Edward P. Lambert".

Edward P. Lambert
Chief, Environmental Compliance Branch
Regional Planning and Environment Division South



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

SEP 26 2019

Edward P. Lambert
Chief, Environmental Compliance Branch
U.S. Army Corps of Engineers, Memphis District
167 North Main Street, B-202
Memphis, Tennessee 38103-1894

Re: Cooperating Agency Request for the North Desoto County, Mississippi Feasibility Study

Dear Mr. Lambert:

The U.S. Environmental Protection Agency, Region 4, received your letter dated September 6, 2019, offering this Agency an opportunity to be a cooperating agency for the subject document. The U.S. Army Corps of Engineers (USACE), Memphis District is preparing a Draft Integrated Feasibility Report and Environmental Impact Statement (DIFR-EIS) for the Memphis Metropolitan Stormwater Management Project.

We accept the Memphis District's offer to become a cooperating agency for the proposed project. However, it should be noted that our status as a cooperating agency has no effect on our review responsibilities under Section 102(2)(C) of the National Environmental Policy Act or Section 309 of the Clean Air Act and being a cooperating agency does not imply that the EPA will necessarily concur with all aspects of the DIFR-EIS.

Contingent upon agency resources, the EPA agrees to provide preliminary agency feedback on areas in which we have a level of expertise. The USACE should ensure that information relevant for providing comments will be provided to the agency in a timely manner, allowing sufficient review time, and with levels of detail necessary for meaningful feedback. The EPA also agrees to participate in the USACE's scoping activities and other important milestone meetings and technical reviews.

We appreciate your coordination with us and look forward to reviewing the environmental document for the proposed project. If you have any further questions or concerns, you may contact Mr. Larry Long at (404) 562-9460 or at long.larry@epa.gov. Please note that future correspondence pertaining to EPA's cooperating agency status should be directed to Ms. Ntale Kajumba, Acting Chief for the NEPA Section at (404) 562-9620 or kajumba.ntalc@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris A. Militscher".

Christopher A. Militscher
Chief, NEPA Section
Strategic Programs Office

Section 3

Mississippi Department of Fisheries, Wildlife, and Parks



DEPARTMENT OF THE ARMY

MEMPHIS DISTRICT CORPS OF ENGINEERS

167 NORTH MAIN STREET B-202
MEMPHIS TN 38103-1894

September 6, 2019

Larry Pugh
Mississippi Department of Wildlife, Fisheries and Parks
Fisheries Bureau
1505 Eastover Drive, Jackson, Mississippi 39211

Dear Mr. Pugh,

The U.S. Army Corps of Engineers (USACE), Memphis District (MVM), thanks the Mississippi Department of Wildlife, Fisheries and Parks (MDWFP) for the informal comments and information provided on the *North DeSoto County, Mississippi Feasibility Study*, thus far.

The USACE MVM is preparing a Draft Integrated Feasibility Report and Environmental Impact Statement (DIFR-EIS) for the Memphis Metropolitan Stormwater Management Project entitled *North DeSoto County, Mississippi Feasibility Study*. The study focuses on the development of multi-purpose features to reduce flood risk and damages in the project area. Flooding inundates major transportation corridors and damages public infrastructure and development, including residential, commercial and industrial properties; isolates neighborhoods and communities; and threatens life safety. Removal of suitable riparian cover, loss of wetlands and floodplains, and an increase in development for residential and commercial purposes have contributed to an altered flow regime and repeated flooding within the City of Horn Lake, Southaven, Olive Branch, and Hernando as well as causing channel instability and further degradation of aquatic and wetland resources. Retention and/or detention basins, channel modifications, floodplain restoration, and other features are being investigated in this study to determine if these options would be effective and feasible in reducing damages from flooding.

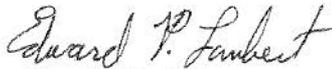
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Project formulation will be in accordance with NEPA and Engineering Regulation 1105-2-100 and will fully consider a range of environmental, economic and social factors. As a cooperating agency, the MDWFP would fully consider the views need and benefits of competing interests. A cooperating agency may, in response to a lead agency's request for assistance in preparing the environmental impact statement, reply that other program commitments preclude

any involvement or the degree of involvement requested in the action that is the subject of the environmental impact statement. A copy of this reply shall be submitted to the Council on Environmental Quality.

Please indicate whether the MDWFP accepts the formal invitation to become a cooperating agency within 30 days of this letter. If you have questions, please contact Andrea Carpenter by phone at (901) 544-0817 or by email at Andrea.L.Carpenter@usace.army.mil.

Sincerely,

A handwritten signature in cursive script that reads "Edward P. Lambert".

Edward P. Lambert
Chief, Environmental Compliance Branch
Regional Planning and Environment Division South



**MISSISSIPPI
DEPARTMENT OF WILDLIFE, FISHERIES, AND PARKS**

SAM POLLES, Ph.D
Executive Director

September 24, 2019

Mr. Edward P. Lambert
Chief, Environmental Compliance Branch
Regional Planning and Environmental Division South
Memphis District Corps of Engineers
167 North Main Street B-202
Memphis, TN 38103-1894

Dear Mr. Lambert,

I am in receipt of your letter regarding the *North Desoto County, Mississippi Feasibility Study*. Thank you for inviting the Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) to become a cooperating agency.

The MDWFP appreciates the USACE for taking into consideration the informal comments and information that we provided in 2018. The MDWFP recognizes the importance of this project; however, we do not desire to become a cooperating agency under the National Environmental Policy Act, 40 CFR 1501.6. We will be glad to participate in the planning process by reviewing and commenting on project documents.

Please let me know if you need additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Larry Pugh".

Larry Pugh
Fisheries Bureau Chief of Staff

From: [Carpenter Crowther, Andrea L CIV USARMY CEMVN \(US\)](#)
To: [Dennis Riecke](#)
Subject: RE: North DeSoto
Date: Tuesday, June 30, 2020 3:53:00 PM
Attachments: [Wood Stork MS SLOPES FY2019 final fillable.pdf](#)
[From Horn Lake Road Bridge Looking DS.JPG](#)
[Lagoon 2.jpg](#)
[Lagoon.jpg](#)
[Looking US toward HLRoad Bridge.jpg](#)

Hi Dennis,

Sorry for taking so long to get back you. I started this email last week. Are you interested in seeing one of the SLOPES documents? I have attached the wood stork SLOPES that we will likely use for the project.

I got the project into the Heritage system after talking with Nicole, so no worries there. I'm waiting for the letter back. I asked for species of concern in several of the basins in DeSoto County because the scope of the project may be expanded, we aren't sure yet.

I believe that part of the area is a designated green space and it looks like the landowners on the left descending bank planted all of those trees, so I'm sure they'll want to keep as much as possible. I have proposed avoiding where possible, and replanting that riparian zone where impacts are unavoidable. There are some concerns, as it may increase expected roughness and decrease the flood risk reduction benefits that are expected. I'll keep working for it, and we will certainly minimize impacts everywhere possible; however, I already know that the flood risk management and maintenance will take priority. I was down there earlier last week, and I have attached some photos. There is some pretty decent habitat locally, but a lot of the habitat is isolated into fairly small areas. I like the idea of native grasses. Would there be any requirements of acquiring native eco-types, or do you know if there are any programs in Mississippi that produce native seed?

Recreation (small primitive boat launch) is a little complicated. I think the Sponsor has to pay for 100% of that cost, maybe. I have never worked on doing something like that, but I know some people who have, so I will ask. Since it is a County or City designated Greenspace, it may be more promising.

The SWAP is very helpful. I think you sent that a while ago, I have referenced it in several places in the draft report already. It took a little bit to find my way around in it there is so much info, but it is a great help.

Thank you for the feedback, Dennis.

Have a great 4th if I don't have a chance to talk to you before then!

Thanks,
Andrea

-----Original Message-----

From: Dennis Riecke [<mailto:Dennis.Riecke@wfp.ms.gov>]
Sent: Monday, June 22, 2020 7:25 PM
To: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US) <Andrea.L.Carpenter@usace.army.mil>
Subject: [Non-DoD Source] Re: North DeSoto

It would be great if we could preserve as much of that wooded area adjacent to this stream as possible. I know some of the riparian zone will have to be cleared for the channel enlargement/stabilization. But after the work is done, perhaps we could replant trees on one side and native grasses and shrubs on the other side. I would hate to see development take all of the riparian zone. That will increase runoff from the additional amount of impervious surfaces. A fifty foot buffer is too narrow, we need to push for more, perhaps up to 300 feet. Some developed access to the creek with some canoe/kayak launching areas would be great. My agency is starting to build those. Saw one on a creek in AR. Just a trail down to the water and then a small platform at the creek edge.

Email Nicole. She will be happy to help you and remember that all federally funded projects need our heritage survey review. I see Corps public notices that just refer to coordinating with the USFWS from something called SCOPES which I think is some standard agreed upon guidance statewide.

Dennis

From: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US) <Andrea.L.Carpenter@usace.army.mil>
Sent: Monday, June 22, 2020 5:19 PM
To: Dennis Riecke <Dennis.Riecke@wfp.ms.gov>
Subject: RE: North DeSoto

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thanks Dennis, I appreciate it. I tried to create a project in the heritage database, but it didn't work the first time. I'll email Nicole, and see what we can come up with.

There is water in Horn Lake Creek, pretty much all of the time if not ALL the time. I think it is perennial. Try this for the channel enlargement. If it doesn't, I will try something else.

Thank you for your comments and suggestions. I will keep working to incorporate these items into the project. Also, if you have any other recommendations on stream restoration, don't hesitate to let me know!

Thanks so much,
Andrea

-----Original Message-----

From: Dennis Riecke [<mailto:Dennis.Riecke@wfp.ms.gov>]
Sent: Monday, June 22, 2020 4:41 PM
To: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US) <Andrea.L.Carpenter@usace.army.mil>
Subject: [Non-DoD Source] Re: North DeSoto

Andrea,

I looked at the map and the table and read your Email. I could see the detention basins on the map but not the stream channelization. I like the idea of a bench cut to create a small floodplain adjacent to the channelized/stabilized creeks. I want the Corps to consider using "soft" technology, i.e. suitable shrubs to stabilize the banks in lieu of all or some of the riprap armoring being planned. I have seen this technique used in NW Arkansas with success to stabilize eroding banks. Large boulders and anchored logs were also placed in the channel to deflect flow, and create some structure as opposed to a channel totally armored with rip rap. Don't know if there is continuous flow in these streams or not. Urban streams typically have severely degraded aquatic habitat and are mainly inhabited by generalist species who are the only ones that can exist under such conditions. No information on any existing recreational fishing or access to the streams in the area. Such information would be nice to have to determine if we can enhance or provide such a recreational opportunity in an urban setting. Any NRCS programs available under the Fish and Wildlife partnership through NRCS State Wildlife Technical Committee. ?Supposedly there is a stream restoration component that could use appropriated funds, but to my knowledge it has never been utilized. Your contact for this is:

kevin.nelms@usda.gov

Start with him. He may refer you to someone else.

Dennis Riecke
Fisheries/Environmental Coordinator

Nolehoe

We do not currently have any records of rare, threatened, or endangered species or communities in the vicinity of Nolehoe Creek in DeSoto County, MS. The quantity and quality of data collected by the Mississippi Natural Heritage Program are dependent on the research and observations of many individuals and organizations and, in many cases, this information is not the result of comprehensive or site-specific field surveys.

Lick Creek

SNAME	SCOMNAME	Fed_Status	State_Status	S_RANK
<i>Antrostomus carolinensis</i>	Chuck-will's-widow			S4B
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker			S4S5
<i>Hyalocichla mustelina</i>	Wood Thrush			S5B
<i>Setophaga discolor</i>	Prairie Warbler			S5B
<i>Protonotaria citrea</i>	Prothonotary Warbler			S5B
<i>Geothlypis formosa</i>	Kentucky Warbler			S5B
<i>Mustela frenata</i>	Long-tailed Weasel			S2?

Horn Lake Creek

SNAME	SCOMNAME	Fed_Status	State_Status	S_RANK
<i>Ursus americanus</i>	American Black Bear		LE	S1
<i>Lasiurus borealis</i>	Eastern Red Bat			S4S5

Cow Pen Creek

SNAME	SCOMNAME	Fed_Status	State_Status	S_RANK
<i>Ursus americanus</i>	American Black Bear		LE	S1
<i>Lasiurus borealis</i>	Eastern Red Bat			S4S5

Coldwater River

SNAME	SCOMNAME	Fed_Status	State_Status	S_RANK
<i>Noturus gladiator</i>	Piebald Madtom		LE	S1
<i>Strophitus undulatus</i>	Squawfoot			S1
<i>Equisetum arvense</i>	Field Horsetail			S1S2
<i>Viola pubescens</i> var. <i>pubescens</i>	Smooth Yellow Violet			S1S2
<i>Anodontoides radiatus</i>	Rayed Creekshell			S2
<i>Mustela frenata</i>	Long-tailed Weasel			S2?
<i>Anas rubripes</i>	American Black Duck			S2N
<i>Cyprinella whipplei</i>	Steelcolor Shiner			S3
<i>Etheostoma asprigene</i>	Mud Darter			S3
<i>Hypopsis amnis</i>	Pallid Shiner			S3
<i>Ictiobus niger</i>	Black Buffalo			S3
<i>Haliaeetus leucocephalus</i>	Bald Eagle			S3B,S2N
<i>Pelecanus erythrorhynchos</i>	American White Pelican			S3N
<i>Tritogonia verrucosa</i>	Pistolgrip			S4
<i>Cyclonaias pustulosa</i>	Pimpleback			S5
<i>Fusconaia flava</i>	Wabash Pigtoe			S5
<i>Lampsilis teres</i>	Yellow Sandshell			S5
<i>Ligumia subrostrata</i>	Pondmussel			S5
<i>Potamilus purpuratus</i>	Bleufer			S5
<i>Utterbackia imbecillis</i>	Paper Pondshell			S5

Camp Creek Upper

SNAME	SCOMNAME	Fed_Status	State_Status	S_RANK
<i>Antrostomus carolinensis</i>	Chuck-will's-widow			S4B
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker			S4S5
<i>Hyalocichla mustelina</i>	Wood Thrush			S5B
<i>Setophaga discolor</i>	Prairie Warbler			S5B
<i>Protonotaria citrea</i>	Prothonotary Warbler			S5B
<i>Geothlypis formosa</i>	Kentucky Warbler			S5B

Camp Creek Canal

We do not currently have any records of rare, threatened, or endangered species or communities in the vicinity of Camp Creek Canal Creek in DeSoto County, MS. The quantity and quality of data collected by the Mississippi Natural Heritage Program are dependent on the research and observations of many individuals and organizations and, in many cases, this information is not the result of comprehensive or site-specific field surveys.

Section 4

Mississippi Department of Environmental Quality



DEPARTMENT OF THE ARMY

MEMPHIS DISTRICT CORPS OF ENGINEERS

167 NORTH MAIN STREET B-202
MEMPHIS TN 38103-1894

September 6, 2019

Florance Bass
Mississippi Department of Environmental Quality
Environmental Permits Division
Office of Pollution Control Mississippi
Department of Environmental Quality
Jackson, MS 39213

Dear Ms. Bass,

The U.S. Army Corps of Engineers (USACE), Memphis District (MVM), thanks the Mississippi Department of Environmental Quality (MDEQ) for the informal comments and information provided on the *North DeSoto County, Mississippi Feasibility Study*, thus far.

The USACE MVM is preparing a Draft Integrated Feasibility Report and Environmental Impact Statement (DIFR-EIS) for the Memphis Metropolitan Stormwater Management Project entitled *North DeSoto County, Mississippi Feasibility Study*. The study focuses on the development of multi-purpose features to reduce flood risk and damages in the project area. Flooding inundates major transportation corridors and damages public infrastructure and development, including residential, commercial and industrial properties; isolates neighborhoods and communities; and threatens life safety. Removal of suitable riparian cover, loss of wetlands and floodplains, and an increase in development for residential and commercial purposes have contributed to an altered flow regime and repeated flooding within the City of Horn Lake, Southaven, Olive Branch, and Hernando as well as causing channel instability and further degradation of aquatic and wetland resources. Retention and/or detention basins, channel modifications, floodplain restoration, and other features are being investigated in this study to determine if these options would be effective and feasible in reducing damages from flooding.

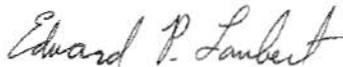
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interests. A cooperating agency may, in response to a lead agency's request for assistance in preparing the environmental impact statement, reply that other program commitments preclude any involvement or the degree of involvement requested in the action that is the subject of the environmental impact statement. A copy of this reply shall be submitted to the Council on Environmental Quality.

Please indicate whether the MDEQ accepts the formal invitation to become a cooperating agency within 30 days of this letter. If you have questions, please contact Andrea Carpenter by phone at (901) 544-0817 or by email at Andrea.L.Carpenter@usace.army.mil.

Sincerely,

A handwritten signature in cursive script that reads "Edward P. Lambert".

Edward P. Lambert
Chief, Environmental Compliance Branch
Regional Planning and Environment Division South

From: [Carpenter Crowther, Andrea L CIV USARMY CEMVN \(US\)](#)
To: "[Florance Bass](#)"; "[larry.long@epa.gov](#)"; "[Mike Freiman](#)"
Subject: RE: North DeSoto
Date: Thursday, June 18, 2020 4:49:00 PM
Attachments: [channel enlargement only HLC.KMZ](#)

Hello All,

Do you have any availability tomorrow or Monday for a call? I can set up a webinar so we can see maps and things.

I am attaching a map that indicates where the likely National Economic Development Plan would occur, if approved. The basics of the proposed project (currently) include approximately 0.5-mile channel enlargement with a riprap bottom. Are there any environmental features, such as a bench cut, or another feasible item that MDEQ has seen used successfully. Do you have any suggestions? Do you see any other items for concern?

I'd also like to discuss 303(d) and 305(b) streams. It looks like all of the streams in DeSoto County that we are looking at are not listed on the 303(d) list, some are listed as in-attainment for their uses (support of fish and wildlife, mostly). How do those 'moves' occur? I understand there are assessments and TMDL's, how I can ensure with you guys that we are not exceeding these/.

Also, if there are any specific items that EPA or MDEQ would like to recommend for monitoring of water quality etc. I'd be very interested.

Finally, there is a potential HTRW site adjacent to the (not yet) proposed channel enlargement per Will Stacey at MDEQ. It was a sewage lagoon about 40-50 years ago. MDEQ doesn't have much as far as records go and I can't currently find my map of it... Sorry about that. I can't get it to pull up on EnviroMapper today either. What do we need to do to determine if there is danger of an impacts here?

I appreciate your feedback.

Thank you,
Andrea L. Carpenter
Biologist
USACE, Regional Planning and Environment Division South
167 N. Main St., Rm. B-202
Memphis, TN 38103
Phone: 901-544-0817
Fax: 901-544-3955
Email: Andrea.L.Carpenter@usace.army.mil

-----Original Message-----

From: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US)
Sent: Monday, April 20, 2020 2:12 PM
To: Florance Bass <FBass@mdeq.ms.gov>
Cc: Mike Freiman <mfreiman@mdeq.ms.gov>
Subject: RE: North DeSoto

Thanks Florance.

We have a pdt on the subject project tomorrow morning. I'm going to spend the next few hours looking into the link you provided.

If you guys are available, maybe we can have a call later this week?

-----Original Message-----

From: Florance Bass [mailto:FBass@mdeq.ms.gov]

Sent: Thursday, April 16, 2020 1:23 PM

To: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US) <Andrea.L.Carpenter@usace.army.mil>

Cc: Mike Freiman <mfreiman@mdeq.ms.gov>

Subject: [Non-DoD Source] RE: North DeSoto

Andrea,

We discussed what would be included in a WQC application review and considerations that should be made when eliminating possible project alternatives. You can find our regulations at the following link:

Blocked<https://www.mdeq.ms.gov/wp-content/uploads/2017/06/11-Miss.-Admin.-Code-Pt.-6-Ch.-1..pdf>

You will find the scope of review which outlines factors of decision and basis of denial. That is located on pages 143-145. It is Rule 1.3.4. I would also pay attention to our definition of feasible alternatives as well. That definition can be found on page 11 (Rule 1.1.1.A.27)

Also, I mentioned that I would reach out to Mike Freiman to see if there are any concerns or additional monitoring data that may be needed from our Surface Water Division for the project. This is needed to discuss what may need to be addressed to be in compliance with any TMDLS or additional listings for Horn Lake Creek. I am copying Mike on this email so you will have his contact information. Mike, I'll reach out to you to discuss what I know thus far.

In light of current events, please note that I may not be available by phone directly in my office. I am frequently checking email and voicemail. I will be communicating by email or phone. If you call, please leave a voicemail. I will return your call as soon as possible.

Florance Bass, P.E., BCEE

Manager, 401/Stormwater Branch

Environmental Permits Division, Office of Pollution Control MS Department of Environmental Quality

(601)961-5614 (office)

(769)233-3276 (cell)

-----Original Message-----

From: Carpenter Crowther, Andrea L CIV USARMY CEMVN (US) <Andrea.L.Carpenter@usace.army.mil>

Sent: Thursday, April 16, 2020 1:07 PM

To: Florance Bass <FBass@mdeq.ms.gov>

Subject: North DeSoto

Hi Florance,

Can you send me the link to the permitting items we were discussing earlier today when you get a chance? We were talking about the scope of review for permitting actions, denial factors, and also talking with one of your MDEQ counterparts about the 303(d) component of Horn Lake Creek, and how to address it.

Thank you,

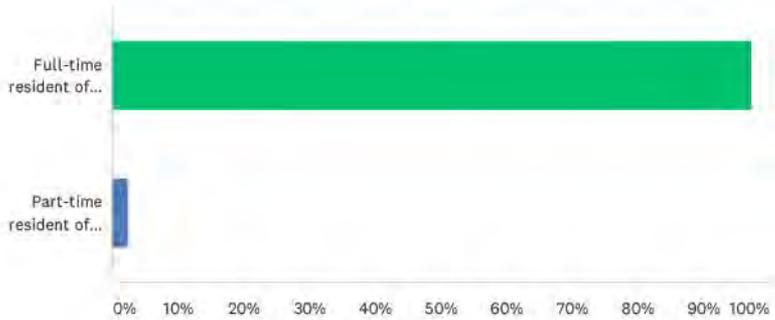
Andrea

Section 5

Public Coordination

Q1 Which best describes your residency status?

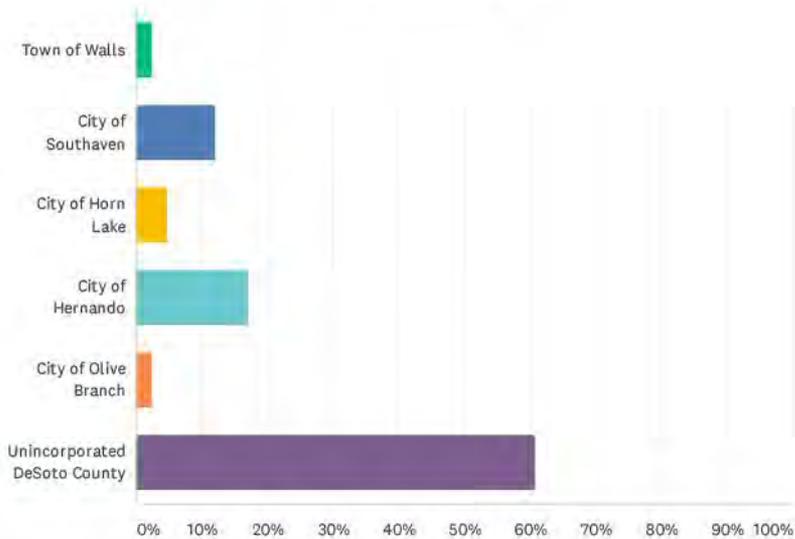
Answered: 41 Skipped: 2



ANSWER CHOICES	RESPONSES	
Full-time resident of DeSoto County	97.56%	40
Part-time resident of DeSoto County	2.44%	1
TOTAL		41

Q2 In what area do you live?

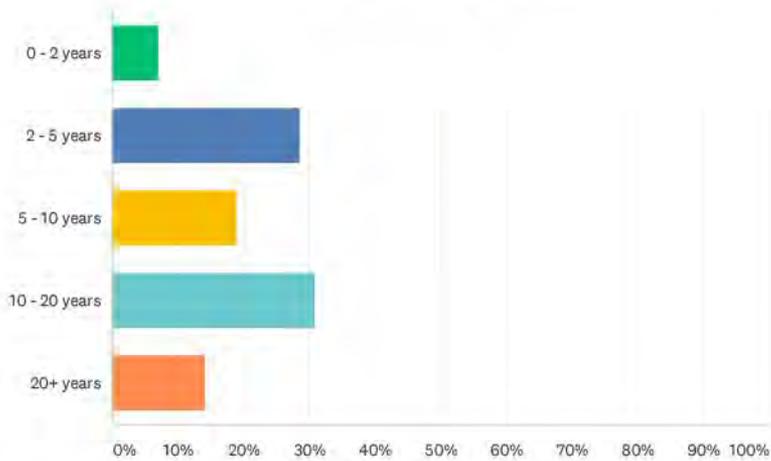
Answered: 41 Skipped: 2



ANSWER CHOICES	RESPONSES	
Town of Walls	2.44%	1
City of Southaven	12.20%	5
City of Horn Lake	4.88%	2
City of Hernando	17.07%	7
City of Olive Branch	2.44%	1
Unincorporated DeSoto County	60.98%	25
TOTAL		41

Q3 How long have you lived at your current location?

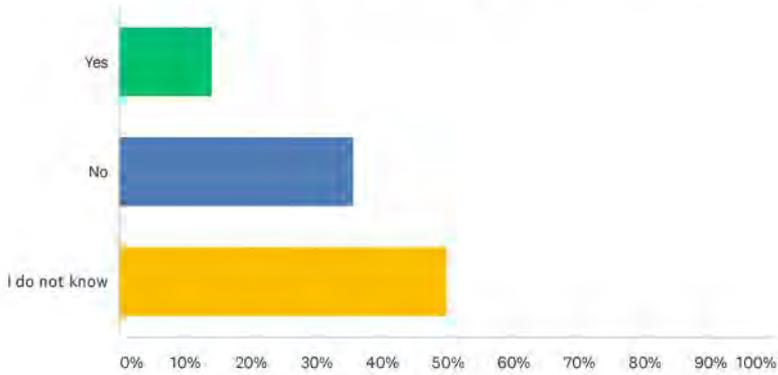
Answered: 42 Skipped: 1



ANSWER CHOICES	RESPONSES	
0 - 2 years	7.14%	3
2 - 5 years	28.57%	12
5 - 10 years	19.05%	8
10 - 20 years	30.95%	13
20+ years	14.29%	6
TOTAL		42

Q4 Are you located within a FEMA floodplain?

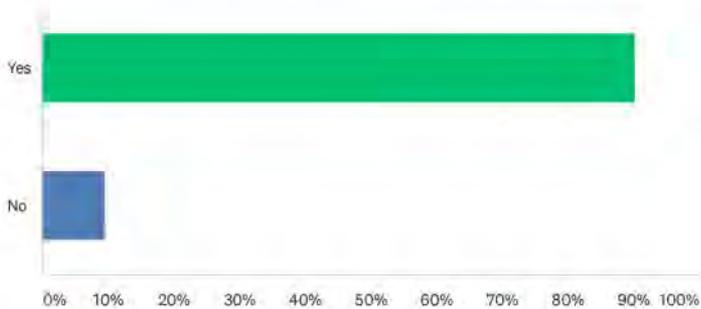
Answered: 42 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	14.29%	6
No	35.71%	15
I do not know	50.00%	21
TOTAL		42

Q5 Are there any rivers, streams, canals, lakes, reservoirs, ponds or other watercourses within ½ of a mile of your property?

Answered: 42 Skipped: 1



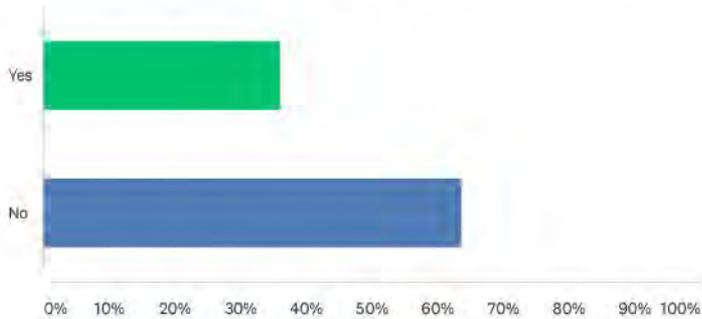
ANSWER CHOICES	RESPONSES	
Yes	90.48%	38
No	9.52%	4
TOTAL		42

Q6 Please provide a detailed description of the waterbody located near your property (including the distance of your property from the waterbody).

Answered: 31 Skipped: 12

Q7 Has your property ever flooded to your knowledge?

Answered: 36 Skipped: 7



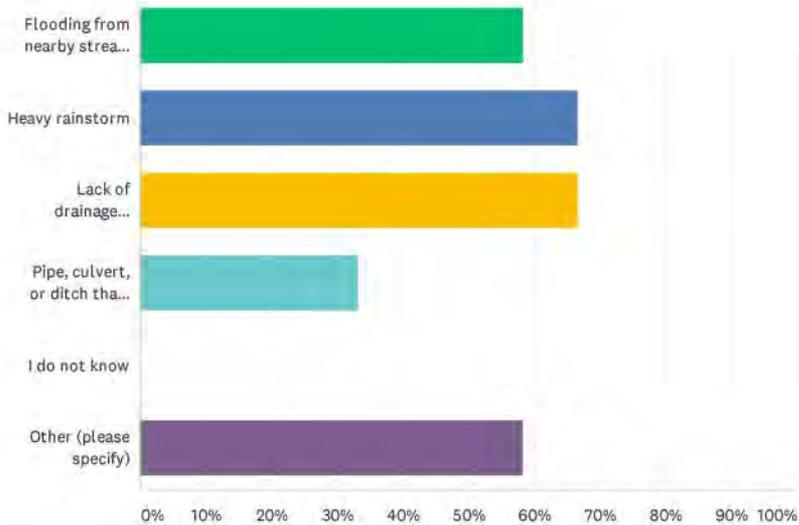
ANSWER CHOICES	RESPONSES	
Yes	36.11%	13
No	63.89%	23
TOTAL		36

Q8 What is the physical address of your property that flooded? If a physical address does not exist, please give detailed directions to the flood site.

Answered: 11 Skipped: 32

Q9 What was the cause of flooding? Check all that apply if multiple flood events have occurred on your property.

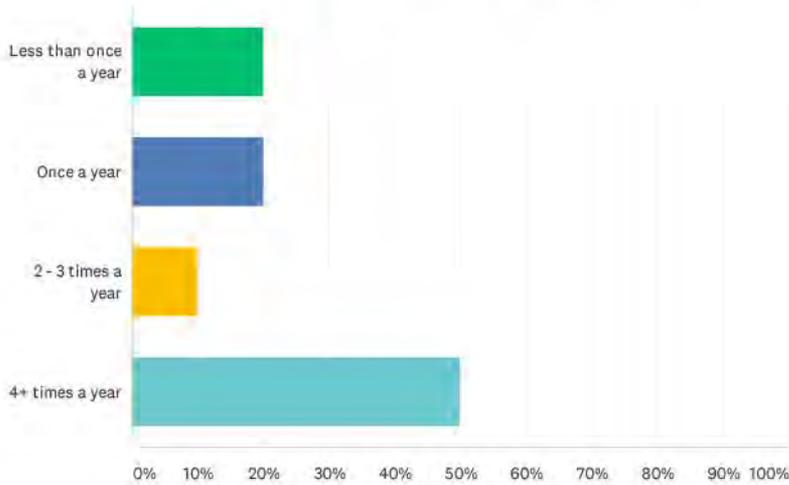
Answered: 12 Skipped: 31



ANSWER CHOICES	RESPONSES	
Flooding from nearby stream, river, lake, ditch, or pond	58.33%	7
Heavy rainstorm	66.67%	8
Lack of drainage facilities to drain water from property	66.67%	8
Pipe, culvert, or ditch that was blocked or needs maintenance	33.33%	4
I do not know	0.00%	0
Other (please specify)	58.33%	7
Total Respondents: 12		

Q10 How often does your property flood?

Answered: 10 Skipped: 33



ANSWER CHOICES	RESPONSES	
Less than once a year	20.00%	2
Once a year	20.00%	2
2 - 3 times a year	10.00%	1
4+ times a year	50.00%	5
TOTAL		10