Appendix A
Coordination

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1 COORDINATING AGENCIES

2 SHPO COORDINATION

2.1 LETTER TO ILLINOIS SHPO

Correspondence between USACE and SHPO occurred on Talked to IL SHPO on Feb 25, 2020.

Jeffrey D. Kruchten

Illinois State Historic Preservation Office Illinois Dept. of Natural Resources

Attn: Review & Compliance/Old State Capital One Natural Resources Way Springfield, Illinois 62702

2.2 LETTER FROM ILLINOIS SHPO

3 THPO COORDINATION

3.1 Letter to THPO

Cozy

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT CORPS OF ENGINEERS
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

REPLY TO
ATTENTION OF:

01 June 2020

Engineering and Construction Division
Curation and Archives Analysis Branch (EC-Z)

President Deborah Dotson
~~Delaware Nation, Oklahoma~~ Butler of Delaware Nation's AOI - not sent to them
P.O. Box 825
Anadarko, OK 73005

Subject: Oakwood Bottoms Greentree Reservoir (OBGTR) Habitat Rehabilitation and Enhancement Project, Jackson County, Illinois

Dear President Dotson:

We are contacting your tribe to initiate consultation regarding a feasibility study for a Habitat Rehabilitation and Enhancement Project (HREP) in Jackson County, Illinois, in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. The U.S. Army Corps of Engineers, St. Louis District (District), is undertaking a feasibility study for the Oakwood Bottoms Greentree Reservoir (OBGTR) HREP. The OBGTR, consisting of approximately 13,500 acres bottomland forest and wetlands, is located within the Shawnee National Forest in the Mississippi River floodplain on the left descending bank of the Mississippi River between River Miles (RM) 73-84 in Jackson County, Illinois (Figures 1 and 2). It is owned and managed by the U.S Forest Service.

There is a significant reduction in functional bottomland hardwood forest habitat and emergent wetland habitat in the OBGTR. Fluctuating water levels are important to creating and maintaining habitat for different plants and tree growth. The levee system adjacent to the study area changed the function of the floodplain river dynamic. Currently, the land is managed to counter the loss of river connectivity to its floodplain. However, the existing structures and processes do not mimic typical water levels at appropriate times, thereby reducing the ability of the study area to function for multiple habitat types, particularly bottomland hardwood forest and emergent wetlands.

The overarching goal of this study is to formulate alternatives to restore the aquatic ecosystem within the OBGTR. In addition, the study also documents if the District participation is economically justified in restoring ecosystem structure and function within the study area. The potential features of the project include the installation of

1

water control structures, enhancement of wetland berms, removal of low berms to connect sub-impoundment areas, reforestation efforts, and the excavation or enhancement of drainage ditches. The final feasibility level of design is currently being undertaken and upon its completion the project's Area of Potential Effect (APE) will be developed. At that time the District will undertake an archaeological survey to locate any potentially effected historic properties as part of its Section 106 responsibilities.

The District is requesting that you review the map and information about the project and notify our office if you have any concerns about traditional cultural properties, sacred sites, or other resources that may be located within the study area. If you have any questions or comments, please feel free to contact me at (314) 331-8855, or contact Chris Koenig (Supervisory Archaeologist and Tribal Liaison) at (314) 331-8151 or email Christopher.J.Koenig@usace.army.mil. A copy of this letter has been furnished to Ms. Erin Paden.

Sincerely

Jennifer L. Riordan
Chief, Curation and Archives Analysis Branch

2

Figure 1. General Location of Study Area.

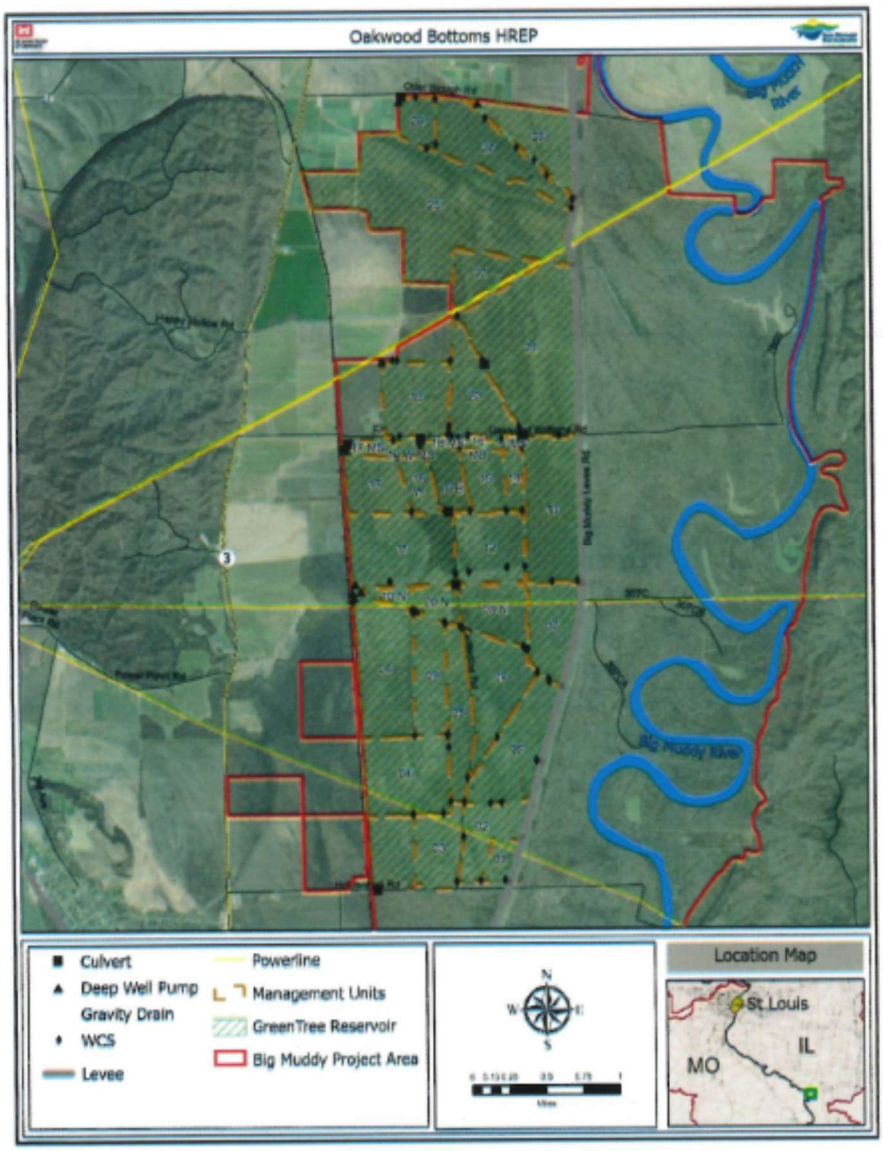

Figure 2. Map of Study Area.

MVS Leaders

Tribe	Title	Name (First, Middle, Last)	Last Name	Street Address	Street Address 2	City	State	Zipcode	Furnished Copy
Absentee-Shawnee Tribe of Indian of Oklahoma	Governor	John Johnson	Johnson	2025 S. Gordon Cooper Drive		Shawnee	OK	74810-9381	Ms. Devon Frazier
Caddo Nation of Oklahoma	Chairman	Tamara Francis-Fourkiller	Francis-Fourkiller	P.O. Box 487		Binger	OK	73009	Mr. Phil Cross
Citizen Potawatomi Nation, Oklahoma	Chairman	John Barrett	Barrett	1601 S. Gordon Cooper Drive		Shawnee	OK	74801	Ms. Kelli Mosteller
Delaware Tribe of Indians	Chief	Chester Brooks	Brooks	5100 Tuxedo Boulevard		Bartlesville	OK	74006	Mr. Larry Heady
Eastern Shawnee Tribe of Oklahoma	Chief	Glenna J. Wallace	Wallace	P.O. Box 350		Seneca	MO	64865	Mr. Brett Barnes
Forest County Potawatomi Community, Wisconsin	Chairman	Ned Daniels	Daniels	P.O. Box 340		Crandon	WI	54520	Mr. Michael LaRonge
Hannahville Indian Community, Michigan	Chairman	Kenneth Meshigaud	Meshigaud	N 14911 Hannahville B-1 Road		Wilson	MI	49896-9728	Mr. Earl Meshigaud
Ho-Chunk Nation of Wisconsin	President	Marlon WhiteEagle	WhiteEagle	P.O. Box 667		Black River Falls	WI	54615	Mr. William Quackenbush
Iowa Tribe of Kansas and Nebraska	Chairman	Tim Rhodd	Rhodd	3345 Thrasher Road, #8		White Cloud	KS	66094	Mr. Lance Foster
Iowa Tribe of Oklahoma	Chairman	Edward B. Kent, Jr.	Kent	Route 1, Box 721		Perkins	OK	74059	Dr. Robert Fields
Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas	Chairman	Lester Randall	Randall	824 111th Drive		Horton	KS	66439	Mr. Fred Thomas
Kickapoo Tribe of Oklahoma	Chairman	David Pacheco	Pacheco	P.O. Box 70		McCloud	OK	74851	Mr. Kent Collier
Match-e-be-nash-she-wish Band of Pottawatomi Indians of Michigan	Chairman	Bob Peters	Peters	2872 Mission Dr.		Shelbyville	MI	49344	Mr. Lakota Pochedley
Miami Tribe of Oklahoma	Chief	Douglas Lankford	Lankford	202 S. Eight Tribes Trail	P.O. Box 1326	Miami	OK	74355	Ms. Diane Hunter
Nottawaseppi Huron Band of the Potawatomi, Michigan	Chairman	Jamie Stuck	Stuck	2221—1 & 1/2 Mile Road		Fulton	MI	49052	Mr. Douglas R. Taylor
Peoria Tribe of Indians of Oklahoma	Chief	Craig Harper	Harper	118 S. Eight Tribes Trail	P.O. Box 1527	Miami	OK	74355	Mr. Logan Pappenfort
Pokagon Band of Potawatomi Indians, Michigan and Indiana	Chairman	Matt Wesaw	Wesaw	P.O. Box 180	58620 Sink Road	Dowagiac	MI	49047	Mr. Matthew Bussler
Prairie Band Potawatomi Nation	Chairman	Joseph Rupnick	Rupnick	Government Center	16281 Q Road	Mayetta	KS	66509	The Historic Preservation Office
Sac & Fox Nation of Missouri in Kansas and Nebraska	Chairperson	Tiauna Carnes	Carnes	305 N. Main Street		Reserve	KS	66434	Ms. Lisa Montgomery
Sac & Fox Nation, Oklahoma	Principal Chief	Justin F. Woods	Woods	920883 S Highway 99	Building A	Stroud	OK	74079	Mr. Chris Boyd
Sac & Fox Tribe of the Mississippi in Iowa	Chairman	Troy Wanatee	Wanatee	349 Meskwaki Road		Tama	IA	52339	Mr. Johnathan Buffalo
Shawnee Tribe	Chairman	Benjamin J. Barnes	Barnes	P.O. Box 189		Miami	OK	74355	Ms. Tonya Tipton
The Osage Nation	Principal Chief	Geoffrey Standing Bear	Standing Bear	P.O. Box 779		Pawhuska	OK	74056	Dr. Andrea Hunter
The Quapaw Tribe of Indians	Chairman	John Berrey	Berrey	P.O. Box 765		Quapaw	OK	74363	Mr. Everett Bandy
United Keetoowah Band of Cherokee of Oklahoma	Chief	Joe Bunch	Bunch	P.O. Box 746		Tahlequah	OK	74464	Ms. Whitney Warrior

MVS Reps

Tribe	Title	Name (First, Middle, Last)	Last Name	Position	Street Address	Street Address 2	City	State	Zipcode
Absentee-Shawnee Tribe of Indians of Oklahoma	Ms.	Devon Frazier	Frazier	Tribal Historic Preservation Officer	2025 S. Gordon Cooper Drive		Shawnee	OK	74810-9381
Caddo Nation of Oklahoma	Mr.	Phil Cross	Cross	Acting Tribal Historic Preservation Officer	117 Memorial Lane	P.O. Box 487	Binger	OK	73009
Citizen Potawatomi Nation, Oklahoma	Ms.	Kelli Mosteller	Mosteller	Tribal Historic Preservation Officer	Cultural Heritage Center	1601 S. Gordon Cooper Drive	Shawnee	OK	74801
Delaware Tribe of Indians	Mr.	Larry Heady	Heady	THPO Special Assistant	1928 E. 6th ST		Duluth	MN	55812
Eastern Shawnee Tribe of Oklahoma	Mr.	Brett Barnes	Barnes	Historic Preservation Officer	P.O. Box 350		Seneca	MO	64865
Forest County Potawatomi Community, Wisconsin	Mr.	Michael LaRonge	LaRonge	Tribal Historic Preservation Officer	Cultural Center, Library & Museum	8130 Mishkoswen Drive, P.O. Box 340	Crandon	WI	54520
Hannahville Indian Community, Michigan	Mr.	Earl Meshigaud	Meshigaud	Historic Preservation Office	P.O. Box 351, Highway 2 & 41		Harris	MI	49845
Ho-Chunk Nation of Wisconsin	Mr.	William Quackenbush	Quackenbush	Tribal Historic Preservation Officer	P.O. Box 667		Black River Falls	WI	54615
Iowa Tribe of Kansas and Nebraska	Mr.	Lance Foster	Foster	Tribal Historic Preservation Officer	3345 Thrasher Road		White Cloud	KS	66094
Iowa Tribe of Oklahoma	Dr.	Robert Fields	Fields	Historic Preservation Office	Route 1, Box 721		Perkins	OK	74059
Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas	Mr.	Fred Thomas	Thomas	Vice Chair	824 111th Drive		Horton	KS	66439
Kickapoo Tribe of Oklahoma	Mr.	Kent Collier	Collier	Historic Preservation Office	P.O. Box 70		McCloud	OK	74851
Match-e-be-nash-she-wish Band of Pottawatomi Indians of Michigan	Mr.	Lakota Pochedley	Pochedley	Tribal Historic Preservation Officer	2872 Mission Drive		Shelbyville	MI	49344
Miami Tribe of Oklahoma	Ms.	Diane Hunter	Hunter	Tribal Historic Preservation Officer	202 S. Eight Tribes Trail	P.O. Box 1326	Miami	OK	74355
Nottawaseppi Huron Band of the Potawatomi, Michigan	Mr.	Douglas R. Taylor	Taylor	Tribal Historic Preservation Officer	1301 T Drive S		Fulton	MI	49052
Peoria Tribe of Indians of Oklahoma	Mr.	Logan Pappenfort	Pappenfort	Historic Preservation Office	118 S. Eight Tribes Trail	P.O. Box 1527	Miami	OK	74355
Pokagon Band of Potawatomi Indians, Michigan and Indiana	Mr.	Matthew Bussler	Bussler	Tribal Historic Preservation Officer	P.O. Box 180	58620 Sink Road	Dowagiac	MI	49047
Prairie Band Potawatomi Nation	The	Historic Preservation Office	Historic Preservation Officer	Tribal Council Member	Government Center	16281 Q Road	Mayetta	KS	66509
Sac & Fox Nation of Missouri in Kansas and Nebraska	Ms.	Lisa Montgomery	Montgomery	Environmental Protection Agency Director	305 N. Main Street		Reserve	KS	66434
Sac & Fox Nation, Oklahoma	Mr.	Chris Boyd	Boyd	NAGPRA/Historic Preservation Officer	920883 S. Highway 99	Building A	Stroud	OK	74079
Sac & Fox Tribe of the Mississippi in Iowa	Mr.	Johnathan Buffalo	Buffalo	Historic Preservation Office	349 Meskwaki Road		Tama	IA	52339
Shawnee Tribe	Ms.	Tonya Tipton	Tipton	Historic Preservation Office	P.O. Box 189		Miami	OK	74355
The Osage Nation	Dr.	Andrea Hunter	Hunter	Historic Preservation Office	627 Grandview Avenue		Pawhuska	OK	74056
The Quapaw Tribe of Indians	Mr.	Everett Bandy	Bandy	Tribal Historic Preservation Officer	P.O. Box 765		Quapaw	OK	74363-0765
United Keetoowah Band of Cherokee of Oklahoma	Ms.	Whitney Warrior	Warrior	Tribal Historic Preservation Officer	P.O. Box 746		Tahlequah	OK	74464

3.2 Tribal Response

A letter will be sent to:

Absentee-Shawnee Tribe of Indians of Oklahoma
Caddo Nation of Oklahoma
Citizen Potawatomi Nation, Oklahoma
Delaware Nation, Oklahoma
Delaware Tribe of Indians
Delaware Tribe of Indians
Eastern Shawnee Tribe of Oklahoma
Forest County Potawatomi Community, Wisconsin
Hannahville Indian Community, Michigan
Ho-Chunk Nation of Wisconsin
Iowa Tribe of Kansas and Nebraska
Iowa Tribe of Oklahoma
Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas
Kickapoo Tribe of Oklahoma
Match-e-be-nash-she-wish Band of Potawatomi Indians of Michigan
Miami Tribe of Oklahoma
Nottawaseppi Huron Band of the Potawatomi, Michigan
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians, Michigan and Indiana
Prairie Band Potawatomi Nation
Sac & Fox Nation of Missouri in Kansas and Nebraska
Sac & Fox Nation, Oklahoma
Sac & Fox Tribe of the Mississippi in Iowa
Shawnee Tribe
The Osage Nation
The Quapaw Tribe of Indians
United Keetoowah Band of Cherokee of Oklahoma

4 PUBLIC COMMENTS

5 US FISH & WILDLIFE SERVICE

Marion, IL Ecological Services Office

Thank you for the opportunity to provide this Draft Fish and Wildlife Coordination Act Report. If you have questions, please contact me at (618) 998-5945.

Sincerely,

/s/ Matthew T. Mangan

Matthew T. Mangan
Fish and Wildlife Biologist

cc: IDNR (Atwood)
MDC (Vitello)
USFS (Pitcher)

Attachments: Table 1
Table 2
Appendix A – Literature Cited

Table 1. Habitat Suitability Index (HSI) scores for Existing, Future with Project (Year 1,5,25 and 50) and Future without Project (Year 1,5,25 and 50), Oakwood Bottoms HREP.

Habitat Type	Species	Existing	Future With				Future Without			
		0	1	5	25	50	1	5	25	50
Overall Forest	Gray Squirrel	0.75	0.75	0.73	0.39	0.77	0.75	0.73	0.24	0.13
TSI	Gray Squirrel	0.75	0.75	0.73	0.52	0.85	0.75	0.73	0.24	0.13
Berm Degrades	Gray Squirrel	0.00	0.00	0.00	0.52	0.85	0.00	0.00	0.00	0.00
Berm Create	Gray Squirrel	0.75	0.00	0.00	0.00	0.00	0.75	0.73	0.24	0.13
Emergent Wetland	Bullfrog	0.85	0.90	0.95	0.90	0.90	0.85	0.77	0.70	0.64
Ditch Enhancement	Bullfrog	0.00	0.74	0.78	0.78	0.78	0.00	0.00	0.00	0.00

Table 2. Habitat Units for Future with (Year 50) and Future without Project (Year 50), Oakwood Bottoms HREP. Net change is the difference between Future with and Future without Project.

Habitat Type	Species	Future With	Future Without	Net
Overall Forest	Gray Squirrel	83,369.8	51,124.6	32,245.2
TSI	Gray Squirrel	53,522.3	29000.3	24,522.0
Berm Degrades	Gray Squirrel	1,270.3	0.0	1,270.3
Berm Create	Gray Squirrel	0.0	212.8	-212.8
Emergent Wetland	Bullfrog	4,284.05	3,340.76	943.3
Ditch Enhancement	Bullfrog	400.5	0.00	400.5

Table 3. AAHUs for Future with (Year 50) and Future without Project (Year 50), Oakwood Bottoms HREP. Net change is the difference between Future with and Future without Project.

Habitat Type	Species	Future With	Future Without	Net
Overall Forest	Gray Squirrel	1667.4	1022.5	644.9
TSI	Gray Squirrel	1070.4	580.0	490.4
Berm Degrades	Gray Squirrel	25.4	0.0	25.4
Berm Create	Gray Squirrel	0.0	4.3	-4.3
Emergent Wetland	Bullfrog	85.7	66.8	18.9
Ditch Enhancement	Bullfrog	8.0	0.00	8.0

5.1 Threatened and Endangered Species and Critical Habitat in the Study Area

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Southern Illinois Sub-Office
Southern Illinois Sub-office
8588 Route 148
Marion, IL 62959-5822
Phone: (618) 997-3344 Fax: (618) 997-8961
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To:
Consultation Code: 03E18100-2020-SLI-0003
Event Code: 03E18100-2021-E-00034
Project Name: Oakwood Bottoms HREP

October 08, 2020

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 attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project "may affect" listed species or critical habitat. Under the ESA, it is the responsibility of the Federal action agency or its designated respresentative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website

http://ecos.fws.gov/ipac/ at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all wind energy projects and projects that include installing towers that use guy wires or are over 200 feet in height, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act *(*16 U.S.C. 703 *et seq*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. 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.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

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:

Southern Illinois Sub-Office
Southern Illinois Sub-office
8588 Route 148
Marion, IL 62959-5822
(618) 997-3344

Project Summary

Consultation Code: 03E18100-2020-SLI-0003

Event Code: 03E18100-2021-E-00034

Project Name: Oakwood Bottoms HREP

Project Type: LAND - RESTORATION / ENHANCEMENT

Project Description: Oakwood Bottoms green tree reservoir. Project would potentially involve berm degrades, new berms, ditch enhancement, berm elevation raises, water control structure updates, pump station, reforestation, timber stand improvement

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/37.66184513312235N89.45194126069981W

Counties: Jackson, IL

Endangered Species Act Species

There is a total of 5 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 Fisheries[1], 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
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Least Tern *Sterna antillarum* Population: interior pop. No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8505	Endangered

Fishes

NAME	STATUS
Pallid Sturgeon *Scaphirhynchus albus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162	Endangered

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.

6 US FISH AND WILDLIFE DRAFT COORDINATION ACT REPORT

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Southern Illinois Sub-Office (ES)
8588 Route 148
Marion, Illinois 62959

FWS/SISO

July 20, 2020

Colonel Bryan K. Sizemore
U.S. Army Corps of Engineers
St. Louis District
1222 Spruce Street
St. Louis, Missouri 63103-2833

Attn: Ben McGuire, CEMVP-PD-P

Dear Colonel Sizemore:

This letter constitutes our Draft Fish and Wildlife Coordination Act Report (Report) for the Oakwood Bottoms Greentree Reservoir Habitat Rehabilitation and Enhancement (HREP) Project located in Jackson County, Illinois. This report is intended to provide compliance with Subsection 2(b) of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and compliance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*); and, the National Environmental Policy Act (83 Stat. 852, as amended P.L. 91-190, 42 U.S.C. 4321 et seq.). This Report has been reviewed by the Missouri Department of Conservation and the Illinois Department of Natural Resources and their concurrence is noted.

Introduction

The Oakwood Bottoms Greentree Reservoir (Oakwood Bottoms) HREP Project is a component of the Upper Mississippi River Restoration Program (UMRR), authorized by Section 1103 of the Water Resources Development Act (WRDA) of 1986. The vision of the UMRR is "A healthier and more resilient Upper Mississippi River ecosystem that sustains the river's multiple uses". The Project addresses habitat rehabilitation and enhancement at Oakwood Bottoms, which is owned by the U.S. Forest Service (USFS) and is part of the Shawnee National Forest. Oakwood bottoms consists of 13,500 acres of bottomland forest and wetlands located between Upper Mississippi River Miles 73 and 84 and the Project focuses on the 4,700-acre Greentree reservoir portion of Oakwood Bottoms.

Resource Problems and Opportunities

Human activity over the past two centuries within the Middle Mississippi River (MMR) has altered the hydrology and biotic communities historically present within the project area. These

alterations have reduced the diversity and quality of floodplain forest and wetland habitats including bottomland hardwood forests. The stressors are likely to continue and cause further decline in the quality of floodplain forest and wetland habitats within the project area.

The bottomland hardwood forest habitats within the project area are impacted by water inundation during the growing season and a lack of hard-mast regeneration and recruitment, resulting in a forest community with limited species and age diversity. Without action, it is anticipated that forest health would continue to degrade with the current hydrologic regime and water management infrastructure and will result in a loss of habitat for migratory waterfowl, neotropical migrants, endangered bat species, and resident wildlife. Wetland habitats within the project area have also declined due to woody encroachment and insufficient water management capabilities. Without action, it is anticipated that the aquatic habitats would continue to degrade and result in a loss of wetland habitat for migratory waterfowl and other wildlife resources. The degraded state of the project area, however, provides a significant opportunity to improve the quality and diversity of bottomland forest and wetland habitats within the proposed project area for the benefit of migratory waterfowl and other wildlife resources.

The primary problems to be addressed by this project include unnatural water level fluctuations, degraded forest community, and reduction of emergent wetland within the study area.

Goals and Objectives

The goal of the Oakwood Bottoms Project is to restore and improve the quality and diversity of bottomland hardwood forest and wetland ecosystem resources within the Project area. To achieve this goal a planning team of biologists, engineers, and planners from the U.S. Army Corps of Engineers (Corps), USFS, and USFWS developed the objectives for the project. The objectives include the following:

- Objective 1: Increase regeneration of bottomland hardwood forest within the study area during the period of analysis.
- Objective 2: Restore natural hydrologic conditions and function to the floodplain by emulating natural flooding and drainage regimes within the study area during the period of analysis.
- Objective 3: Restore degraded wetland habitat in the study area for resident migratory wildlife during the period of analysis.

The goals and objectives of the Oakwood Bottoms Project fit well into the system wide objectives for the Upper Mississippi River System (Galat et al., 2007). The system wide objectives include:

- Manage for a more natural hydrologic regime (hydrology and hydraulics)
- Manage for processes that shape a diverse and dynamic river channel (geomorphology)
- Manage for processes that input, transport, assimilate, and output materials within UMR basin river-floodplains: water quality, sediments, and nutrients (biogeochemistry)
- Manage for a diverse and dynamic pattern of habitats to support native biota (habitat)

- Manage for viable populations of native species and diverse plant and animal communities (biota)

Proposed Project Features

To achieve the project objectives, several project plans/features were evaluated. The recommended plan (Alternative 3 - Forest Service Preferred Alternative) consists of the following:

- Berm construction (~11 acres), deconstruction (~60 acres), and associated earthwork to decrease the number of management units in the study area and restore connectivity of the bottomland hardwood forest while still providing feeding and resting habitat for migratory waterfowl.
- Removal of 20 stoplog structures and 9 slide gates and installation of 18 new stoplog structures, 9 slide gates, and 7 culverts to increase efficiency of the current water level management in the study area and restore the functionality of the bottomland hardwood forest.
- Installation of one pump station and construction of 10 acres of interior channels to allow water removal from the study area during the late winter to significantly reduce tree mortality due to prolonged water exposure.
- Installation of four well pumps to allow flooding of various management units in the fall and provide access to important food resources and feeding areas for migrating waterfowl.
- Excavation of 94 acres of emergent wetlands to provide floodplain habitat diversity, improve the quality and quantity of emergent wetland habitat, and increase feeding and resting areas for migratory waterfowl.
- Reforestation of approximately 60 acres with native species to increase floodplain habitat diversity, improve the quality and quantity of bottomland hardwood forest, and increase feeding sources for migratory waterfowl.
- Timber stand improvements (approximately 1,600 acres)

This plan restores approximately 4,500 acres of bottomland hardwood floodplain forest and 94 acres of wetland habitat within the Project area.

Methodology to Evaluate Alternatives

The Oakwood Bottoms HREP was analyzed using the Habitat Evaluation Procedures (HEP). The target species for the HEP included the bullfrog for semi-permanently flooded wetland habitat and the grey squirrel for forested wetland habitat. Existing conditions, future without project conditions and future with project conditions were examined. This analysis was conducted with team members representing the Corps, USFS, and USFWS.

The utilized evaluation models produced a rating of habitat quality for each respective habitat type. This rating is referred to as a Habitat Suitability Index (HSI). The HSI, a value ranging from 0.1 to 1.0, measures the existing and future habitat conditions compared to optimum habitat, which is 1.0. This value, when multiplied by the available habitat within the project area, will provide a measure of available habitat quality and quantity known as habitat units (HUs).

Average annual habitat units (AAHUs) for each species are typically calculated to reflect expected habitat conditions over a 50-year project life.

Existing, Future without, and Future with Project Conditions

Several general and site-specific assumptions were made as to what the project area and vicinity would be like 50 years in the future with and without the project and can be found in Appendix F (Habitat Evaluation & Quantification) of the Feasibility Report (USACE 2020).

Existing, Future without, and Future with Project Conditions

Overall Forest

The habitat suitability for the gray squirrel improved with the project by year 50, while without the project the habitat suitability declined across the years (Table 1). Habitat suitability for the gray squirrel improved due to improved forest growth, increased availability of hard mast tree species, and increased food resources. Without the project there would be a loss of mature hard mast trees and lack of hard mast regeneration, loss of hard mast food resources, and conversion to less desirable tree species resulting in reduced HSI scores (Table 1). The proposed project results in a net increase of 32,245.2 habitat units and 644.9 AAHUs across all the forested areas (Table 2 and 3).

Timber Stand Improvement (TSI)

The habitat suitability for the gray squirrel improved in years 25 and 50 with the added component of TSI when compared to the project overall forest conditions (Table 1). The TSI favors retention of hard mast species through the removal of less desirable species and promotes hard mast regeneration which results in improved forest growth, increased availability of hard mast tree species, and increased food resources. The proposed project feature results in a net increase of 24,522.0 habitat units and 490.4 AAHUs across the areas proposed for TSI (Table 2 and 3).

Berm Degrades

Habitat quality for the gray squirrel also improved in the areas of berm degrades due to forest growth and increased availability of hard mast tree species while without the project those areas would continue to be non-forested and provide no habitat benefits (Table 1). The proposed project feature results in a net increase of 1,270.3 habitat units and 25.4 AAHUs across areas proposed for berm degrades (Table 2 and 3).

Berm Creation

Habitat quality for the gray squirrel declined in the areas of berm creation due to the removal of forest habitat while without the project those areas would continue to be forested (Table 1). The proposed project results in a net loss of -212.8 habitat units and -4.3 AAHUs across areas proposed for berm creation (Table 2 and 3).

Emergent Wetland

The habitat suitability for the bullfrog improved with the project and remained high across all years, while without the project wetland habitat conditions declined across the years (Table 1). Habitat quality for the bullfrog improved with the project and remained high across the years due to improved wetland vegetation and water quality conditions. Without the project, there would be a loss of emergent vegetation due to increased woody encroachment and the inability to manage for ideal water conditions resulting in reduced HSI scores (Table 1). The proposed project results in a net increase of 943.3 habitat units and 18.9 AAHUs across all emergent wetland areas (Table 2 and 3).

Ditch Enhancement

Habitat quality for the bullfrog also improved in the areas of ditch enhancements due to improved wetland vegetation and water quality conditions while without the project those areas would continue to be unsuitable (Table 1). The proposed project results in a net increase of 400.5 habitat units and 8.0 AAHUs across all areas proposed for ditch enhancement (Table 2 and 3).

Summary

The HEP analysis indicates that restoration of forested habitats results in a net increase of 1,156 AAHUs over the no action alternative. In addition, the restoration of wetland habitat results in a net increase of 27 AAHUs over the no action alternative. The combination of habitat features in the preferred alternative will yield a net increase of 1,183 AAHUs over the future without project condition.

Conclusions and Recommendations

According to the Incremental Cost Analysis, the preferred alternative ranks 3 out of 4 in costs per AAHU output compared to the other alternatives including the no action alternative. A large portion of the cost for the preferred alternative is attributable to the infrastructure needed to maintain bottomland hardwood forests and wetland habitats within the project area. Bottomland hardwood forest and wetland habitats are an important component of the Mississippi River ecosystem and there are currently limited opportunities to implement restoration projects for these habitat types in this portion of the river. The original *Upper Mississippi River System Habitat Needs Assessment* (Theiling, et al., 2000) emphasized the need for wetland and floodplain forest restoration in the MMR and the *Habitat Needs Assessment II* (McCain, et al., 2018) also identified the need to restore, maintain and enhance floodplain vegetation diversity, including hard-mast (nut producing) trees within this portion of the Upper Mississippi River. This plan restores approximately 4,500 acres of bottomland hardwood forest and 94 acres of wetland habitat. Additionally, it is very difficult to capture the full benefits associated with floodplain restoration projects. For purposes of the Incremental Cost Analysis, the model was only able to capture habitat unit benefits associated with the acreage within the immediate project area. However, we believe that the ecosystem benefits of floodplain restoration extend beyond the project area for both aquatic and terrestrial species. These habitats are critical to migratory birds, neotropical migrants, and provide habitat for a variety of other wildlife

resources. We fully support the preferred alternative as it will restore a large component of habitat diversity in this portion of the Upper Mississippi River System.

Overall, the proposed project (Alternative 3 - Forest Service Preferred Alternative) will be beneficial to the Mississippi River System and biota dependent upon the river by improving habitat quality in this portion of river. The project will improve the quality and diversity of bottomland forest and wetland habitats within the project area. Migratory birds, neotropical migrants and other terrestrial organisms will have access to improved habitat for resting, feeding, nesting, and escape cover. The proposed Oakwood Bottoms HREP will be beneficial to a variety of fish and wildlife resources and is fully supported by the Service.

Threatened and Endangered Species

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service (Service) information concerning any species, listed or proposed to be listed, which may be present in the area of a proposed action. In the Biological Assessment (BA), you provided a list of species, which may be present within the project area that was obtained from the Service's Information, Planning, and Conservation System (IPaC) website on January 29, 2019. That list includes the endangered gray bat (*Myotis grisescens*), endangered Indiana bat (*Myotis sodalis*), endangered least tern (*Sterna antillarum*), endangered pallid sturgeon (*Scaphirhynchus albus*), and threatened northern long-eared bat (*Myotis septentrionalis*). There is no designated critical habitat in the project area at this time.

You can visit our Information, Planning, and Conservation System (IPaC) at the following link below to obtain an updated official U.S. Fish and Wildlife species list.

https://ecos.fws.gov/ipac/

The biological assessment should be finalized for this proposed action. The purpose of the assessment is to identify listed or proposed species likely to be adversely affected by the action and to assist in making a decision as to whether formal consultation should be initiated.

Although the bald eagle has been removed from the threatened and endangered species list, it continues to be protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA). The Service developed the National Bald Eagle Management Guidelines to provide landowners, land managers, and others with information and recommendations regarding how to minimize potential project impacts to bald eagles, particularly where such impacts may constitute "disturbance," which is prohibited by the BGEPA. The Service is aware of a bald eagle nest in the vicinity of the proposed project area and continued coordination with the Service is recommended. A copy of the guidelines is available at:

http://www.fws.gov/midwest/eagle/pdf/NationalBaldEagleManagementGuidelines.pdf

Thank you for the opportunity to provide this Draft Fish and Wildlife Coordination Act Report. If you have questions, please contact me at (618) 998-5945.

Sincerely,

/s/ Matthew T. Mangan

Matthew T. Mangan
Fish and Wildlife Biologist

cc: IDNR (Atwood)
MDC (Vitello)
USFS (Pitcher)

Attachments: Table 1
Table 2
Appendix A – Literature Cited

Table 1. Habitat Suitability Index (HSI) scores for Existing, Future with Project (Year 1,5,25 and 50) and Future without Project (Year 1,5,25 and 50), Oakwood Bottoms HREP.

Habitat Type	Species	Existing	Future With				Future Without			
		0	1	5	25	50	1	5	25	50
Overall Forest	Gray Squirrel	0.75	0.75	0.73	0.39	0.77	0.75	0.73	0.24	0.13
TSI	Gray Squirrel	0.75	0.75	0.73	0.52	0.85	0.75	0.73	0.24	0.13
Berm Degrades	Gray Squirrel	0.00	0.00	0.00	0.52	0.85	0.00	0.00	0.00	0.00
Berm Create	Gray Squirrel	0.75	0.00	0.00	0.00	0.00	0.75	0.73	0.24	0.13
Emergent Wetland	Bullfrog	0.85	0.90	0.95	0.90	0.90	0.85	0.77	0.70	0.64
Ditch Enhancement	Bullfrog	0.00	0.74	0.78	0.78	0.78	0.00	0.00	0.00	0.00

Table 2. Habitat Units for Future with (Year 50) and Future without Project (Year 50), Oakwood Bottoms HREP. Net change is the difference between Future with and Future without Project.

Habitat Type	Species	Future With	Future Without	Net
Overall Forest	Gray Squirrel	83,369.8	51,124.6	32,245.2
TSI	Gray Squirrel	53,522.3	29000.3	24,522.0
Berm Degrades	Gray Squirrel	1,270.3	0.0	1,270.3
Berm Create	Gray Squirrel	0.0	212.8	-212.8
Emergent Wetland	Bullfrog	4,284.05	3,340.76	943.3
Ditch Enhancement	Bullfrog	400.5	0.00	400.5

Table 3. AAHUs for Future with (Year 50) and Future without Project (Year 50), Oakwood Bottoms HREP. Net change is the difference between Future with and Future without Project.

Habitat Type	Species	Future With	Future Without	Net
Overall Forest	Gray Squirrel	1667.4	1022.5	644.9
TSI	Gray Squirrel	1070.4	580.0	490.4
Berm Degrades	Gray Squirrel	25.4	0.0	25.4
Berm Create	Gray Squirrel	0.0	4.3	-4.3
Emergent Wetland	Bullfrog	85.7	66.8	18.9
Ditch Enhancement	Bullfrog	8.0	0.00	8.0

APPENDIX A

LITERATURE CITED

Galat , D., Barko, J., Bartell, S., Davis, M., Johnson, B., Lubinski, K., . . . Wilcox, D. (2007). *Environmental Science Panel Report: Establishing System-wide Goals and Objectives for the Upper Mississippi River System.* U.S Army Corps of Engineers, Rock Island District, St. Louis District, St. Paul District: Rock Island, Illinois, St. Louis, Missouri, St. Paul, Minnesota

McCain, K.N.S., S. Schmuecker, and N.R. De Jager *2018*. Habitat Needs Assessment-II for the Upper Mississippi River Restoration Program: Linking Science to Management Perspectives. U.S. Army Corps of Engineers, Rock Island District, Rock Island, IL

Theiling, C. H., Korschgen, C., DeHaan, H., Fox, T., Rohweder, J., & Robinson, L. (2000). *Habitat Needs Assessment for the Upper Mississippi River System Technical Report.* La Crosse, WI: U.S. Geological Survey, Upper Midwest Environmental Sciences Center.

USACE (U.S. Army Corps of Engineers). 2020. Upper Mississippi River Restoration, Draft Feasibility Report with Integrated Environmental Assessment, Oakwood Bottoms Greentree Reservoir Habitat Rehabilitation and Enhancement Project. U.S. Army Corps of Engineers, St. Louis District, St. Louis, MO.

7 ILLINOIS DEPARTMENT OF NATURAL RESOURCES

EcoCAT
Ecological Compliance Assessment Tool

Applicant:	U.S. Army Corps of Engineers	*IDNR Project Number:*	2106396
Contact:	Benjamin McGuire	*Date:*	10/08/2020
Address:	1222 Spruce St St. Louis, MO 63103	*Alternate Number:*	2003295

Project: Oakwood Bottoms Habitat Rehabilitation and Enhancement Project
Address: Oakwood Bottoms Rd, Gorham

Description: Oakwood Bottoms Habitat Rehabilitation and Enhancement Project. Features include: berm degrades, water control structure upgrades/replacements, pump station, TSI, reforestation

Natural Resource Review Results

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Fountain Bluff Geological Area INAI Site
Cynosciadium *(Cynosciadium digitatum)*
Cynosciadium *(Cynosciadium digitatum)*
Gray Bat *(Myotis grisescens)*
Indiana Bat *(Myotis sodalis)*
Indiana Bat *(Myotis sodalis)*
Indiana Bat *(Myotis sodalis)*
Indiana Bat *(Myotis sodalis)*
Manna Grass *(Glyceria arkansana)*
Northern Long-Eared Myotis *(Myotis septentrionalis)*
Northern Long-Eared Myotis *(Myotis septentrionalis)*
Swollen Sedge *(Carex intumescens)*
Timber Rattlesnake *(Crotalus horridus)*
Timber Rattlesnake *(Crotalus horridus)*

An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Jackson

Township, Range, Section:
10S, 3W, 4
10S, 3W, 5
10S, 3W, 8
10S, 3W, 9
10S, 3W, 16
10S, 3W, 17
10S, 3W, 20
10S, 3W, 21
10S, 3W, 28

Page 1 of 2

IDNR Project Number: 2106396

10S, 3W, 29
9S, 3W, 28
9S, 3W, 29
9S, 3W, 32
9S, 3W, 33

IL Department of Natural Resources Contact
Bradley Hayes
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
U.S. Army Corps of Engineers

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

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From: Hayes, Bradley
To: Hopfinger, Christopher J CIV USARMY CEMVP (US)
Subject: [Non-DoD Source] RE: Questions on Oakwood Bottoms HREP
Date: Monday, September 10, 2018 9:53:36 AM

Christopher,

Thanks for the additional information, much appreciated.
Brad

-----Original Message-----
From: Hopfinger, Christopher J CIV USARMY CEMVP (US) <Christopher.Hopfinger@usace.army.mil>
Sent: Monday, September 10, 2018 8:39 AM
To: Hayes, Bradley <Bradley.Hayes@illinois.gov>
Subject: [External] RE: Questions on Oakwood Bottoms HREP

Hi Brad-

Oakwood Bottoms HREP is a USACE planning study that is in the first year/stages. USACE is partnering with the US Forest Service to improve the water control infrastructure and associated ecological health of the forest and wetlands within the Project Area (Oakwood Bottoms management area).

I am currently writing the existing conditions section of the EA/Report. This is why I generated the ECO CAT review, to determine the extent of known species within the Project Area.

Formulation of Alternatives and Features will be happening in calendar year 2019, with a final proposal/EA scheduled to be in draft form by the end of 2019.

At this point, we do not know where on the ground impacts would occur.

I have attached a word document summarizing the potential project (this was from our planning workshop last fall).

If you need further information or have questions feel free to call me anytime,

Thanks,

Christopher J. Hopfinger
Forester, Environmental Compliance Section Regional Planning and Environmental Division North U.S. Army Corps of Engineers St. Louis District
1222 Spruce Street
St. Louis, MO 63103-2833

314-331-8171
Christopher.Hopfinger@usace.army.mil

-----Original Message-----
From: Hayes, Bradley [mailto:Bradley.Hayes@illinois.gov]
Sent: Friday, September 7, 2018 2:56 PM
To: Hopfinger, Christopher J CIV USARMY CEMVP (US) <Christopher.Hopfinger@usace.army.mil>
Subject: [Non-DoD Source] Questions on Oakwood Bottoms HREP

Chris,

I am taking over USACE for Adam Rawe and saw the Oakwood Bottoms HREP project in my que. Could you provide me with more details on this project?

Thanks,

Brad

Brad Hayes

Resource Planner

Division of Real Estate Services and Consultation

Office of Realty & Capital Planning

Illinois Department of Natural Resources

One Natural Resources Way

Springfield, IL 62702

Bradley.Hayes@illinois.gov <mailto:Bradley.Hayes@illinois.gov>

Phone: (217) 782-0031

Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
http://dnr.state.il.us

JB Pritzker, Governor
Colleen Callahan, Director

October 30, 2019

Benjamin McGuire
U.S. Army Corps of Engineers
1222 Spruce St
St. Louis, MO 63103

RE: Oakwood Bottoms HREP
Project Number(s): 2003295
County: Jackson

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

However, the Department requests further opportunities for coordination and comments as this project continues to develop to ensure State protected resources are considered.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Bradley Hayes
Division of Ecosystems and Environment
217-785-5500

8 PLANNING CHARRETTE

A full report is available upon request. Executive summary is provided below.

1 Executive Summary

1.1 Project Description

The Oakwood Bottoms Habitat Rehabilitation and Enhancement Project is located in the Mississippi River Floodplain on the left descending bank of the Mississippi River between River Miles 73-84 in Jackson County, IL. The Project Area is located in the Middle Mississippi River which is the first free- flowing section of the Mississippi River downstream of the lock and dam systems. The U.S. Forest Service (USFS), an agency of the U.S. Department of Agriculture, owns and manages the Oakwood Bottoms as part of the Shawnee National Forest.

The USFS acquired the tracts for the Oakwood Bottoms property between 1936 and 1938. Prior to acquisition the property was cleared, leveled, and heavily manipulated from its natural composition for agricultural purposes leading to a heavily fragmented landscape. Since acquiring the property, the USFS has been working to restore the ecosystem through different measures but a large scale systematic approach has not been attempted.

The Shawnee National Forest Land and Resource Management Plan of 2006 provides guidance for managing the project area as a refuge. The management direction for the project area is "to provide flooded habitat for migratory and over-wintering waterfowl and other game and non-game species, including songbirds, raptors, reptiles, amphibians and other native, wetland species." Current water and vegetative management practices are accomplished using a system of channels, berms, water control structures, pumping facilities and numerous subimpoundment areas. This water management system is inefficient and resource intensive, resulting in diminished habitat management capacity.

1.2 Value Engineering Study Results

Although no longer required for feasibility-level studies, a Value Engineering (VE) Function Analysis Workshop following the standard VE methodology was conducted on 1-3 November 2017 for the Oakwood Bottoms Habitat Rehabilitation and Enhancement Project. This workshop functioned as a study scoping meeting with Federal and State stakeholders, non-governmental organizations with technical knowledge of the area and its problems, and other experts with greentree reservoir management experience who provided technical guidance. This workshop did not replace the required NEPA scoping activity, which will occur at a later date.

During the creative phase of the study, 7 proposals were developed.

The participants brainstormed and refined lists of problems, opportunities, objectives and constraints for the study. All of these items are documented in Section 3.

9 PREVIOUS PUBLIC SCOPING AND OUTREACH

2 Oakwood bottoms public meeting 3/5/2020 at Grand Tower civic center

See sign-in sheet

Andy presented the info regarding the past season and flooding issues (pump failures and wildlife damage to berms) that delayed or prevented some units from fully flooding. (See Andy's presentation)

Chase Seals described the work that NWTF was doing in or near OB

Lennie presented a brief summary of the USACE project and tree health data and conditions

Jasen Brown described the status of the USACE OB project and timelines

Topics discussed

Planting the moist soils to millet or corn- a couple action items spurred from this topic. Eichholz corrected the misconception of corn is better than MS.

- Need to convert some units that has lost its timber to moist soil (8N,5, maybe others)
  - Consider this in HREP planning.
- Need to reconstruct our current MS units so that they can be properly managed (drained and filled) for good moist soil production. Currently we cannot get a tractor into them until July/August.

Getting water off sooner – as soon as the season is over

- Some say there is no need to leave water on for the spring migration because there is always plenty of water around at the end of the season and for the spring migration.

Motorized access to hunting for mobility impaired hunters

Need more bridges

No one objected to the continuation of the refuge. After meeting discussions lead to- People are in favor of the refuge and its current location. They think it helps the hunting success. May have to move the south boundary to the powerline ROW after restoration work by USACOE.

A few discussions on the Friends of Oakwood Bottoms agreement.

Need to make sure to include SIU, DU, NWTF, and other partners to the meeting. We did invite DU and NWTF this time. Also, Tom Neal would have attended had he known of it.

3 Comments from the October 18, 2018 OB meeting at Grand Tower

LJP

1) Need to have moist soil units in the lower areas
2) USFS staff and contractors need to stay out of the refuge
3) USFS staff and contractors need to stay out of the OB during hunting season, (or at least until shooting time is over and get out well before sunset)
4) Drain the units earlier instead of trying to provide habitat for the spring migration

5) Change OB to the south waterfowl hunting zone
6) Why can't mobility disabled hunters use atv's? They once were. If there are complaints from the folks walking in, then make the rules state that the walk-in hunters can go in at 4:30 and the ATV hunters can go in at 5. Can also make the rule that ATV hunters must be out by 2 pm to keep people from horsing around in OB.
7) Can you make moist soil units in other areas of OB that aren't used much by waterfowl?
8) Can you make the hunting restriction times for the BM wetlands the same as OB?
9) Some were concerned reducing the miles of berm would increase the difficulty accessing hunting spots
10) Foot bridges across the deep ditches

CD

- Need a plan for dewatering too. Argument was made that leaving water after duck season is hurting oaks.
    - My afterthoughts are, we always shoot for getting water off before green-up so not sure this is a valid argument. However, maybe getting the water off sooner may get those units not only drained by green-up but actually allow more time for soils to dry before green-up. That obviously would be a good thing. But that is naturally a wet time of year, so not sure if that is realistic. It seems it doesn't matter if a unit is flooded or not, the soils are typically completely saturated from December-May.
    - I would like to think this through some more and figure out a new dewatering schedule if needed. We can always expect big migrations of mallards from Feb 15-March 15.
        - One possibility is we could pick 2 flood blocks to drain right after duck season and leave the others flooded (at least partially) until mid-March as normal, then on the second year of the 2 year rotation, switch the dry/wet blocks around at drain time.
- To provide spring migration habitat, it was suggested to create more moist soil units and have those as the spring flooded units while all greentree is drained after duck season.
- There was some compelling arguments to allow handicap atvs on centerline road (at a minimum) again… One way to reduce walking hunter/atv hunter conflict is to allow walking hunters in at 430 and atv hunters could only go in after 5. Tim said he would talk to Brendan about this.
- Heard comments about the refuge
    - One person said it was good for a year or two but if we keep managing like we did last year, then do away with it. Too much human disturbance, not enough water, and unit 14 was not mowed and flooded on time
    - Most favor the refuge and see it as a good thing for the ducks and for hunting in the area. One person said, even last year, he could hear thousands of ducks in the refuge while hunting nearby units, so even last year, it was holding ducks.
- Comment about our people driving up and down centerline road and levees during hunting hours and spooking ducks while they were working into hunters.
    - We need to always try to stay out of Oakwood until the afternoon during hunting season.

- Big Muddy Wetlands; comment that maybe we should do the 430 to 1pm hunting, temporal refuge at this site as well to hold more ducks in the area. WE have this set at oakwood and larue, but not for this spot in between. Another gentleman did not agree with this because allowing all day hunting gives people opportunities to hunt evenings.
- Heard favorable comments about the 430 walk-in times at Oakwood. Said it keeps people from camping at the spots.
- Everyone seemed in favor of Oakwood being back in the south zone and having the later duck season.

JDD

Not much talk about forest health. If it was it was questions about what is killing their tree at their house or management in the uplands. Most comments for Oakwood was about moist soils and hunting.

- Manage the moist soil have better before adding more. Too many cattails and species not as important for ducks.
- Utilize wet areas that hold water and have undesirable species for additional moist soil.
- The refuge is killing you guys for trying to manage for forest health because you need to dry up areas for the trees and 1/3 of Oakwood is locked up in a refuge and un-huntable. You guys don't need to refuge birds, there are plenty of places around to do that. Your most important contribution to refuge is on the migration back north.
- Having the use of herbicides in forest management at Oakwood is a good thing with the sprouting that is occurring.
- Is commercial harvesting an option in Oakwood?
- Oakwood in the south central zone is ridiculous. Putting it back in the south zone would give you a couple extra weeks later to flood closer to tree dormancy

ATC

- Restated about getting water off as soon as hunting season is over
- Working to save the tress and seedlings is a good thing
- Get more water in Unit 6
- Foot bridges for access across ditches
- Use kayaks (no motors) to cross ditches and able to float along the ditches 19-21 instead of walking all the way down
- Keep all contractors out during hunting season

4 Oakwood Bottoms Open House Announcement

USDA
United States Department of Agriculture

Forest Service
Shawnee National Forest
50 Highway 145 South
Harrisburg, Illinois 62946
www.fs.usda.gov/shawnee

News Release

Media Contact: Angelica Cacho
(618) 253-1031
angelicacacho@fs.fed.us

Shawnee National Forest open-house event to discuss current conditions and future management and habitat restoration work in the Oakwood Bottoms project area.

HARRISBURG, Ill. (October 4, 2018) – Join Shawnee National Forest staff for an open-house to discuss current conditions and future management of Oakwood Bottoms in Jackson County. The 4,000 acre Oakwood Bottoms greentree reservoir system is primarily managed to provide habitat for migratory waterfowl.

The Shawnee National Forest is partnering with the U.S. Army Corps of Engineers, St. Louis District, to conduct the Oakwood Bottoms Habitat Rehabilitation and Enhancement Project feasibility study. This study will look at ways to increase the efficiency of managing the Oakwood Bottoms greentree reservoir system, including the ability to flood and drain more quickly. At this meeting, they will discuss the scope of the study and will solicit feedback from potentially affected parties to ensure that all issues and concerns, and potential solutions are considered in the study.

Forest Service staff will also provide an overview of the bottomland forest conditions, the current and future flooding plans, and current habitat restoration and enhancement work. The Forest Service would also like feedback regarding the refuge and other management activities within the project area.

Oakwood Bottoms Project Open-house: October 18 from 6:00-8:30 p.m. at the Grand Tower Civic Center at 610 Front Street, Grand Tower, IL.

Oakwood Bottoms Field Trip: October 27. Meet at the Oakwood Bottoms interpretive site at 9 am for a tour of sites within the green-tree reservoir system with US Forest Service staff.

Updated information about these events can be found on the Shawnee National Forest Facebook event page: www.facebook.com/shawneenatlforest.

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