DRAFT ENVIRONMENTAL ASSESSMENT
WITH
DRAFT FINDING OF NO SIGNIFICANT IMPACT

LEVEE REPAIR (P.L. 84-99):
HOWARD BEND LEVEE DISTRICT
ST. LOUIS COUNTY, MISSOURI
MISSOURI RIVER

3 July 2024

US Army Corps of Engineers
St. Louis District

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1.0. Introduction

1.1. Project Authorization

Emergency actions undertaken by USACE to repair flood control works damaged or destroyed by flooding are authorized by Public Law 84-99, as amended by Section 206 of the Flood Control Act of 1962 (hereafter referred to as PL 84-99). USACE regulations covering these and other emergency rehabilitation activities are contained in the Rehabilitation Code 910-300 of ER 500-1-1 (33 C.F.R 203). The Code states that actions taken to restore facilities to pre-disaster conditions under PL 84-99 will not be construed to be either major federal actions or as having significant effects. However, the effect of rehabilitation on the environment must be considered. This includes the effects of construction on endangered species (PL 93-205 and Appendix B of ER 1105-2-50) and archeological and historic properties (Chapter 3 of ER 1105-2-50).

Since the Howard Bend Levee District is active in the USACE Rehabilitation and Inspection Program, they are eligible for Flood Control and Coastal Emergency funding authorized by PL 84-99. Based on the authority outlined in PL 84-99, the U.S. Army Corps of Engineers – St. Louis District (USACE), in cooperation with the Howard Bend Levee Association, is proposing to repair the Howard Bend Levee System.

This document is a Draft Environmental Assessment (EA) with an attached unsigned Finding of No Significant Impact (FONSI) for levee repairs to the Howard Bend Levee District (LD). The purpose of this EA is to evaluate potential environmental impacts of proposed levee repairs, determine if the environmental impacts rise to the level of significant, and to serve as a record of interagency coordination for the emergency rehabilitation actions. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended and the Council on Environmental Quality's Regulations (40 Code of Federal Regulations §1500-1508, as reflected in the USACE Engineering Regulation 200-2-2. Impacts on relevant environmental resources are discussed in this EA and summarized in the unsigned FONSI.

1.2. Emergency Provision for Environmental Compliance

On 26 July 2022, 8-12 inches of rain fell in the St. Louis Metro area in Missouri and Illinois. This caused extensive urban flooding impacting cities, farmland, levees, roadways, and buildings. Despite the fact that there was no flooding on the major rivers at any of the gaged locations, several levee systems experienced damages due to extreme flash flooding on creeks and smaller tributaries. The affected areas included St.

Louis City, St. Louis County, St. Louis County, and Lincoln County in Missouri, and Madison, St. Clair, Clinton, and Washington Counties in Illinois.

On 04 November 2022, a Memorandum for Record was signed by COL Kevin R. Golinghorst, giving approval to complete PL 84-99 Levee Repairs, resulting from 2022 flooding, using the emergency provisions of Engineering Regulations (ER) 500-1-1, Emergency Employment of Army and Other Resources Civil Emergency Management Program; ER 200-2-2 Procedures for Implementing the National Environmental Policy Act (NEPA); and 33 CFR Part 325.2(e)(4) and 36 CFR Part 800.12 (b)(2), Protection of Historic Properties.

These levee repairs are considered to be emergency actions because of the following:

1) The need to complete construction of levee repairs as soon as possible and prior to additional flooding or inundation.
2) The risk of economic loss from additional flooding of communities along rivers within the St. Louis District, their tributaries, and adjacent agricultural lands.

Neither the implementation of the Emergency Action provision within ER 200-2-2, nor the use of a categorical exclusion, exempts the action from compliance with any other Federal law (e.g., Endangered Species Act, Fish and Wildlife Coordination Act, Bald and Golden Eagle Protection Act, National Historic Preservation Act, Clean Water Act, etc.). All environmental evaluation, coordination, consultation, and compliance including acquiring any necessary permits will be completed concurrent with, or following, the emergency repairs.

1.3. Location

The Howard Bend Levee System is a non-federally constructed, non-federally maintained levee located in St. Louis County, Missouri, along the east bank of the Missouri River at approximately Missouri River Mile 29.7 to 37.4 (Figure 1). The system consists of 1.91 miles of floodwall and 6.25 miles of levee constructed with a representative crown width between 10 feet, and a representative side slope of 1 on 3. The levee system provides a 500-year level of protection.

The Howard Bend Levee System reduces the risk of flooding from the Missouri River to Maryland Heights and a small portion of Chesterfield in St. Louis County, Missouri. A review of the National Levee Database finds that, within the 6,000-acre leveed area are the Missouri Highways 364 and 141, multiple residences, commercial and industrial properties including Creve Coeur Airport, Midwestern Plastic Chemical Factory, two water treatment plants and a sewage treatment facilities, Historic Aircraft Restoration Museum, a casino, and also 2,000 acres of productive agricultural land. This system

provides benefits to nearly 1,500 residents and employees and approximately $335 million in property.

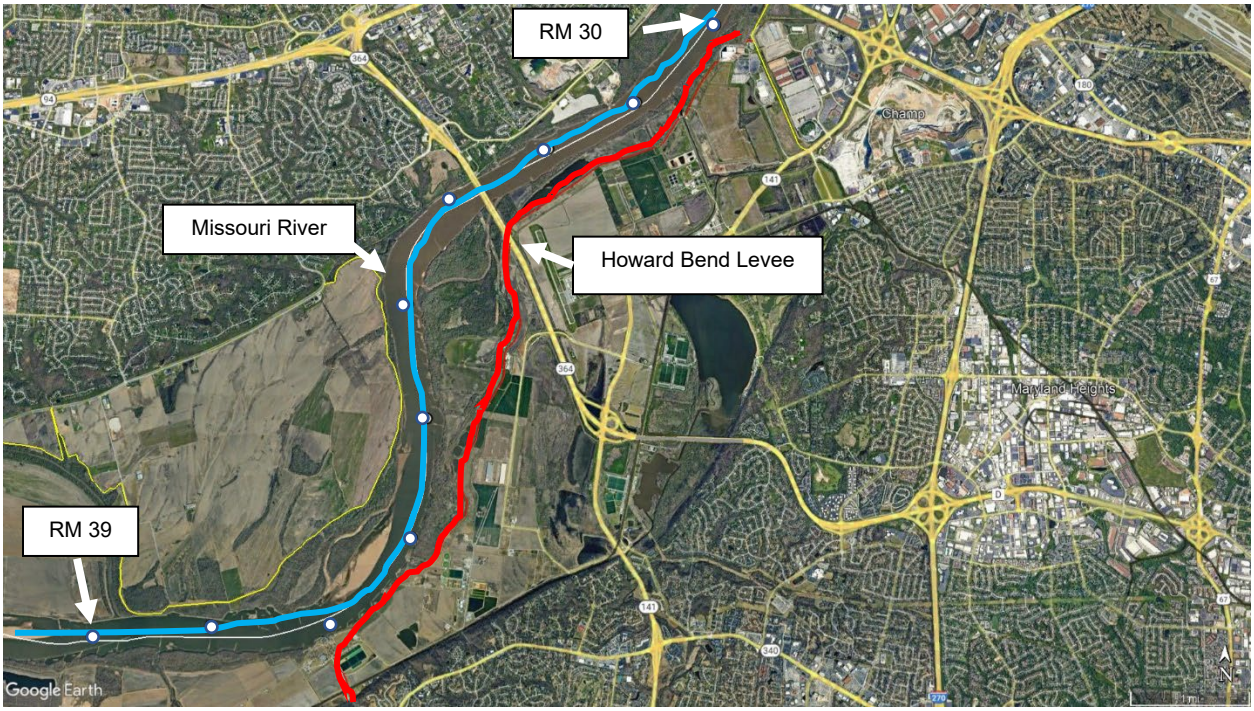


Figure 1. Location of the Howard Bend Levee System (red line) in St. Louis County, MO, USA.

1.4. Purpose and Need

The purpose of this EA is to evaluate the environmental impacts resulting from the proposed repair of the levee. There is a need for repairs because without them, the area would remain unprotected during high water events. Water would enter the area through the damaged segments of the levee resulting in a hazard to human life, property damage, and reduced commercial and industrial productivity. The floodwaters could deposit debris and hazardous materials onto the farm fields, hindering future farming productivity.

2.0. Project Alternatives Considered

This section describes and compares the alternatives based on their geotechnical, engineering design, economic, and environmental impact and achievement of project objectives for the damaged Howard Bend Levee District. The National Environmental Policy Act (NEPA) requires that in analyzing alternatives to a proposed action, a federal agency must consider an alternative of "No Action." Likewise, Section 73 of the Water Resources Development Act (WRDA) of 1974 (PL 93-251) requires federal agencies to give consideration to nonstructural measures to reduce or prevent flood damage.

2.1. Alternative 1-No Action (Future without project (FWOP))

Under the No Action Alternative, the federal government would not repair the damages to the Howard Bend levee. It is possible that the Levee District would make repairs without federal assistance. Environmental impacts of repairs made by the Levee District would be similar to the tentatively selected alternative, except that the repair duration may differ and the environmental protections may be reduced. However, due to the uncertainty of the Levee District making all necessary repairs, **the environmental impacts of allowing the damage to remain unrepaired are regarded as the No Action Alternative**.

2.2. Alternative 2-Non-structural Measures

Section 73 of the WRDA of 1974 (P.L. 93-251) require federal agencies to give consideration to non-structural measures to reduce or prevent flood damage. Nonstructural measures reduce flood damages without significantly altering the nature or extent of flooding. Damage reduction from nonstructural measures could be accomplished by changing the land use within the floodplains through relocation of residential and commercial structures and regulation of floodplain development, or by mitigating existing flood hazard through flood proofing and flood warning and preparedness systems. A flood warning system would do little to reduce structural and agricultural damages. However, flood proofing and relocation out of a flood prone area are effective measures at reducing flood risk. However, non-structural flood risk reduction measures are not desirable to the Howard Bend Levee District because they generally have large costs, and non-structural flood risk reduction measures would not protect agriculturally productive lands or other features that could not be flood proofed such as local business and industry protected by the levee system.

Under PL 84-99, the Corps has the authority to pursue a non-structural alternative only if the project sponsor requests such an alternative.

"There is hereby authorized an emergency fund to be expended in preparation for emergency response to any natural disaster, in flood fighting and rescue operations, or in the repair or restoration of any flood control work threatened or destroyed by flood, including the strengthening, raising, extending, or other modification thereof as may be necessary in the discretion of the Chief of Engineers for the adequate functioning of the work for flood control, or in implementation of ***nonstructural alternatives to the repair or restoration of such flood control work if requested by the non-federal sponsor.****"*

Additionally, ER 500-1-1, dated 30 September 2001, states that:

"Under PL 84-99, the Chief of Engineers is authorized, ***when requested by the non-Federal public sponsor****, to implement nonstructural alternatives (NSA's) to the rehabilitation, repair, or restoration of flood control works damaged by floods or coastal storms. The option of implementing an NSA project (NSAP) in lieu of a structural repair or restoration is available only to non-Federal public sponsors of flood control works (FCW's) eligible for Rehabilitation Assistance in accordance with this regulation, and* ***only upon the written request of such non-Federal public sponsors****.* ***The principal purposes of an NSAP are for floodplain restoration, provision or restoration of floodways; and/or reduction of future flood damages and associated (FCW) repair costs****. [NOTE: Habitat restoration is recognized as being a significant benefit that can be achieved with an NSAP, and may be a significant component of an NSAP,* ***but is not considered to be a principal purpose under this authority****.]"*

The Howard Bend Levee District declined to request the pursuit of a non-structural alternative because present owners desire to continue agricultural use; therefore, this alternative was eliminated from further consideration in this EA.

2.3. Alternative 3-Structural Repair of Levee with Federal Assistance (Tentatively Selected Plan (TSP))

Under this alternative, the federal government would reconstruct the levee to pre-flood level of protection. A team including members of the St. Louis District's Engineering Design Branch and Geotechnical Engineering Branch were involved with developing the most economical and efficient design for repair. Structural repairs at each Damage Area would reconstruct the levee to pre-flood grade. There are eight types of damages used by USACE levee specialists to describe the damage to a given levee including breaches, slides, scour, turf damage, rutting, erosion Type I, Type II, and Type III (Table 1).

Table 1. A description of the various types of damages used by USACE levee specialists to classify damages sustained to levees.

Damage Classification	Description	Potential Repair Method
Breach	Rupture, break, or gap in the levee system	Stripping, preparing, placing embankment, and compacting in lifts
Slide	Movement of soil down the levee slope	Excavation of damaged area, and replacement of embankment in compacted lifts
Erosion Type I	Wave wash / minor erosion less than 12 inches deep	Stripping, disking, filling, and compacting
Erosion Type II	Moderate erosion between 12 and 18 inches deep	Stripping, preparing, placing embankment, and compacting
Erosion Type III	Major erosion greater than 18 inches deep	Stripping, preparing, placing embankment, and compacting in layers
Scour Hole	Channel or pool created by water flowing forcefully over something (e.g., levee)	Often accompanies a levee breach. Repair method varies by location and severity.
Turf Damage	The upper layer of ground made up of grass and plant roots has been damaged due to long-standing water inundation.	Disking and seeding
Rutting	Depressions, ruts, or pot holes that are located along the levee crown, embankments, and access roads unrelated to levee settlement that will pond water.	Filling in the depressions using embankment material from the adjacent undamaged levee section.

The Howard Bend Levee experienced damage to an outfall structure located where Creve Coeur Creek empties into the Missouri River just downstream of River Mile 31 (Figure 2). The structure includes two 10’ x 12’ metal sluice gates on a double culvert with wingwalls located in a reach of concrete floodwall. The damage area is concentrated around the culvert structure which is a large **scour hole** that generated the instability and caused **Erosion Type III** on the landside side slope of the levee

adjacent to the culvert. The scour hole is estimated to have a 5.5 ft depth and 350 ft span along the channel. The scour hole also damaged the culvert foundation, the embankment, the revetment on the east and west banks, and a maintenance platform and access ramp (Figure 3). The levee district repaired the scour hole and embankment with rip-rap to prevent further damage (Figure 4). However, some Erosion Type III remains unrepaired and the culvert undermining still needs to be addressed with a repair.

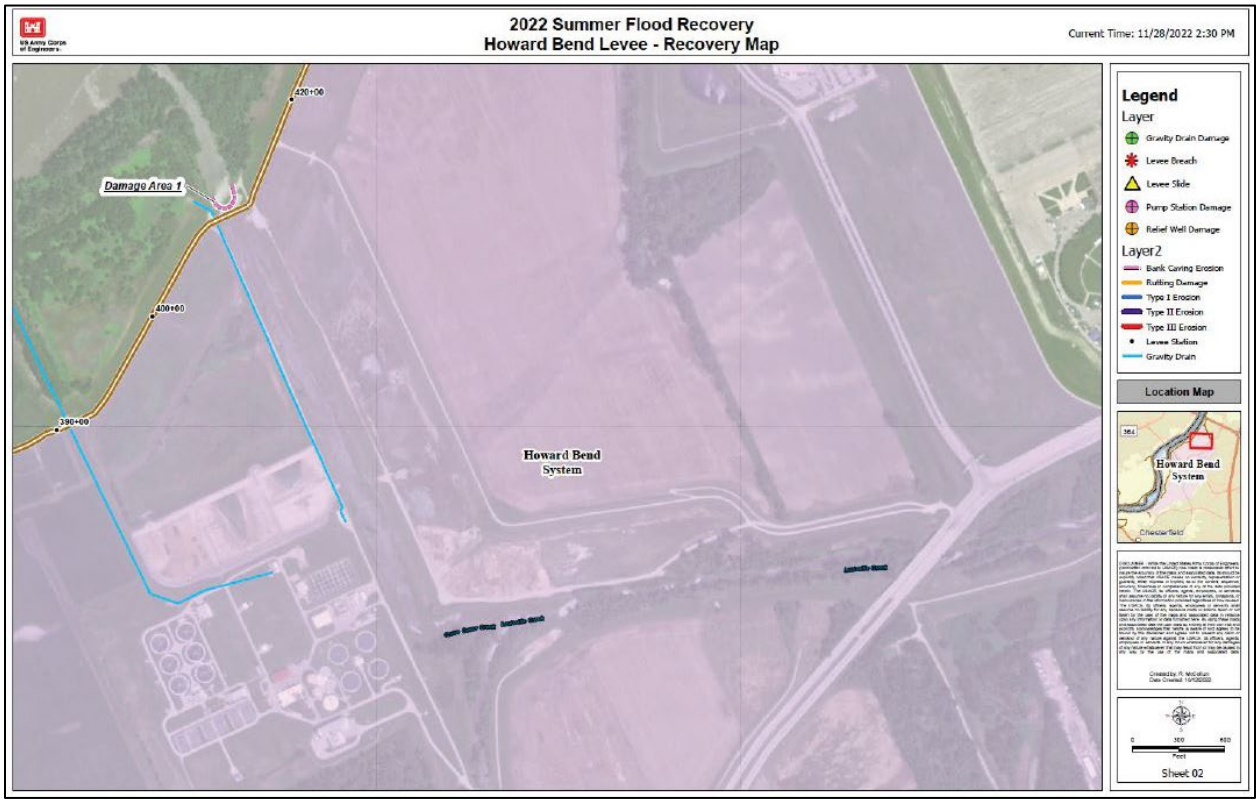


Figure 2. Location of the damaged culvert.

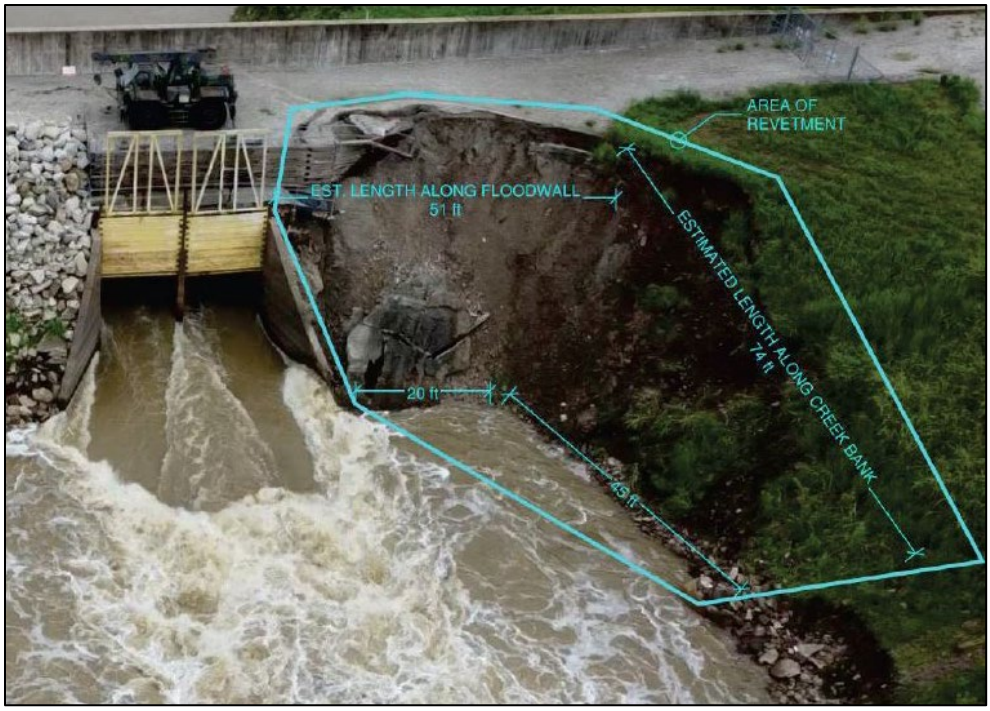


Figure 3. Photo of damages to the water control structure and the adjacent embankment and levee.

Figure 4. Levee District's repair of the eroded bank near water control structure with revetment.

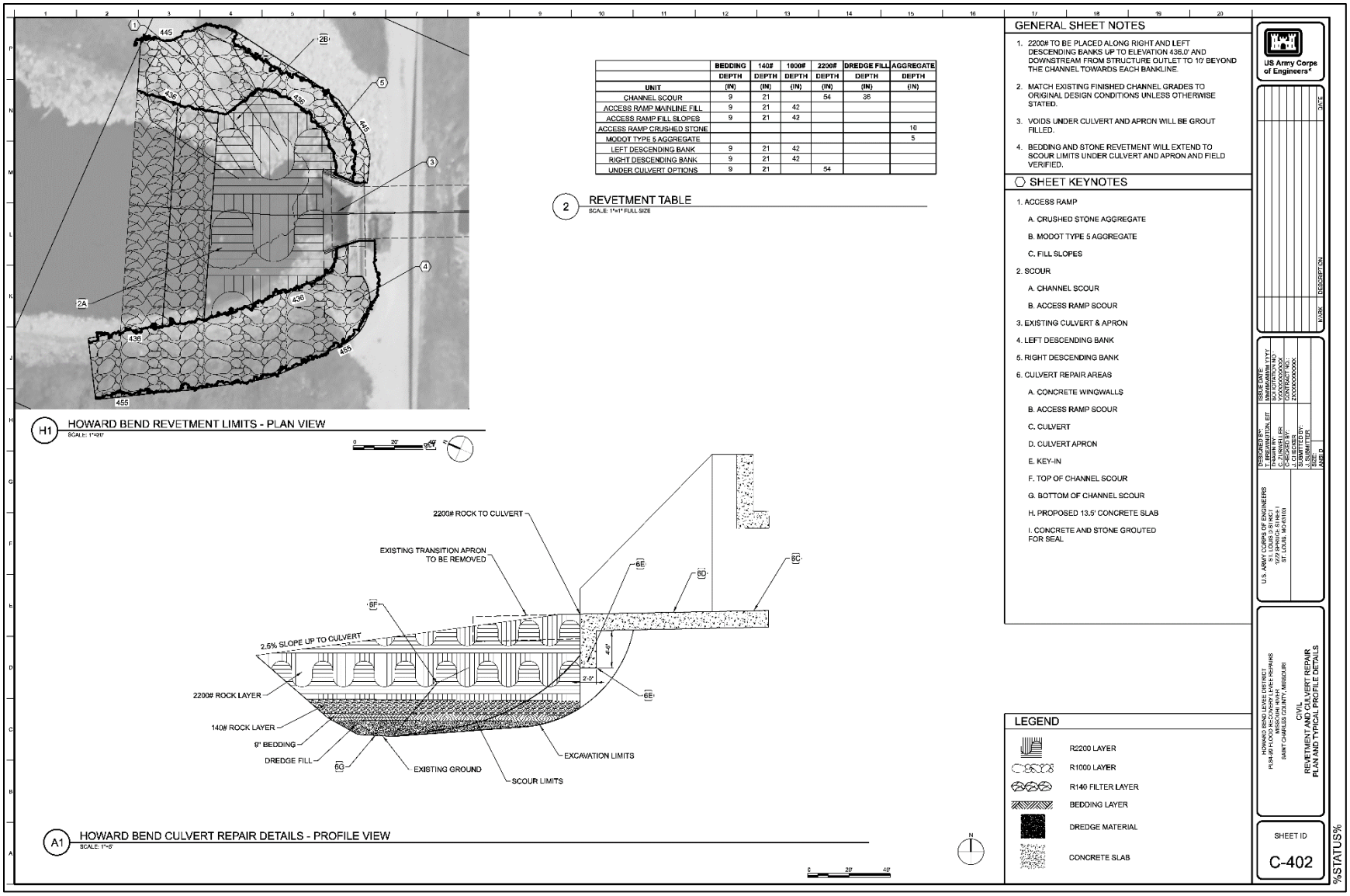
The recommended repairs for each area of damage are as follows:

a. Channel Bed Scour Repair - The scoured areas include the channel bottom, underneath the existing double culvert, and underneath both channel banks. These areas will be repaired before embankment repairs by filling using pervious material, geogrid or geotextile, bedding material, and appropriately sized riprap. The material will be placed in the eroded areas using bulldozers, scrapers, or other earth moving equipment. The pervious material will be capped with the stone armoring system. In order to place the fill material, a temporary dam would need to be placed around the mouth of the outfall structure and just upstream of the structure to dewater the area. Water would be pumped from Creve Cour Creek to the downstream side of this dam to maintain flow and prevent the waters from backing up behind the dam and outfall structure (Figure 5).

b. Slope Grading and Revetment - Embankment Failures for the west and east banks will be repaired by excavating the damaged section of the channel banks near the levee and culvert foundation, utilizing appropriate excavation equipment, and separately stockpiling the excavated material in designated areas. As the soil material is placed back in the levee section it will be compacted with sheepsfoot rollers or other approved compaction equipment.

c. Access Road Repair - The access road will be repaired by removing the remaining riprap and damaged section at the failure plane utilizing scrapers, bulldozers, excavators, or other excavation equipment, and stockpiling the excavated material in designated areas. A subgrade layer for the foundation will be restored with embankment and/or riprap as appropriate. An aggregate base layer will be compacted on top using crawler type equipment or other approved compacting equipment.

d. Platform Repairs - Platform repairs will require removal of damaged timber wall and guardrail as well as excavation of any loose material down to the existing retaining wall and retaining box. Bedding or geotextile material will be installed in those areas. The platform will be filled with appropriate embankment material and compacted. The timber wall and guardrail will be replaced as needed for stability and access.



UNIT	BEDDING DEPTH (IN)	140# DEPTH (IN)	1000# DEPTH (IN)	2200# DEPTH (IN)	DREDGE FILL DEPTH (IN)	AGGREGATE DEPTH (IN)
CHANNEL SCOUR	9	21		54	36	
ACCESS RAMP MAINLINE FILL	9	21	42			
ACCESS RAMP FILL SLOPES	9	21	42			
ACCESS RAMP CRUSHED STONE						10
MODOT TYPE 5 AGGREGATE						5
LEFT DESCENDING BANK	9	21	42			
RIGHT DESCENDING BANK	9	21	42			
UNDER CULVERT OPTIONS	9	21		54		

Figure 5. Diagram of the proposed repair design for the damage to the outfall structure.

3.0. Affected Environment & Environmental Impacts

This chapter summarizes the biological, physical, and social environments of the affected project area relative to the alternatives under consideration. Relevant resources are addressed in terms of their present condition, their projected condition under the No Action alternative, and the expected effects of the TSP.

3.1. Physical Resources

The Howard Bend Levee District is located in St. Louis County within the floodplain of the Missouri River. The levee system is bordered by an unnamed tributary to the Missouri River to the west and Creve Coeur Creek to the east. Creve Coeur Creek is on the 2022 303d list for Chloride (Missouri Department of Natural Resources, 2022). The unnamed tributary is not listed (waterbody ID # 3960).

According to the National Wetland Inventory, there are some isolated open freshwater wetlands, forested wetlands, and freshwater emergent wetlands scattered throughout the levee district (Figure 5). Some of these open water wetlands are artificial impoundments used for water treatment and agricultural uses. There are also natural wetlands and oldfields at the nearby Little Creve Coeur Ecological Area. Creve Coeur Lake is the largest body of water in the levee district. The land beyond the levee consists of riparian forest, oldfields, open water wetlands, and some agricultural fields.

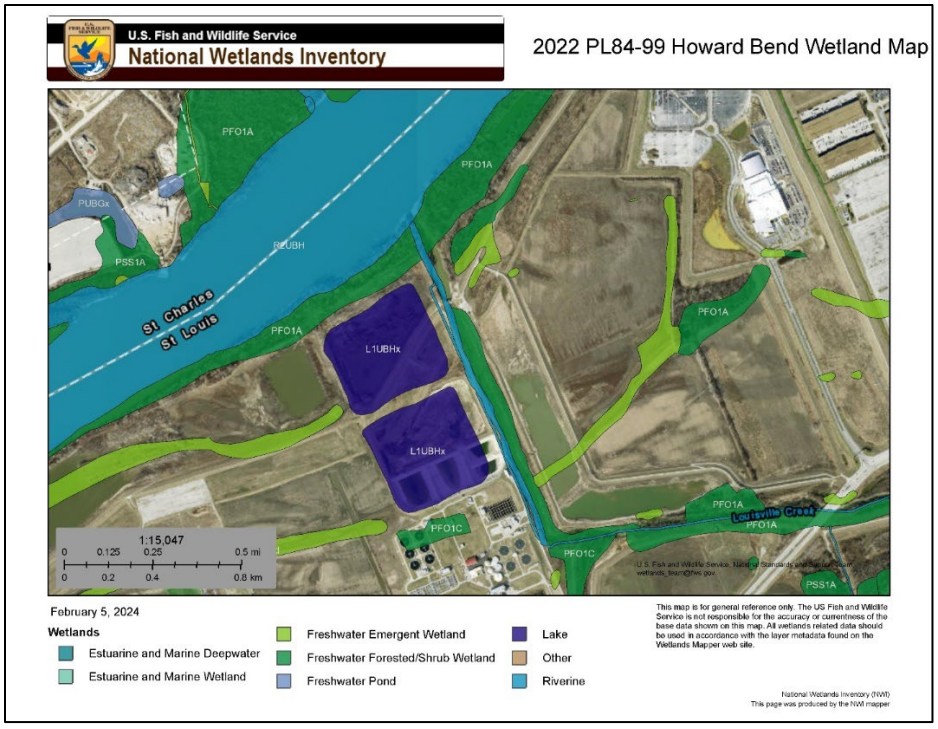


Figure 6. A map of the wetland features near the action area.

Land use within the levee district is primarily agricultural production land (Figure 6). Of the 1,343 acres within the leveed area, 739 (>50%) is used to grow a mixture of corn, soybean, and wheat. The 2013 USDA NASS aerial imagery provided an estimation of the crop allocation inside the levee district, which was used to determine a distribution of 45% corn, 45% soybean, and 10% wheat. The field to the east of the action area is prime farmland, while the levee, the area around the creek, and the riparian corridor are not prime farmland (Figure 7). In addition to traditional commodity crops, the leveed area also contains a sod farm, a small high-density residential area, and about 200 acres of natural and recreation lands, which includes a soccer complex. Even though the leveed area could be considered rural, it is surrounded by large residential and commercial developments as well as busy roadways.

The ambient noise in the study area is a product of the surrounding traffic, agricultural production, and some recreation.

Figure 7. A map of the 2022 ESRI land use/land cover in the action area (white star).

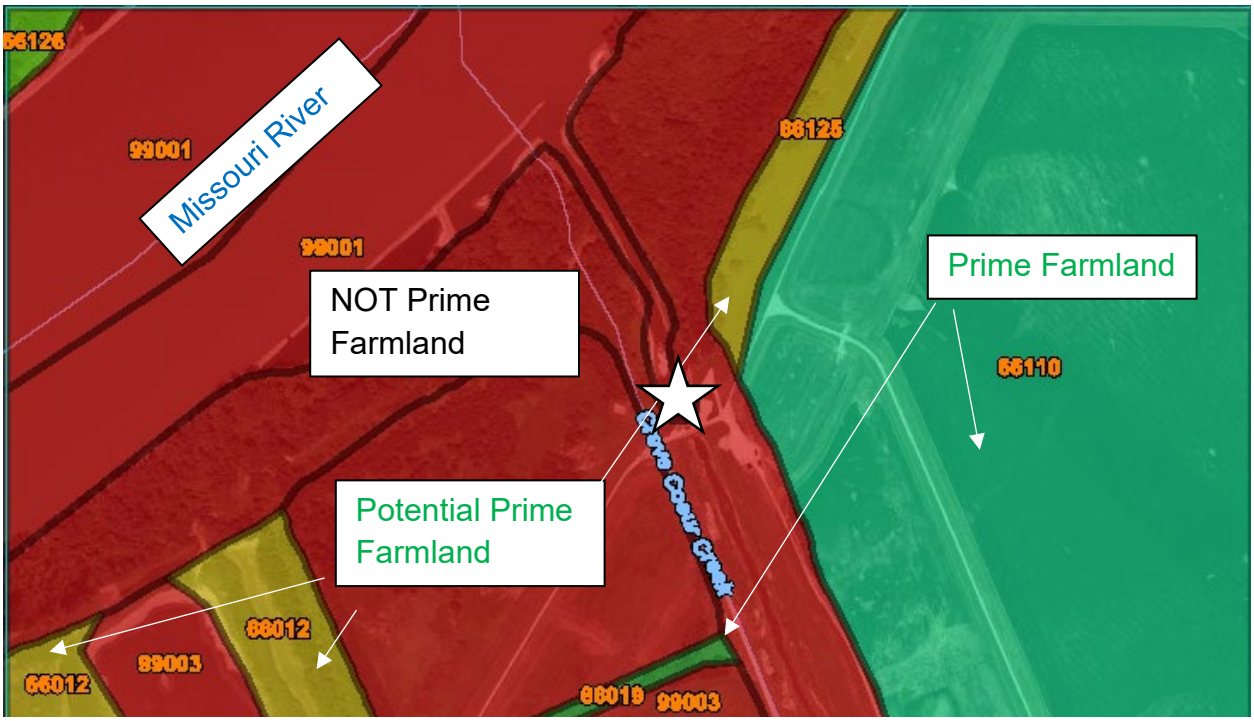


Figure 8. A map of the areas of prime farmland in and around the action area (white star).

The Clean Air Act of 1970 requires the U.S. Environmental Protection Agency (USEPA) to designate National Ambient Air Quality Standards (NAAQS). The statutory authority for the Clean Air Act is 42 U.S.C. § 7401 et seq. The USEPA has identified standards for six criteria pollutants: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter (PM_{10} = less than 10 microns; and $PM_{2.5}$ = less than 2.5 microns in diameter),

and sulfur dioxide. As of 2024, St. Louis County, Missouri, is currently a non-attainment area for 8-hour ozone (Environmental Protection Agency, 2022).

Alternative 1 – No Action (Future without Project) – The increased risk of levee failure and landside flooding under the current conditions combined with future high-water events could have adverse impacts including increased scour and sedimentation as well as temporary or permanent changes in land use. Debris, deposition of unsuitable materials, and contaminated liquids or solids could enter the levee district creating less than desirable agricultural conditions and hindering future farming productivity, including productivity of prime farmland. These impacts may also decrease the water quality of aquatic habitats in the levee district, such as wetlands, ponds/lakes, and streams. Residential and commercial properties, as well as infrastructure, roadways, and utilities could become inundated. Air quality and noise pollution are expected to remain similar to existing conditions.

Alternative 3 – Repair of Levees with Federal Assistance – Water Quality would experience temporary minor adverse impacts during the repair construction. The slide repairs and erosion repairs would involve some amount of soil disturbance, which could cause a short-term increase in turbidity in the adjacent waterways near the construction site if flooding or heavy rains occurred before the soil was compacted and secured with vegetation. The Contractor shall provide best management practices to limit sedimentation pollution from entering nearby aquatic habitats. The expected slight increases in turbidity and sedimentation pollution would cease after construction. All disturbed areas would be reseeded following construction to reduce the potential for future erosion. The temporary dam placed around the mouth of the outfall structure would also increase turbidity and would smother any aquatic life that could not move away from the location. No wetlands would be impacted as part of this Alternative. Prime Farmland and other agricultural land would not be affected by the repair. No commercial, industrial, or public recreation areas would be affected by the repair.

Emissions from construction equipment may cause temporary minor adverse impacts to air quality as construction creates minimal increases in ozone, carbon monoxide, suspended airborne particulates, and carbon dioxide levels in the vicinity of the construction site.

The proposed project would be expected to temporarily increase noise levels near the repair and associated worksites. The U.S. Environmental Protection Agency has set a limit of 85 decibels on the A scale (the most widely used sound level filter) for eight hours of continuous exposure to protect against permanent hearing loss. Based upon similar construction activities conducted in the past, noise above this level would not be

expected to occur for periods longer than eight hours. Noise levels would return to normal after construction completion.

3.2. Biological Resources

3.2.1. Fish and Wildlife

Fish and wildlife habitats in the action area are limited, given the amount of commercial, industrial, and agricultural development. The available wildlife habitat located in and near the leveed area include a mix of riparian forest, oldfields, freshwater wetlands, and the lower Missouri River. The lower Missouri River is the second largest free-flowing river in the United States and provides important floodplain habitat in the form of scour holes, side channels, backwaters, wetlands, and bottomland forest. Many important fish species occur in the lower Missouri River. Three species of sturgeon can be found including shovelnose sturgeon (*Scaphirhynchus platorynchus*), lake sturgeon (*Acipenser fulvescens*), and the endangered pallid sturgeon (*Scaphirhynchus albus*). The river is important for recreational angling of bluegill (*Lepomis macrochirus*), several catfish species, and largemouth bass (*Micropterus salmoides*), among others. It should be noted that the levee is set back from the main channel of the river.

There is a riparian corridor of bottomland forest between the levee and the river bisected by Creve Coeur Creek, which flows through the damaged water control structure in the levee. Bottomland forest is important habitat, but also serves a function as a storage area for excess floodwater and a means to improve water quality before it reaches open water, like the Missouri River. Many wildlife species rely on bottomland forests including large game species like whitetail deer (*Odocoileus virginianus*), mid-sized predator species like racoon (*Procyon lotor*), opossum (*Didelphis virginianus*), and skunk (*Mephitis mephitis*), and numerous small mammals, amphibians, and reptiles. The riparian corridor also has some open water wetland features outside of the action area. The remainder of the action area is marginal habitat including the levee right-of-way and adjacent cropland. The levee is covered in turf grass and is regularly mowed and maintained, limiting its value as habitat for wildlife.

Alternative 1 – No Action (Future without Project) – If the Howard Bend Levee is not repaired to the federal standard, the outfall structure may become further undermined and the levee system would have less stability causing an increased probability of future flooding. If that flooding were to occur then a more diverse and dynamic terrestrial and aquatic habitat may develop if the levee system were to remain unrepaired. The terrestrial habitat could be inundated by high water more frequently, and the vegetative composition may be altered. During high water events, water could pond on the landside of the levee and deposit sediment, decreasing flood water turbidity, killing

agricultural vegetation as flood water ponds on typically historical wetland areas that are currently dominated by agriculture. However over time, wetland vegetation would become reestablished. During flood events, terrestrial fauna would be displaced as their habitat is inundated. Conversely, fishes and other aquatic organisms would gain access to floodplain habitat, which would benefit the spawning and rearing of many species.

Alternative 3 – Repair of Levees with Federal Assistance – It is anticipated that impacts of the levee repair on fish and wildlife resources would be minimal. The repair would not require tree clearing nor excavation of borrow material. If heavy rain occurs during levee repair, washing soil into the adjacent streams, there could be a short-term increase in sediment pollution in the immediate area, possibly displacing fish and other mobile organisms temporarily. The temporary dam placed around the mouth of the outfall structure would also displace mobile aquatic organisms and would smother immobile organisms. Following construction, any displaced mobile aquatic species would be expected to return. The Contractor is required to comply with all applicable federal, state, and local laws and regulations and provide environmental protective measures (i.e. best management practices) and procedures to prevent and control pollution. This includes the condition that the Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to, and damage of, fish and wildlife. The action area where the repairs to the levee would be carried out is also developed, providing little in the way of wildlife habitat. Therefore, no more than short-term minor adverse impacts to fish and wildlife resources are anticipated.

3.2.2. Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 provides protection for bird species native to North America. Missouri falls in the Mississippi Flyway, a bird migration route which follows the Mississippi River, the Missouri River, and the Lower Ohio River in the United States. The habitats along the Mississippi Flyway are important nesting and feeding areas for many migratory birds and waterfowl species. A variety of migratory birds might occur in the project areas, some as migrants and some as breeders, depending on the time of year. Year-round residents would also be present. The proposed levee repair would not require tree clearing that could impact roosting or nesting migratory birds. The areas around the outfall structure are maintained for levee safety and area routinely mowed and maintained to be free of woody vegetation, which makes the area around the outfall structure unsuitable for ground nesting birds.

3.2.3. Bald and Golden Eagle Protection Act

Although the bald eagle (*Haliaeetus leucocephalus*) was removed from the federal list of threatened and endangered species in 2007, it continues to be protected under the

Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA). The BGEPA prohibits unregulated take of bald eagles, including disturbance. The U.S. Fish and Wildlife Service (USFWS) developed the National Bald Eagle Management Guidelines (USFWS 2007a) 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. On 29 June 2016, an active bald eagle nest was identified along Creve Coeur Creek. This nest is greater than 660ft from work areas or travel routes. If a previously unidentified nest is found within 660 feet of any work areas, then the USFWS would be contacted and the Bald Eagle Management Guidelines would be implemented.

3.2.4. Biological Assessment

In compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, official lists of species and critical habitats potentially occurring in the vicinity of the proposed project was acquired from the USFWS Information for Planning and Conservation (IPaC) website at (https://ecos.fws.gov/ipac/) on 26 January 2024 (Project Code: 2023-0011259; Table 2). Impacts and effects determinations for the proposed federal action on each listed species are discussed below. The USFWS concurred with the effects determinations made in this Biological Assessment on 16 April 2024 (Appendix 1). The USFWS would also be invited to comment during the Public Review period required under NEPA.

Table 2. List of federally threatened and endangered species and habitat potentially occurring in the vicinity of the proposed project.

Common Name (Scientific Name)	Classification	Habitat
Gray Bat (*Myotis grisescens*)	Endangered	Caves year-round (winter hibernacula and summer roosting). In the summer gray bats forage along rivers, lakes, and creeks, and may roost under bridges.
Indiana Bat (*Myotis sodalis)*	Endangered	Caves, mines (winter hibernacula); trees (summer roosting); and small stream corridors with well-developed riparian woods; upland forests (foraging)
Northern Long-eared Bat (*Myotis septentrionalis*)	Proposed Endangered	Caves, mines; rivers and reservoirs adjacent to forests
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	In summer, roosts in structures, trees, cliffs, and caves. In winter, hibernates in caves.

Common Name (Scientific Name)	Classification	Habitat
Pallid Sturgeon (*Scaphirhychus albus*)	Endangered	Is a bottom-oriented, large river obligate fish inhabiting the Missouri and Mississippi rivers and some tributaries from Montana to Louisiana
Monarch Butterfly (*Danaus plexippus*)	Candidate	Uses milkweed plants as a reproductive host. Could occur anywhere in Missouri with host milkweed present.
Decurrent False Aster *(Boltonia decurrens*)	Threatened	Disturbed alluvial soils.

Gray Bat (*Myotis grisescens*)
The endangered gray bat occurs in several Missouri counties where it inhabits caves during both summer and winter. With rare exceptions, gray bats sleep in caves year-round, a divergence from the behavior of the Indiana bat and northern long-eared bat. During the winter, they hibernate in deep, vertical caves (U.S. Fish & Wildlife Service, 2019). In the summer, they roost in caves which are scattered along rivers. Foraging occurs in a variety of common habitats that largely overlap with both the Indiana and northern long-eared bat, including in and around the tree canopy of floodplain, riparian, and upland forests. There are no caves or mines that would be impacted by the proposed repairs.

Alternative 1 – No Action (Future without Project) – If the repairs are not carried out the levee will become more damaged and compromised over time. This could result in the leveed area transitioning to a more natural floodplain habitat. This would benefit bats foraging in the floodplain.

Alternative 3 – Repair of Levees with Federal Assistance – The proposed project would not adversely affect any caves or summer foraging habitat and would not require tree clearing. The construction disturbance would create noise and vibration, which may impact bats roosting nearby. The St. Louis District has made a “may affect, not likely to adversely affect” (NLAA) determination for the gray bat.

Indiana Bat (*Myotis sodalis*)
During late fall and winter, Indiana bats hibernate in caves and mines. During the spring and summer, Indiana bats roost in trees. Suitable roosting trees can be alive or dead, but all would have loose, exfoliating bark, holes, and other damage that can be used by a roosting bat. These damages allow bats to crawl inside and be sheltered from

predators and weather. Indiana bat roost trees are typically at least 5 inches diameter at breast height (dbh) with suitable roosting characteristics (U.S. Fish & Wildlife Service, 2022). Preferred roost sites are in forest openings, at the forest edge, or where the overstory canopy allows some sunlight exposure to the roost tree, which is usually within 1 km (0.6 mi.) of water. Indiana bats forage for flying insects (particularly moths) in and around the tree canopy of floodplain, riparian, and upland forests. The most significant threat facing Indiana bat populations today is white-nose syndrome (WNS), a fungal disease. Other major range wide threats to the Indiana bat include habitat loss/degradation, forest fragmentation, winter disturbance, and environmental contaminants.

Alternative 1 - No Action (Future without Project) – If the repairs are not carried out the levee will become more damaged and compromised over time. This could result in the leveed area transitioning to a more natural floodplain habitat. This would benefit bats foraging in the floodplain. The ponding water would also kill standing timber, reducing available roosts.

Alternative 3 - Repair of Levees with Federal Assistance – The proposed project would not require tree clearing. Bats roosting near the construction areas would experience temporary, minor adverse impacts in the form of vibration and noise. The St. Louis District has made an (NLAA) determination for the Indiana bat.

Northern Long-eared Bat (*Myotis septentrionalis*)
The northern long-eared bat is sparsely found across much of the eastern and north central United States and spend winter hibernating in caves and mines. They typically use large caves or mines with large passages and entrances; constant temperatures; and high humidity with no air currents. Within hibernacula, they are found in small crevices or cracks. During summer, NLEB habitat includes a variety of forested habitats and adjacent non-forested habitats such as emergent wetland, edges of agricultural fields, old fields, pastures, fencerows, strips of riparian forest, and linear wooded corridors. Trees that would serve as potential roosts would be at least 3 inches dbh and have exfoliating bark, cracks, crevices and/or cavities (U.S. Fish & Wildlife Service, 2022). Suitable forested areas would be either dense or loose aggregations of trees, relatively unfragmented compared to areas that are highly-fragmented or that have been clear-cut. The NLEB is more likely to use a single tree with roosting characteristics if it is within 1000 feet of other forest. Human-made structures, like houses, barns, and bridges have also been observed to host roosting NLEBs. Forest fragmentation, logging and forest conversion are major threats to the species. One of the primary threats to the northern long-eared bat is the fungal disease, white-nose syndrome,

which has killed an estimated 5.5 million cave-hibernating bats in the Northeast, Southeast, Midwest and Canada.

Alternative 1 - No Action (Future without Project) – If the repairs are not carried out the levee will become more damaged and compromised over time. This could result in the leveed area transitioning to a more natural floodplain habitat. This would benefit bats foraging in the floodplain. The ponding water would also kill standing timber, reducing available roosts.

Alternative 3 - Repair of Levees with Federal Assistance – The proposed project would not adversely impact caves or mines and would not require tree clearing. Bats roosting nearby would experience temporary, minor adverse impacts in the form of vibration and noise during construction activities. The St. Louis District has made an NLAA determination for the Northern long-eared bat.

Tricolored Bat (*Perimyotis subflavus*)
Tricolored bats were formerly called Eastern Pipistrelle. Tricolored bats are usually found roosting singly, only sometimes in pair or clusters of up to a dozen individuals (Missouri Department of Conservation, 2022). In winter, tricolored bats hibernate in caves. They prefer caves that are humid and warm. In summer, they leave their hibernation caves and roost in trees amongst dead leaves, in crevices in cliffsides, and in human-made structures. They also sometimes roost in caves during summer. Tricolored bat forages for insects high in the air along forest edge and the boundary of streams or open bodies of water. Tricolored bats mate during spring, fall, and sometimes in the winter. Maternity colonies begin forming in mid-April and females bear 1 to 2 pups by late May to mid-July.

Alternative 1 - No Action (Future without Project) – More frequent flooding of the area would be anticipated which may cause mortality of flood-intolerant tree species within the leveed area. The increased frequency of standing water within the leveed area may improve foraging habitat for bats foraging in the floodplain.

Alternative 3 - Repair of Levees with Federal Assistance – The proposed project would not adversely impact caves or mines and would not require tree clearing. Bats roosting near the construction areas would experience temporary, minor adverse impacts in the form of vibration and noise. The St. Louis District has made a NLAA determination for the tricolored bat.

Pallid Sturgeon (*Scaphirhynchus albus*)
Pallid sturgeon are a bottom-oriented, large river obligate fish inhabiting the Missouri and Mississippi rivers and some tributaries from Montana to Louisiana (Kallemeyn, 1983). Pallid sturgeon are adapted to large rivers with extensive micro-habitat diversity in the form of braided channels, irregular flows, seasonal flood cycles. In addition to the main channel, they use waters in the river floodplains including backwaters, chutes, and sloughs. Pallid sturgeon have been documented over a variety of available substrates but are often associated with sandy and fine bottom materials (Bramblett & White, 2001). It is suspected that sand and gravel bars and the mouths of major tributaries may be utilized for spawning. This species feeds on aquatic invertebrates and small fish. Spawning appears to occur between March and July, with lower latitude fish spawning earlier than those in the northern portion of the range. Spawning appears to occur over firm substrates, in deeper water, with relatively fast, turbulent flows, and is driven by several environmental stimuli including flow, water temperature, and day length (Wildhaber, et al., 2007).

Alternative 1 - No Action (Future without Project) – During highwater events, the levee would continue to erode and wash soil into adjacent water bodies, resulting in an increase in turbidity in the immediate area. In contrast, reconnected floodplains have been identified as an important habitat for sturgeon. Openings on or near the main stem river may allow sturgeon to gain access to a large area of floodplain habitat, therefore, pallid sturgeon may be benefitted by the No Action.

Alternative 3 - Repair of Levees with Federal Assistance –. All contracts to conduct levee repairs would require the implementation of Best Management Practices (BMPs) to minimize effects to pallid sturgeon habitat by erosion and runoff into waters. Some temporary minor impacts may occur during construction activities and the placement of the temporary dam around the mouth of the outfall structure. The St. Louis District has made a NLAA determination for the pallid sturgeon.

Monarch Butterfly (*Danaus plexippus*)
The monarch butterfly is a large orange butterfly that is a candidate for listing on the Endangered Species List. Monarch populations of eastern North America have declined 90%. Much of the monarch butterfly's life is spent migrating between Canada, Mexico, and the U.S. Monarchs do not overwinter in Missouri (U.S. Fish & Wildlife Service, 2021). The monarch occurs in a variety of habitats where it searches for its host plant, milkweed. Of the over 100 species of milkweed that exist in North America, only about one fourth of them are known to be important host plants for monarch butterflies. The main monarch host plant is common milkweed (*Asclepias syriaca*) (Kaul & Wilsey, 2019). Other common hosts include swamp milkweed (*Asclepias incarnata*),

butterflyweed (*Asclepias tuberosa*), whorled milkweed (*Asclepias verticillata*), and poke milkweed (*Asclepias exaltata*) (U.S. Fish & Wildlife Service, 2021). Three factors appear most important to explain the decline of monarchs: loss of milkweed breeding habitat, logging at overwintering sites, and climate change and extreme weather. In addition, natural enemies such as diseases, predators, and parasites, as well as insecticides used in agricultural areas may also contribute to the decline. The project area is likely to have some milkweed in the wetland areas and in more wet areas of the open fields.

Alternative 1 - No Action (Future without Project) – With less maintenance of the levee itself, it is possible that some milkweed populations might become established where the mowing once limited vegetation growth. If the more frequent flooding limits agricultural and other commercial use of the leveed area, this could also allow more natural vegetation, including milkweed, to become established.

Alternative 3 - Repair of Levees with Federal Assistance – There are no populations of milkweed identified along the levee or in the work areas. The repair area is previously disturbed and routinely mowed for levee maintenance. Missouri is not an overwintering location for Monarchs. Therefore, the St. Louis District has made a "not likely to jeopardize the continued existence*"* determination for the monarch butterfly.

Decurrent False Aster (*Boltonia decurrens*)
The decurrent false aster is presently known from scattered localities on the floodplains of the Illinois River and Mississippi River from its confluence with the Missouri River south to Madison County, Illinois. Decurrent false aster grows in wetlands, on the borders of marshes and lakes, and on the margins of bottomland oxbows and sloughs. Historically, this plant was found in wet prairies, marshes, and along the shores of some rivers and lakes. The species favors recently disturbed areas and flooding may play a role in maintaining its habitat. Current habitats include riverbanks, old fields, roadsides, mudflats and lake shores. It relies on periodic flooding to scour away other plants that compete for the same habitat (U.S. Fish & Wildlife Service, 2019). The typical flowering season for decurrent false aster is from August through October. In Missouri, decurrent false aster distribution is currently restricted to the Mississippi River floodplain from the Illinois River southward. Current populations are fewer and more isolated than in historical times. Presently it is only known to occur in St. Charles County, MO.

Alternative 1 - No Action (Future without Project) – Failure to repair the levee could possibly lead to the increased potential of decurrent false aster colonization within the agricultural areas adjacent to the breaches if a nearby seed source is present.

Alternative 3 - Repair of Levees with Federal Assistance – The proposed project area is within the existing levee footprint. The levees are planted with grasses and mowed regularly, which creates unsuitable conditions for a population of Boltonia to become established. The St. Louis District has made a “no effect” determination for the decurrent false aster.

3.2.5. Missouri Department of Conservation

A Natural Heritage Review was obtained from MDC’s website on 10 November 2022 of the Howard Bend Levee System resulted in an automatically-generated Level Three Report. On 22 November 2023, MDC provided a more detailed Heritage Report (Appendix 3). This report identified a state-listed (also federally-listed) Level 3 resource, pallid sturgeon, as having records in the Missouri River less than one mile from the action area. The report also identified three Level 2 state-listed resources as having records within one mile of the project area including lake sturgeon (*Acipenser fulvescens*), flathead chub (*Platygobio gracilis*), and American bittern (*Botaurus lentiginosus*). These fish species may be minorly adversely impacted during the repair construction. However, all BMPs to prevent soil erosion and sedimentation pollution would be implemented as conservation measures to minimize the impact. There were also several state-ranked resources near the project area (Table 3).

Table 3. Natural Heritage records indicate the following state-ranked species near the project area:

Common Name	Scientific Name	State Rank	Proximity (miles)	Primary Habitat
Bullsnake	*Pituophis catenifer sayi*	SU	<5	Grassland native prairie, Grassland non-native, Savanna, Old field/shrub, Savanna pasture/orchard
American Badger	*Taxidea taxus*	S3	<4	Grassland matrix, Savanna pasture/orchard, Row/close grown crops
Long-tailed Weasel	*Mustela frenata*	S3	<5	Habitat generalist, Savanna/Shrub/Woodland matrix, Forest matrix, Grassland matrix
Skipjack Herring	*Alosa chrysochloris*	SU	<1	River/stream
Highfin Carpsucker	*Carpiodes velifer*	S2	<1	River/stream
Western Silvery Minnow	*Hybognathus argyritis*	S2	<1	River/stream
Plains Minnow	*Hybognathus placitus*	S2	<1	River/stream

Sturgeon Chub	*Macrhybopsis gelida*	S3	<1	River/stream
Ghost Shiner	*Notropis buchanani*	S2	<1	River/stream
River Darter	*Percina shumardi*	S3	<1	River/stream
Dwarf Burhead	*Helanthium tenellum*	S1	<1	Sinkhole pond
Bergia	*Bergia texana*	S2	<1	Moist edge/mudflat, Row/close grown crops
Rocky Mountain Bulrush	*Schoenoplectiella saximontana*	S1	<1	Moist edge/mudflat, Sand/gravel bars
Slender Paspalum	*Paspalum setaceum var. setaceum*	S1	<1	Forest upland, Moist edge/mudflat, Roadside/railroad

Similarly to the state-listed fish species, the aquatic state-ranked species may be minorly adversely impacted during the repair construction, but BMPs would be in place to minimize this impact. Erosion control BMPs and BMPs to prevent excessive sedimentation pollution would be in place to minimize impact to aquatic habitat. The terrestrial area around the levee and outfall structure where repair activities would take place is only marginal terrestrial habitat. Mobile terrestrial species may be indirectly impacted through noise and vibration during construction, but direct adverse impact is unlikely. Furthermore, the work areas are unsuitable habitat for bullsnake, American badger, and long-tailed weasel. The levee is planted in fast-growing, cool season grasses and the regular maintenance and mowing of the levee area would make the work areas unsuitable for terrestrial plant species. MDC would be invited to comment during the Public Review period.

3.3. Socioeconomic Resources

Based on an economic analysis of the Howard Bend levee, the project average annual benefits are estimated to be $156,000, with average annual cost of $116,000 yield a Benefit to Cost Ratio of 1.3 to 1. In order to complete this report in a timely and cost-efficient manner, engineering/economic studies were limited to those required to validate that the repair work is economically justified.

Alternative 1 - No Action (Future without Project) - If the Howard Bend Levee District is not repaired to the Federal standard, there would be reduced flood protection during future flood events. The previously protected area would be subject to a higher probability of flooding, making the area less suitable for reliable agricultural productivity, and may jeopardize the water treatment plants set behind the levee. If flood events

interfere with the water treatment plants, this could result in health risks for the affected communities. The reduced agricultural production behind the levee could result in potential negative economic effects on the Levee District and the local economy.

Alternative 3 - Repair of Levees with Federal Assistance - Local agriculture, agri-businesses, the local airport, water treatment plants, and other businesses would benefit from levee repair and subsequent flood damage reduction. The proposed levee repairs would not require residential displacement. No adverse impacts to life, health, or safety would result from levee repair. Substantial long-term benefits are expected from the levee repairs if made to the Federal Standard.

3.4. Cultural Resources

Alternative 1 – No Action (Future without Project) – There are no historic properties in the repair area that could be affected should the levee remain unrepaired. Cultural Resources are expected to remain similar to existing conditions.

Alternative 3 – Repair of Levees with Federal Assistance – The proposed repair of the levee will take place within an area previously disturbed for the levee, commercial borrow will be utilized for repairs, and paved roads will be utilized for hauling and laydown areas. For these reasons, the St. Louis District has determined that the proposed repairs would have **no effect on Historic Properties**. A coordination letter was sent to the Missouri State Historic Preservation Office (SHPO) on 14 March 2024. On 10 April 2024, concurrence was obtained from the SHPO (Appendix 3). In the unlikely event that earthmoving activities associated with the proposed repairs impact potentially significant archeological/historic remains, all construction activities and earthmoving actions in the immediate vicinity of the remains would be held in abeyance until the potential significance of the remains could be determined. The precise nature of such investigations would be developed by the St. Louis District in concert with the professional staff of the SHPO.

3.5. Tribal Resources

Alternative 1 - No Action (Future without Project) - There are no known tribal resources in the repair area that could be affected should the levee remain unrepaired. Tribal Resources are expected to remain similar to existing conditions.

Alternative 3 - Repair of Levees with Federal Assistance – The St. Louis District consults with 23 federally recognized tribes that have an interest in this area of the district boundaries. The Tribes are invited to comment on the proposed actions during

both the Section 106 compliance and the NEPA compliance process. A coordination letter was sent to the consulting Tribes on 14 March 2024. On 18 March 2024, the Nottawaseppi Huron Band of Potawatomi Indians responded to say they had no cultural or religions concerns and that they had no objections to the proposed project. On 22 March 2024, the Iowa Tribe of Kansas and Nebraska responded to concur with the determination that the project would have no effect on historic properties. Tribal coordination is in Appendix 4.

3.6. Environmental Justice

Environmental justice refers to fair treatment of all races, cultures, and income levels with respect to development, implementation and enforcement of environmental laws, policies, and actions. Environmental justice analysis was developed following the requirements of: Executive Order 12898 ("Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations," 1994), and "Department of Defense's Strategy on Environmental Justice" (March 24, 1995). This mandates that federal agencies identify and address, as appropriate, disproportionately high, and adverse human health, or environmental effects of proposed projects on minority and low-income populations. Environmental Justice builds on Title VI of the Civil Rights Act of 1964. Environmental Justice has three guiding principles:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental impacts, including social and economic effects on minority and low-income populations
- Ensure full and fair participation by all potentially affected communities in the decision-making process
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

In January of 2021, President Biden issued Executive Order 14008. The order directed the Council on Environmental Quality (CEQ) to develop a new tool to aid in evaluating Environmental Justice concerns. This tool is called the Climate and Economic Justice Screening Tool. The tool has an interactive map and uses datasets that are indicators of burdens in eight categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. The tool uses this information to identify communities that are experiencing these burdens. Such communities are considered disadvantaged because they are overburdened and underserved. The Climate and Economic Justice Screening tool was used to determine if the area is in a tract that is considered disadvantaged (i.e. meets a burden threshold or at least one associated socioeconomic threshold). The study area is in Tract# 29189215143, which is not a disadvantaged community (Figure 9). The remainder of

the levee district is also not disadvantaged and is comprised of Tracts 29189215144, 29189215105, 29189221628, and 29189215141.

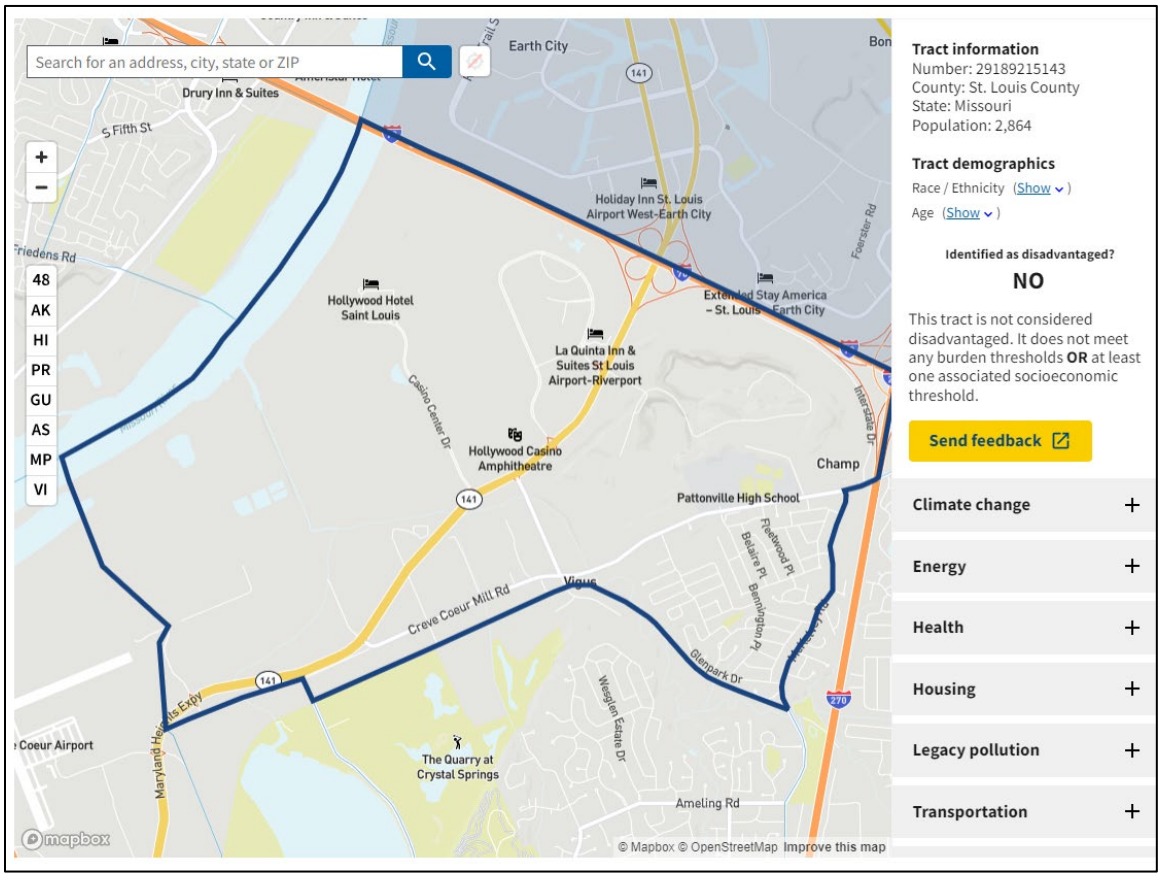


Figure 9. Results of the CEQ Tool for the work areas at the Howard Bend Levee.

Alternative 1 – No Action (Future without Project) –
There are no disadvantaged communities within the project area. The lack of repair could cause adverse impact to existing communities within the levee district, but the levee district is not likely to complete repairs without federal assistance in the No Action scenario.

Alternative 3 – Repair of Levees with Federal Assistance –
The damages would be repaired to the federal standard, which would avoid any adverse impacts to existing communities within the project area. Additionally, there are no disadvantaged tracts that overlap with the levee district. Therefore no disproportionate adverse impacts would occur to disadvantaged communities.

3.7. Hazardous, Toxic, and Radioactive Waste

The U.S. Army Corps of Engineers (USACE) regulations (ER-1165-2-132, ER 200-2-3) and District policy requires procedures be established to facilitate early identification

and appropriate consideration of potential HTRW in feasibility, preconstruction engineering and design, land acquisition, construction, operations and maintenance, repairs, replacement, and rehabilitation phases of water resources studies or projects.

Alternative 1 – No Action (Future without Project) –The levee district is unlikely to conduct substantial repairs without federal assistance, so HTRW concerns are likely to remain similar to existing conditions.

Alternative 3 – Repair of Levees with Federal Assistance – On 22 April 2024, the St. Louis District Environmental and Munitions Branch reviewed the project. Based upon review of the project activity description, the location of the work, and the findings of this EA, it was determined that the proposed work would not require a Phase I Environmental Site Assessment. Although the likelihood is low, there is still a potential of encountering hazardous substances during the proposed work. If HTRW material is encountered at any point during the proposed actions, HTRW discovery provisions in the Activity Hazards Analysis (AHA) should be followed and the USACE Environmental Quality Section should be contacted immediately to assess the conditions. USACE does not and cannot represent that the site contains no hazardous waste or material, including petroleum products.

3.8. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972 (U.S. Environmental Protection Agency, 2024). Waters of the United States that occur within the work areas include the Missouri River and Creve Coeur Creek. Impacts to these waters may require a Section 404 authorization.

Alternative 1 – No Action (Future without Project) –The levee district is unlikely to conduct substantial repairs without federal assistance. If they do, they may be required to submit a pre-construction notice to the USACE St. Louis District Regulatory Office and to seek a Section 404 permit.

Alternative 3 – Repair of Levees with Federal Assistance – The work, as proposed, would be covered under the following Nationwide Permits. The Missouri Regional General Permit (GP) 41 for Flood Recovery and Repair Activities authorizes the protection and repair of existing flood damaged structures, damaged land areas and damaged fills, under authority of Section 10 of the Rivers and Harbors Act of 1899 (33

USC 403) and Section 404 of the Clean Water Act (33 USC 1344), which include actions outlined under repair alternative. Maintenance of existing flood damaged structures and/or flood damaged fills, which have been previously authorized, may be authorized by Nationwide Permit No. 3 or exempted by Part 323.4 of Federal regulations 33 CFR 320- 332. The repair of uplands damaged by storms, floods or other discrete events may be authorized by Nationwide Permit No. 45 upon notification and review by the Regulatory Branch. Section 401 Water Quality Certification is included with most general permits listed above, but additional coordination and/or other state permits may be required prior to construction depending on the scope of repairs. All permits are on file in the District Office, are available online, and in Appendix 5.

3.9. Green House Gas (GHG) Emissions and Climate Change

The National Environmental Policy Act requires Federal agencies to analyze and consider the environmental effects of proposed major Federal actions prior to making decisions. Climate change is a fundamental environmental issue, and its effects fall squarely within NEPA's purview. Estimating GHG emissions or the reduction in emissions is a key element in considering the relationship between a proposed action and climate change. Some common greenhouse gases include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF6), and nitrogen trifluoride (NF3). Several factors can contribute to GHG emissions on a project, including the use of vehicles and equipment, transporting materials and equipment to and from the site. Operations and maintenance of constructed features can also contribute to GHGs. Some constructed features also continue to emit GHGs following construction (e.g. a diesel water pump for a pump station).

Alternative 1 – No Action (Future without Project) –The levee district is unlikely to conduct substantial repairs without federal assistance. However, if they do, the repair work would be expected to contribute temporary minor increases in greenhouse gas emissions in the local work area. Given that the emissions from the repair would only be temporary, it is unlikely that the non-federal repair effort would result in a measurable adverse impact to climate change.

Alternative 3 – Repair of Levees with Federal Assistance – The use of vehicles and equipment would contribute temporary minor increases of greenhouse gas emissions during the work and would cease following the completion of the repair. The repair would not result in adverse impacts to climate change. Additionally, climate change is not anticipated to alter the proposed levee repair.

4.0. Summary Comparison of Project Alternatives

Impacts of the TSP to natural resources, cultural resources, and other aspects and features of the human environment are summarized in Table 4.

Table 4. Summary of the effects of the “No Action” and TSP to physical, biological, and socioeconomic resources.

Resources	**Alternatives**	
	No Action	**TSP**
Physical Resources	Additional damage to the outfall structure could occur, undermining the integrity of the levee during high water events.	Erosion repair and embankment repairs would meet the Federal standard.
	Increased potential for further erosion of levee and sedimentation within drainage district during flood events.	Temporary minor impacts to water and air quality during construction.
	Does not meet project objective of repairs to Federal standard.	Brings the levee protection level back to pre-2022 flood conditions.
Biological Resources	There is potential for beneficial impacts due to potential increase in floodplain wetland habitat.	Construction would be confined to the levee which may result in minor temporary impacts.
	Federal T&E species would not be adversely impacted.	Federally listed species are not likely to be adversely affected.
	Meets project objective of minimal environmental impacts.	Meets project objective of minimal environmental impacts.
Socioeconomic Resources	The levee district would be susceptible to future floods and potential negative impacts to the levee district and regional economy due to levee damages.	Repair of levee would result in the protection of croplands, businesses and structures from floods up to the design (25- year frequency) of the levee system.

	Does not protect the socioeconomic value of the levee district.	Protects the socioeconomic value of the levee district.

5.0. Cumulative Impacts

A cumulative impact is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions of what agency (Federal or non-federal) or person undertakes such actions” (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The majority of the levee systems in the region have been in place for decades. Repairs would involve returning most of the damaged levee sections to the same alignment and level of protection as existed prior to the high-water events of 2022. Temporary impacts from noise, air, and increased water sedimentation would occur; however, repair sites are widely scattered throughout the St. Louis District and therefore additive effects of these impacts would be negligible. These repairs are not anticipated to decrease the post-flood productivity of lands riverward or landward of the levee systems. Many levee repairs require the use of fill material from nearby borrow sites. Excavation of borrow can decrease the area of available agricultural land and/or the area of available floodplain habitat. However, the Howard Bend repair would not require excavation of borrow material. Therefore, cumulative impacts from borrow excavation would not occur. Some PL 84-99 projects sustained damage that is impractical to repair on the original levee alignment. For new levee alignments, some acreage would be removed from agricultural use or from riparian habitats, causing a minor losses to these land use/cover types. However, the Howard Bend repairs would not require a new alignment and would not contribute to these types of cumulative impacts. Therefore, no long term adverse cumulative impacts are anticipated.

6.0. Relationship of TSP to Environmental Requirements

The relationship of the TSP (Alternative 3 – Repair of Levees with Federal Assistance) to environmental requirements, environmental acts, and /or executive orders is shown inTable 5.

Table 5. Relationship of the TSP to environmental requirements, environmental acts, and/or executive orders.

Environmental Requirement	**Compliance**
Bald Eagle Protection Act, 42 USC 4151-4157	FC
Clean Air Act, 42 USC 7401-7542	FC
Clean Water Act, 33 USC 1251-1375	FC
Comprehensive Environmental Response, Compensation, and Liability Act, (HTRW) 42 USC 9601-9675	FC
Endangered Species Act, 16 USC 1531-1543	FC
Farmland Protection Policy Act, 7 (Prime Farmland) USC 4201-4208	FC
Fish and Wildlife Coordination Act, 16 USC 661-666c	FC
Food Security Act of 1985 (Swampbuster), 7 USC varies	FC
Land and Water Conservation Fund Act, (Recreation)16 USC 460d-4601	FC
National Environmental Policy Act, 42 USC 4321-4347	PC[2]
National Historic Preservation Act, 16 USC 470 et seq.	FC
Noise Control Act of 1972, 42 USC 4901-4918	FC
Resource, Conservation, and Rehabilitation Act, (Solid Waste) 42 USC 6901-6987	FC
Rivers and Harbors Appropriation Act, (Sec. 10) 33 USC 401-413	FC
Water Resources Development Acts of 1986 and 1990 (Sec 906 – Mitigation; Sec 307 - No Net Loss - Wetlands)	FC
Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898)	FC
Floodplain Management (EO 11988 as amended by EO 12148)	FC
Federal Compliance with Pollution Control Standards (EO 12088)	FC
Protection and Enhancement of Environmental Quality (EIS Preparation) (EO 11991)	FC

Protection and Enhancement of the Cultural Environment (Register Nomination) (EO 11593)	FC
Protection of Wetlands (EO 11990 as amended by EO 12608)	FC

FC = Full Compliance, PC^1 = Partial Compliance (on-going, would be accomplished before construction), PC^2 = Full compliance will be achieved upon signing of the NEPA document.

7.0. Coordination, Public Views, and Responses

Notification of this Draft Environmental Assessment and unsigned Finding of No Significant Impact was sent to the officials, agencies, organizations, and individuals listed below for review and comment. During the public review period an electronic copy was available on the St. Louis District's website at:

https://www.mvs.usace.army.mil/Portals/54/docs/pm/Reports/EA/PL84992022HowardBendDraftEAUnsignedFonsi.pdf

Please note that the Finding of No Significant Impact was unsigned during the public review period. These documents will be signed into effect only after having carefully considered comments received as a result of this public review.

To assure compliance with the National Environmental Policy Act, Endangered Species Act, and other applicable environmental laws and regulations, coordination with these agencies will continue as required throughout the construction phases of the proposed levee repairs.

8.0. Environmental Assessment Preparers

Evan Hill, Wildlife Biologist
Role: Environmental compliance

Ben Greeling, Environmental Engineer
Role: Environmental Engineering, HTRW

Mark Smith, Ph.D., District Archaeologist
Role: National Historic Preservation Act Analysis and Compliance

James Mills, P.E.
Role: Technical Engineering Lead

Shane Simmons, Project Manager
Role: Project Manager

Evan Stewart, Economist
Role: Economist

9.0. References

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10.0. DRAFT Finding of No Significant Impact (FONSI)

PUBLIC LAW 84-99
HOWARD BEND LEVEE DISTRICT
SAINT LOUIS COUNTY, MISSOURI

1. I have reviewed the documents concerned with the proposed levee repairs to the Howard Bend Levee District. The purpose of this project is to repair levee sections damaged by an extended high-water event during 2022. Repairs would return the levee district to pre-flood conditions in an expedient manner.
2. I have also evaluated pertinent data concerning practicable alternatives relative to my decision on this action. As part of this evaluation, I have considered the following alternatives:
    a. No Action Alternative: Under the no-action alternative, the federal government would not repair the flood damaged levee. The levee district may conduct repairs without federal assistance and these repairs may or may not be to the federal standard.
    b. Nonstructural Alternative: Under PL 84-99, the Corps has the authority to pursue a non-structural alternative only if the project sponsor requests such an alternative. The Howard Bend Levee District declined to request the pursuit of a non-structural alternative; therefore, this alternative was eliminated from further consideration.
    c. Repair of Levees with Federal Assistance (Plan): Under this alternative, the federal government would repair the damaged areas to the pre-2022 flood level of protection.
3. The possible consequences of the No Action Alternative and TSP have been studied for physical, environmental, cultural, social and economic effect, and engineering feasibility. Major findings of this investigation include the following:
    a. The No Action Alternative was evaluated and subsequently rejected primarily based upon the higher potential for future flooding and damage to area agricultural fields, primary and secondary residences, outbuildings, and infrastructure.
    b. No significant adverse impacts to general environmental conditions (i.e., air quality, noise, greenhouse gas emissions, and water quality) would result from the TSP.

c. The TSP is not expected to cause significant adverse impacts to general fish and wildlife resources.

d. The TSP is not expected to cause permanent adverse impacts to the stream and no impact to riparian habitat, bottomland hardwood forest, or wetlands. Levee repairs and associated actions are permitted under Section 404 of the Clean Water Act Missouri General Permit 41 for Flood Recovery and Repair Activities.

e. The action may affect but is not likely to adversely affect federally endangered or threatened species.

f. No prime farmland would be adversely impacted as a result of the TSP.

g. No significant adverse impacts to historic properties (cultural resources) or tribal resources are anticipated as a result of the TSP.

h. The TSP would not disproportionately affect a disadvantaged or underserved community.

i. Under the TSP, local economies would benefit through an increased labor demand to carry out levee repairs. Agricultural land and structures within the drainage district would be provided with pre-2022 flood risk reduction levels.

j. The Contractor shall comply with all applicable federal, state, and local laws and regulations. The Contractor shall provide environmental protective measures and procedures to prevent and control pollution, limit habitat disruption, and correct environmental damage that occurs during construction. All disturbed areas would be reseeded following construction to reduce the potential for erosion.

4. Based upon the Environmental Assessment of the TSP, no significant impacts on the environment are anticipated. The proposed action has been coordinated with appropriate resource agencies, and there are no significant unresolved issues. Therefore, an Environmental Impact Statement will not be prepared prior to proceeding with this action.

Date

Andy J. Pannier
Colonel, U.S. Army
District Commander

Appendix 1
Section 7
Coordination

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
Phone: (573) 234-2132 Fax: (573) 234-2181

In Reply Refer To: 07/03/2024 14:57:16 UTC
Project Code: 2023-0011259
Project Name: PL84-99 2022 Howard Bend

Subject: List of threatened and endangered species that may occur in your proposed project location 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.*).

Threatened and Endangered Species

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 may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from 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. **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.** The Service recommends that verification be completed by visiting the 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 IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance

Refer to the Midwest Region S7 Technical Assistance website for step-by-step instructions for making species determinations and for specific guidance on the following types of projects:

projects in developed areas, HUD, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

Federally Listed Bat Species

Indiana bats, gray bats, and northern long-eared bats occur throughout Missouri and the information below may help in determining if your project may affect these species.

Gray bats - Gray bats roost in caves or mines year-round and use water features and forested riparian corridors for foraging and travel. If your project will impact caves, mines, associated riparian areas, or will involve tree removal around these features – particularly within stream corridors, riparian areas, or associated upland woodlots –gray bats could be affected.
Indiana and northern long-eared bats - These species hibernate in caves or mines only during the winter. In Missouri the hibernation season is considered to be November 1 to March 31. During the active season in Missouri (April 1 to October 31) they roost in forest and woodland habitats. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches diameter at breast height (dbh) for Indiana bat, and ≥3 inches dbh for northern long-eared bat, that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Tree species often include, but are not limited to, shellbark or shagbark hickory, white oak, cottonwood, and maple. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, Indiana bats or northern long-eared bats could be affected.
Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas;
- Trees found in highly-developed urban areas (e.g., street trees, downtown areas);
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees; and
- A stand of eastern red cedar shrubby vegetation with no potential roost trees.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of “There are no listed species found within the vicinity of the project,” then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example "No Effect" document also can be found on the S7 Technical Assistance website.

2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see #3 below) – then project proponents can conclude the proposed activities **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain Life History Information for Listed and Candidate Species through the Species website.
3. If IPac returns a result that one or more federally listed bat species (Indiana bat, northern long-eared bat, or gray bat) are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** these bat species **IF** one or more of the following activities are proposed:
    a. Clearing or disturbing suitable roosting habitat, as defined above, at any time of year;
    b. Any activity in or near the entrance to a cave or mine;
    c. Mining, deep excavation, or underground work within 0.25 miles of a cave or mine;
    d. Construction of one or more wind turbines; or
    e. Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on listed bat species. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example "No Effect" document also can be found on the S7 Technical Assistance website.
If any of the above activities are proposed in areas where one or more bat species may be present, project proponents can conclude the proposed activities **may affect** one or more bat species. We recommend coordinating with the Service as early as possible during project planning. If your project will involve removal of over 5 acres of suitable forest or woodland habitat, we recommend you complete a Summer Habitat Assessment prior to contacting our office to expedite the consultation process. The Summer Habitat Assessment Form is available in Appendix A of the most recent version of the Range-wide Indiana Bat Summer Survey Guidelines.

Other Trust Resources and Activities

Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA

to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed voluntary guidelines for minimizing impacts.

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to guidelines developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's Wind Energy Guidelines. In addition, please refer to the Service's Eagle Conservation Plan Guidance, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

Next Steps

Should you determine that project activities **may affect** any federally listed species or trust resources described herein, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

If you have not already done so, please contact the Missouri Department of Conservation (Policy Coordination, P. O. Box 180, Jefferson City, MO 65102) for information concerning Missouri Natural Communities and Species of Conservation Concern.
We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

John Weber

Attachment(s):

- Official Species List

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:

Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
(573) 234-2132

PROJECT SUMMARY

Project Code: 2023-0011259
Project Name: PL84-99 2022 Howard Bend
Project Type: Levee / Dike - Maintenance/Modification
Project Description: Emergency repair of the Howard Bend Levee System in St. Louis County Missouri.
Damages are currently being assessed and will be fully explained in a subsequent Biological Assessment

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.715028200000006,-90.50942126867041,14z

Counties: St. Louis County, Missouri

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 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. Note that 1 of these species should be considered only under certain conditions.

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.

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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*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	
Indiana Bat *Myotis sodalis*	Endangered
There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/IGUK32UXDFDTBJ3XY62QYVEBQQ/documents/generated/7280.pdf	
Northern Long-eared Bat *Myotis septentrionalis*	Endangered
No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ipac.ecosphere.fws.gov/project/IGUK32UXDFDTBJ3XY62QYVEBQQ/documents/generated/7280.pdf	
Tricolored Bat *Perimyotis subflavus*	Proposed Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	

FISHES

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

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	

FLOWERING PLANTS

NAME	STATUS
Decurrent False Aster *Boltonia decurrens*	Threatened
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7705	

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Army Corps of Engineers
Name: Evan Hill
Address: 1222 Spruce St
City: St. Louis
State: MO
Zip: 63103
Email evan.b.hill@usace.army.mil
Phone: 3149255004

From: Roberts, Andy
To: Hill, Evan B CIV USARMY CEMVP (USA)
Subject: [Non-DoD Source] Re: [EXTERNAL] RE: Request for Consultation for Howard Bend Levee Repair (PL84-99)
Date: Tuesday, April 16, 2024 1:58:05 PM

Thanks for the update Evan. I sent my response to this project a minute ago, but this will not change our response.

Thanks again!

Andy

From: Hill, Evan B CIV USARMY CEMVP (USA) <Evan.B.Hill@usace.army.mil>
Sent: Monday, April 15, 2024 3:08 PM
To: Roberts, Andy [redacted]
Subject: [EXTERNAL] RE: Request for Consultation for Howard Bend Levee Repair (PL84-99)

Hi Andy,

I need to update you on a detail regarding the proposed repair. The repair would require the dewatering of the pool in front of the outfall structure so that the material can be placed properly. This would require them to place a temporary dam around the mouth of the outfall structure. Water would be pumped from upstream of the outfall structure and around the temporary dam. This is to prevent water from backing up too much upstream of the outfall structure.

Thank you,

Evan Hill
Environmental Compliance Section
Wildlife Biologist
U.S. Army Corps of Engineers
1222 Spruce St
St. Louis, MO 63103
[redacted]

From: Hill, Evan B CIV USARMY CEMVP (USA)
Sent: Monday, April 8, 2024 3:26 PM
To: Andy Roberts [redacted]

Cc: Weber, John S [redacted]
Subject: Request for Consultation for Howard Bend Levee Repair (PL84-99)

Hi Andy,

Back in June 2023, you had provided consultation for the repair to the St. Peters Levee in St. Charles County. Our final project for the 2022 PL84-99 Emergency Levee Repairs is the **Howard Bend Levee** in St. Louis County. As usual, I will be preparing an EA that will go out for public review that you will be invited to comment on, but I wanted to initiate consultation early.

In compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, official lists of species and critical habitats potentially occurring in the vicinity of the proposed project was acquired from the USFWS Information for Planning and Conservation (IPaC) website at (https://ecos.fws.gov/ipac/) on 26 January 2024 (Project Code: 2023-0011259). The IPaC list included gray bat, Indiana bat, northern long-eared bat, tricolored bat, pallid sturgeon, monarch butterfly, and decurrent false aster.
The USACE St. Louis has made a "may affect, not likely to adversely affect" (NLAA) determination for gray bat, Indiana bat, northern long-eared bat, tricolored bat, and pallid sturgeon. A "not likely to jeopardize the continued existence of" determination for the monarch butterfly. A "no effect" determination for the decurrent false aster.
We are requesting consultation under Section 7 of the ESA for the effects determinations made for the listed species.

Description of the damages and proposed repair: The Howard Bend Levee experienced damage to an outfall structure located where Creve Coeur Creek empties into and unnamed tributary to the Missouri River just downstream of River Mile 31. The outfall structure includes two 10' x 12' metal sluice gates on a double culvert with wingwalls located in a reach of concrete floodwall. The damage area is concentrated around the culvert structure which is a large scour hole that generated the instability and caused Erosion Type III on the landside side slope of the levee adjacent to the culvert. The scour hole is estimated to have a 5.5 ft depth and 350 ft span along the channel. The scour hole also damaged the culvert foundation, the embankment, the revetment on the east and west banks, and a maintenance platform and access ramp. The levee district already repaired the scour hole and embankment with rip-rap to prevent further damage. However, some Erosion Type III remains unrepaired and the culvert undermining still needs to be addressed with a repair, hence the levee district's involvement in the PL84-99 program.

In summary, the repair would be limited to the outfall structure and the adjacent levee embankment. Fill material would be placed in the water to address the undermining under the outfall structure. The actual outfall structure itself would not be replaced or otherwise disturbed aside from replacing some damaged guardrails. **No borrow site will be required. No tree clearing is required for the project.** The work would be limited to the previously disturbed areas and roads adjacent to the outfall structure. Access would be via the existing roads on top of the levee and via the existing access ramp adjacent to the outfall structure. No new access roads would be required.

Conservation Measures:

In order to avoid or minimize impacts to physical, biological, and societal resources, contractors shall adhere to all environmental protection requirements listed in the Construction Plans and Specifications. Examples include, but are not limited to:

The Contractor shall submit an Environmental Protection Plan for review and acceptance by the USACE Contracting Officer, which shall include: a list of state and local laws and regulations; a Spill Control Plan; a Recycling and Waste Minimization Plan; a Contaminant Prevention Plan; a Storm Water Pollution Prevention Plan; and an Environmental Monitoring Plan.

- No fill shall be excavated or permanently placed except where required for authorized repairs.
- No removal of existing vegetation outside of the construction area. **No tree clearing is required for the project.**
- All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils; and all contractor work areas shall be re-vegetated with fast germinating grass mixtures to reduce any further erosion.
- Thoroughly clean all construction equipment at the prior job site in a manner that ensures all residual soil is removed and that egg deposits from plant pests are not present.
- Proper disposal of solid waste and debris.
- Proper storage and use of fuels and lubricants.
- Minimize interference with, disturbance to, and damage of, fish and wildlife.
- Protection of water resources to avoid pollution of surface and ground waters.
- Construct or install temporary and permanent erosion and sedimentation control features.
- Maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, disposal sites, and all other work areas free from airborne dust.
- Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

Please let me know if you have any questions or if you need additional information,

Thanks again,

Evan Hill
Environmental Compliance Section
Wildlife Biologist
U.S. Army Corps of Engineers
1222 Spruce St
St. Louis, MO 63103
[redacted]

Appendix 2
State Coordination

Missouri Department of Conservation

Missouri Department of Conservation's Mission is to
protect and manage the forest, fish, and
wildlife resources of the state and to
facilitate and provide opportunities for all citizens to
use, enjoy and learn about these resources.

Natural Heritage Review Level Three Report: Species Listed Under the Federal Endangered Species Act

There are records of species listed under the Federal Endangered Species Act, and possibly also records for species listed Endangered by the state, or Missouri Species and/or Natural Communities of Conservation Concern within or near the the defined Project Area. Please contact the U.S. Fish and Wildlife Service and the Missouri Department of Conservation for further coordination.

Foreword: Thank you for accessing the Missouri Natural Heritage Review Website developed by the Missouri Department of Conservation with assistance from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, Missouri Department of Transportation and NatureServe. The purpose of this report is to provide information to federal, state and local agencies, organizations, municipalities, corporations, and consultants regarding sensitive fish, wildlife, plants, natural communities, and habitats to assist in planning, designing, and permitting stages of projects.

PROJECT INFORMATION

Project Name and ID Number: Howard Bend Emergency Levee Repairs #11755
User Project Number: PL84-99 2022 Emergency Repairs
Project Description: The Howard Bend Levee System is a non-federally constructed, non-federally maintained levee located in St. Louis County, Missouri along the east bank of the Missouri River at approximately Missouri River Mile 29.7 to 37.4. The proposed project would involve repairs made to the several damage areas along the levee. There was no breach of the levee, but rather several areas of erosion and embankment slides that would be repaired to the pre-flood condition.
Project Type: Natural Disasters, Other
Contact Person: Evan Hill
Contact Information: evan.b.hill@usace.army.mil or 5739255004

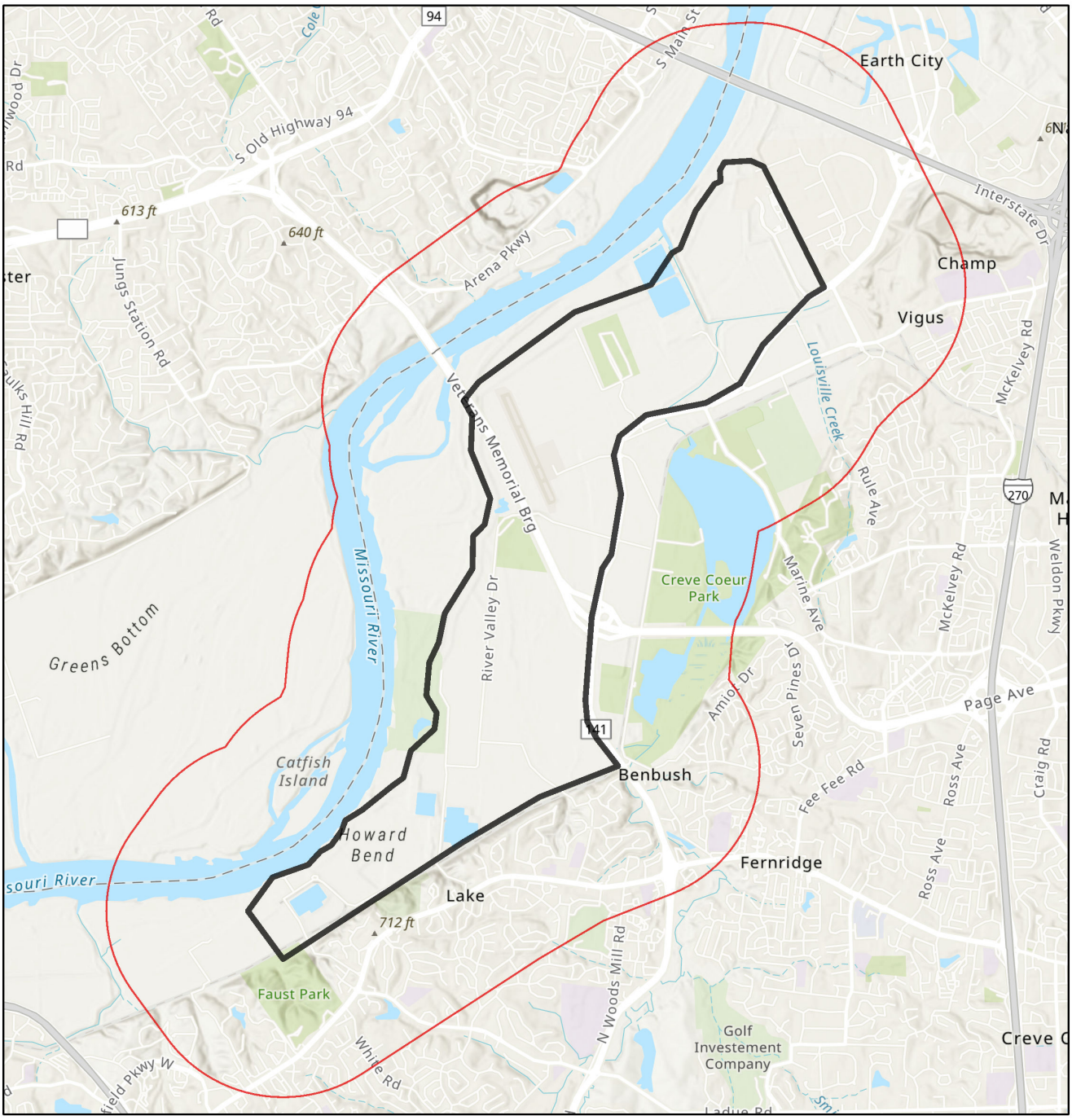
Disclaimer: This NATURAL HERITAGE REVIEW REPORT identifies if a species or natural community tracked by the Natural Heritage Program is known to occur within or near the project area submitted, and shares recommendations to avoid or minimize project impacts to sensitive species or natural habitats. Incorporating information from the Natural Heritage Program into project plans is an important step in reducing impacts to Missouri's sensitive natural resources. If an occurrence record is present, or the proposed project might affect federally listed species, the user must contact the Department of Conservation or U.S. Fish and Wildlife Service for more information.

This Natural Heritage Review Report is not a site clearance letter for the project. Rather, it identifies public lands and records of sensitive resources located close to and/or potentially affected by the proposed project. If project plans or location change, this report may no longer be valid. Because land use conditions change and animals move, the existence of an occurrence record does not mean the species/habitat is still present. Therefore, reports include information about records near but not necessarily on the project site. Lack of an occurrence record does not mean that a sensitive species or natural community is not present on or near the project area. On-site verification is the responsibility of the project. However, the Natural Heritage Program is only one reference that should be used to evaluate potential adverse project impacts and additional information (e.g. wetland or soils maps, on-site inspections or surveys) should be considered. Reviewing current landscape and habitat information, and species' biological characteristics would additionally ensure that Missouri Species of Conservation Concern are appropriately identified and addressed in planning efforts.

U.S. Fish and Wildlife Service – Endangered Species Act (ESA) Coordination: Lack of a Natural Heritage Program occurrence record for federally listed species in your project area does not mean the species is not present, as the area may never have been surveyed. Presence of a Natural Heritage Program occurrence record does not mean the project will result in negative impacts. This report does not fulfill Endangered Species Act consultation with the U.S. Fish and Wildlife Service (USFWS) for listed species. Direct contact with the USFWS may be necessary to complete consultation and it is required for actions with a federal connection, such as federal funding or a federal permit; direct contact is also required if ESA concurrence is necessary. Visit IPaC: Home (fws.gov) to initiate USFWS Information for Planning and Conservation (IPaC) consultation. Contact the Columbia Missouri Ecological Field Services Office (573-234-2132, or by mail at 101 Park Deville Drive, Suite A, Columbia, MO 65203) for more information.

Transportation Projects: If the project involves the use of Federal Highway Administration transportation funds, these recommendations may not fulfill all contract requirements. Please contact the Missouri Department of Transportation at 573-526-4778 or visit Home Page | Missouri Department of Transportation (modot.org) for additional information on recommendations.

Howard Bend Emergency Levee Repairs



November 10, 2022

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Buffered Project Boundary

Project Boundary

Esri, NASA, NGA, USGS, County of St. Louis, Missouri Dept. of Conservation, Missouri DNR, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

Species or Communities of Conservation Concern within the Area:

There are records of species listed under the Federal Endangered Species Act, and possibly also records for species listed Endangered by the state, or Missouri Species and/or Natural Communities of Conservation Concern within or near the defined Project Area. Please contact the U.S. Fish and Wildlife Service and the Missouri Department of Conservation for further coordination.

Email (preferred): NaturalHeritageReview@mdc.mo.gov
MDC Natural Heritage Review
Science Branch
P.O. Box 180
Jefferson City, MO
65102-0180
Phone: 573-522-4115 ext. 3182

U.S. Fish and Wildlife Service
Ecological Service
101 Park Deville Drive
Suite A
Columbia, MO
65203-0007
Phone: 573-234-2132

Other Special Search Results:

The project occurs on or near public land, Beckemeier (August G) CA, St Louis County (Creve Coeur Park Lake), please contact MDC.

Project Type Recommendations:
Natural Disasters - Other should be managed to minimize erosion and sedimentation/runoff to nearby streams and lakes, including adherence to any Clean Water Act permit conditions. Project design should include stormwater management elements that assure storm discharge rates to streams for heavy rain events will not increase from present levels. Revegetate disturbed areas to minimize erosion using native plant species compatible with the local landscape and wildlife needs. Annual ryegrass may be combined with native perennials for quicker green-up. Avoid aggressive exotic perennials such as crownvetch and sericea lespedeza. Please see Best Management Practices for Construction and Development Projects Affecting Missouri Rivers and Streams (mo.gov).

Project Location and/or Species Recommendations:

Endangered Species Act Coordination - If this project has the potential to alter habitat (e.g. tree removal, projects in karst habitat) or cause direct mortality of bats, please coordinate directly with U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 Ext. 100 for Ecological Services) for further coordination under the Endangered Species Act. Indiana bats *(Myotis sodalis*, federal- and state-listed endangered) and **Northern long-eared bats** (*Myotis septentrionalis,* federal-listed threatened) may occur near the project area. Both of these species of bats hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in wooded areas, often riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana bats or Northern long-eared bats, especially from September to April.

Bald Eagle: The project location submitted and evaluated is within the geographic range of nesting Bald Eagles in Missouri. Bald Eagles (*Haliaeetus leucocephalus*) may nest near streams or water bodies in the project area. Nests are large and fairly easy to identify. Adults begin nesting activity in late December and January and young birds leave the nest in late spring to early summer. While no longer listed as endangered, eagles continue to be protected by the federal government under the Bald and Golden Eagle Protection Act. Work managers should be alert for nesting areas within 1500 meters of project activities, and follow federal guidelines at: Do I need an eagle take permit? | U.S. Fish & Wildlife Service (fws.gov) if eagle nests are seen.

Decurrent False Aster (Boltonia decurrens, federal-listed threatened and state-listed endangered) may occur in this area. Decurrent False Aster is a head floodplain species that grows in wetlands and on the borders of marshes, lakes, oxbows, and sloughs. It also may be found in old fields, roadsides, agricultural fields, and on levees. It favors sites characterized by moist soil and regular disturbance, preferably periodic flooding, which maintains open areas with high light levels. Today it is found in areas where succession is prevented, and sunlight is allowed to reach the seedlings. It is a perennial plant that blooms from August through October. Please see Best Management Practices for Construction and Development Projects Decurrent False Aster (mo.gov).

Gray Bat: The submitted project location is within the range of the Gray Myotis (i.e., Gray Bat) in Missouri. Depending on habitat conditions of your project's location, Gray Myotis (*Myotis grisescens*, federal and state-listed endangered) could occur within the project area, as they forage over streams, rivers, lakes, and reservoirs. Avoid entry or disturbance of any cave inhabited by Gray Myotis and when possible retain forest vegetation along the stream and from the cave opening to the stream. Please see Best Management Practices for Construction and Development Projects Gray bat (mo.gov).

Karst: This county has known karst geologic features (e.g., caves, springs, and sinkholes, all characterized by subterranean water movement). Few karst features are recorded in Natural Heritage records, and ones not noted here may be encountered at the project site or affected by the project. Cave fauna (many of which are Species of Conservation Concern) are influenced by changes to water quality; please check your project site for any karst features and make every effort to protect groundwater in the project area. Additional information and specific recommendations are available at Management Recommendations for Construction and Development Projects Affecting Missouri Karst Habitat (mo.gov).

Pallid Sturgeon: The project location submitted and evaluated is located within or adjacent to the Mississippi or Missouri rivers. Pallid Sturgeons (*Scaphirhynchus albus*, federal- and state-listed endangered) are big river fish that range widely in the Mississippi and Missouri River system (including parts of some major tributaries). Any project that modifies big river habitat or impacts water quality should consider the possible impact to pallid sturgeon populations. See Pallid Sturgeon Best Management Practices (mo.gov) for Best Management Practices. Additional coordination with the U.S. Fish and Wildlife Service under the Endangered Species Act may be necessary (U.S. Fish and Wildlife Service, Ecological Services, 101 Park DeVille Drive, Suite A, Columbia, Missouri 65203-0007; phone 573-234-2132.)

Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, and larvae may be moved to new sites on boats or construction equipment. Please inspect and clean equipment thoroughly before moving between project sites. See Managing Invasive Species in Your Community | Missouri Department of Conservation (mo.gov) for more information.

- Remove any mud, soil, trash, plants or animals from equipment before leaving any water body or work area.
- Drain water from boats and machinery that have operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
- When possible, wash and rinse equipment thoroughly with hard spray or HOT water (>140° F, typically available at do-it-yourself car wash sites), and dry in the hot sun before using again.

Streams and Wetlands – Clean Water Act Permits: Streams and wetlands in the project area should be protected from activities that degrade habitat conditions. For example, soil erosion, water pollution, placement of fill, dredging, in-stream activities, and riparian corridor removal, can modify or diminish aquatic habitats. Streams and wetlands may be protected under the Clean Water Act and require a permit for any activities that result in fill or other modifications to the site. Conditions provided within the U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 permit (Kansas City District Regulatory Branch (army.mil)) and the Missouri Department of Natural Resources (DNR) issued Clean Water Act Section 401 Water Quality Certification (Section 401 Water Quality Certification | Missouri Department of Natural Resources (mo.gov)), if required, should help minimize impacts to the aquatic organisms and aquatic habitat within the area. Depending on your project type, additional permits may be required by the Missouri Department of Natural Resources, such as permits for stormwater, wastewater treatment facilities, and confined animal feeding operations. Visit Wastewater Permits | Missouri Department of Natural Resources (mo.gov) for more information on DNR permits. Visit both the USACE and DNR for more information on Clean Water Act permitting.

For further coordination with the Missouri Department of Conservation and the U.S. Fish and Wildlife Services, please see the contact information below:

Email (preferred): NaturalHeritageReview@mdc.mo.gov
MDC Natural Heritage Review
Science Branch
P.O. Box 180
Jefferson City, MO
65102-0180
Phone: 573-522-4115 ext. 3182

U.S. Fish and Wildlife Service
Ecological Service
101 Park Deville Drive
Suite A
Columbia, MO
65203-0007
Phone: 573-234-2132

Miscellaneous Information

FEDERAL Concerns are species/habitats protected under the Federal Endangered Species Act and that have been known near enough to the project site to warrant consideration. For these, project managers must contact the U.S. Fish and Wildlife Service Ecological Services (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) for consultation.

STATE Concerns are species/habitats known to exist near enough to the project site to warrant concern and that are protected under the Wildlife Code of Missouri (RSMo 3 CSR 1 0). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR 1 0-4.111. Species tracked by the Natural Heritage Program have a "State Rank" which is a numeric rank of relative rarity. Species tracked by this program and all native Missouri wildlife are protected under rule 3CSR 10-4.110 General Provisions of the Wildlife Code.

See Missouri Species and Communities of Conservation Concern Checklist (mo.gov) for a complete list of species and communities of conservation concern. Detailed information about the animals and some plants mentioned may be accessed at Mofwis Search Results. Please contact the Missouri Department of Conservation to request printed copies of any materials linked in this document.

Missouri Department of Conservation
Science Branch
P. O. Box 180
Jefferson City, MO 65102
Prepared by: Shelly Colatskie
NaturalHeritageReview@mdc.mo.gov
(573) 522 - 4115 ext. 3182

Natural Heritage Review Report

November 22, 2023

Evan Hill
USACE
Evan.B.Hill@usace.army.mil

NHR ERT ID:	11755	NHR ERT Level:	3
Project type:	Levee Repair		
Location/Scope:			
County:	St. Louis		
Project Title:	Howard Bend Emergency Levee Repair		
Query received:	8/7/2023		

This NATURAL HERITAGE REVIEW is not a site clearance letter. Rather, it identifies public lands and records of sensitive resources located close to and/or potentially affected by the proposed project. If project plans or location change, this report may no longer be valid. Because land use conditions change and animals move, the existence of an occurrence record does not mean the species/habitat is still present. Therefore, reports include information about records near but not necessarily on the project site. Lack of an occurrence record does not mean that a sensitive species or natural community is not present on or near the project area. On-site verification is the responsibility of the project. These records serve as one reference and additional information (e.g. wetland or soils maps, on-site inspections or surveys) should be considered. Look for additional information about the biological and habitat needs of records listed to avoid or minimize impacts. More information is at Natural Areas | Missouri Department of Conservation (mo.gov) and Missouri Fish and Wildlife Information System (MOFWIS).

Level 3: Records of federal-listed (also state-listed) species or critical habitats near the project site:

- **Missouri River:** The Missouri River (together with its tributary mouths) is home to many aquatic species of federal and state concern, including federal-listed Pallid Sturgeon, state-listed Lake Sturgeon, Flathead Chub, and others. Bluffs, banks, and floodplains may also include habitat used by listed Gray bats, Indiana bats, and Bald Eagles. All these are sampled at points but must be assumed to be present in suitable habitats through extended river reaches.
  - Terrestrial projects that manage construction and include operation plans to avoid runoff of sediment or pollutants are unlikely to affect the aquatic species.
  - Regulations enforced by other agencies to protect water quality and human health are generally adequate to protect the needs of wildlife as well.
  - Projects that place fill in or discharge water to the river are subject to federal permits, and strict observance of conditions required in those permits is important to minimize risk of damage to endangered species.

  See General Recommendations for additional information on minimizing impacts to aquatic resources.

Natural Heritage records identifies Pallid Sturgeon less than one mile from project site.

- **Pallid Sturgeon:** Pallid Sturgeons (*Scaphirhynchus albus*, federal and state-listed endangered) are big river fish that range widely in the Mississippi and Missouri River system (including parts of major tributaries). Any project that modifies big river habitat or impacts water quality should consider the possible impact to Pallid Sturgeon populations. See https://mdc.mo.gov/sites/default/files/2020-06/PallidSturgeonBMP.pdf for Best Management Practices.

- **Bald Eagles:** Bald Eagles (*Haliaeetus leucocephalus*) nest near streams or water bodies in the project area. Nests are large and fairly easy to identify. While no longer listed as endangered, eagles continue to be protected by the federal government under the Bald and Golden Eagle Protection Act. Work managers should be alert for nesting areas within 1500 meters of project

activities, and follow federal guidelines at: Do I need an eagle take permit? | U.S. Fish & Wildlife Service (fws.gov) if eagle nests are seen.

Following USFWS Incidental Take Guidelines: To avoid the incidental take of bald eagles we recommend:

- a buffer of at least 660 feet between project activities and the nests (including active and inactive nests).
- If project activities are within 660 feet of the nest, please restrict activities to outside the nesting season. The nesting season in Missouri is January 1 – July 15.
- If these recommendations cannot be implemented, incidental take of bald eagles may occur and a permit from USFWS may be necessary.
- Do not clear nests or nest trees.

FEDERAL LIST species/habitats are protected under the Federal Endangered Species Act. **Contact U.S. Fish & Wildlife Service** (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; 573-234-2132) for Endangered Species Act coordination and concurrence information).

Level 2: Records of state-listed (not federal-listed) endangered species AND / OR state-ranked (not state-listed endangered) species and natural communities of conservation concern. The Department tracks these species and natural communities due to population declines and/or apparent vulnerability.

Natural Heritage records identifies Lake Sturgeon, Flathead Chub, and American Bittern less than one mile from project area.

- **Lake Sturgeon:** Lake Sturgeon (*Acipenser fulvescens*) are widely distributed in North America. In Missouri, they are found in the Mississippi and Missouri Rivers but have also been known to occur in the larger tributaries of those two rivers. Lake Sturgeon are listed as either threatened or endangered throughout most of its original range in the United States. Over-harvest appears to have been responsible for the greatest decline in abundance of the Lake Sturgeon. Pollution and restriction of migratory movements due to construction of dams have compounded the problems of over- exploitation. Although Lake Sturgeon are not expected to occur at the project site, any project that impacts water quality should consider the possible impact to Lake Sturgeon that occur nearby in downstream-connected rivers. Please see Best Management Practices for Construction and Development Projects Lake Sturgeon (mo.gov).

- **Flathead Chub:** Flathead Chub's (*Platygobio gracilis,* State-listed Endangered), historical range included the entire length of the Missouri and Mississippi River to the Arkansas state line. Their habitat can vary from turbid waters in swift currents to clear pools and small creeks. Please see Best Management Practices for Construction and Development Projects Flathead Chub (mo.gov).

- **American Bitterns** (*Botaurus lentiginosus*) nest in permanent wetlands with tall, emergent vegetation such as bur-reed and bulrush. Breeding occurs between April and July. Protection and restoration of quality wetlands are important for many species, including the American Bittern. Project activities should not occur within 100 feet of wetland habitat between April 1 and July 31 to prevent disturbing nesting birds. Erosion and sediment controls should be implemented, maintained and monitored for the duration of the project. Disposal of wastes and garbage should be done in designated areas far from wetlands. Draining or destroying permanent, emergent wetland habitat should be avoided. See https://mdc.mo.gov/sites/default/files/2020-06/AmericanBitternBMP.pdf for best management practices regarding this species.

Natural Heritage records indicate the following state-ranked species near the project area:

Scientific Name	Common Name	State Rank	Proximity (miles)	Primary Habitat
Pituophis catenifer sayi	Bullsnake	SU	<5	Grassland native prairie, Grassland non-native, Savanna, Old field/shrub, Savanna pasture/orchard
Taxidea taxus	American Badger	S3	<4	Grassland matrix, Savanna pasture/orchard, Row/close grown crops
Mustela frenata	Long-tailed Weasel	S3	<5	Habitat generalist, Savanna/Shrub/Woodland matrix, Forest matrix, Grassland matrix
Alosa chrysochloris	Skipjack Herring	SU	<1	River/stream
Carpiodes velifer	Highfin Carpsucker	S2	<1	River/stream
Hybognathus argyritis	Western Silvery Minnow	S2	<1	River/stream
Hybognathus placitus	Plains Minnow	S2	<1	River/stream
Macrhybopsis gelida	Sturgeon Chub	S3	<1	River/stream
Notropis buchanani	Ghost Shiner	S2	<1	River/stream
Percina shumardi	River Darter	S3	<1	River/stream
Helanthium tenellum	Dwarf Burhead	S1	<1	Sinkhole pond
Bergia texana	Bergia	S2	<1	Moist edge/mudflat, Row/close grown crops
Schoenoplectiella saximontana	Rocky Mountain Bulrush	S1	<1	Moist edge/mudflat, Sand/gravel bars
Paspalum setaceum var. setaceum	Slender Paspalum	S1	<1	Forest upland, Moist edge/mudflat, Roadside/railroad

State Rank Definitions:

- S1: Critically imperiled in the state because of extreme rarity of or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically, 5 or fewer occurrences or very few remaining individuals (<1,000).
- S2: Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state (6 to 20 occurrences or few remaining individuals).
- S3: Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
- S4: Uncommon but not rare, and usually widespread in the nation or state. Possible cause of long-term concern. Usually more than 100 occurrences and more than 10,000 individuals.
- S#S#: Range Rank: A numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status.
- ?: Denotes inexact or uncertain numeric rank.
- SU: Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

There are no regulatory requirements associated with this status, however we encourage voluntary stewardship to minimize the risk of further decline that could lead to listing.

General recommendations related to this project or site, or based on information about the historic range of species (unrelated to any specific Natural Heritage records):

- **Land Development:** Construction should be managed to minimize erosion and sedimentation/runoff to nearby streams and lakes, including adherence to any Clean Water Act permit conditions (Missouri DNR or US Army Corps of Engineers). Project design should include stormwater management elements that assure storm discharge rates to streams for heavy rain events will not increase from present levels. Revegetate disturbed areas to minimize erosion using native plant species compatible with the local landscape and wildlife needs. Annual ryegrass may be combined with native perennials for quicker green-up. Avoid aggressive exotic perennials such as crown vetch and sericea lespedeza. Please see Best Management Practices for Construction and Development Projects Affecting Missouri Rivers and Streams (mo.gov).
- **Contact Area Manager:** This project is within Beckemeier (August G) Conservation Area. Please contact area manager, Erin Shank (314-301-1506 Ext. 4207) if project activities will impact this CA.

- **Karst:** St. Louis County has known karst geologic features (e.g. caves, springs, and sinkholes, all characterized by subterranean water movement). Few karst features are recorded in Natural Heritage records, and ones not noted here may be encountered at the project site or affected by the project. Cave fauna (many of which are species of conservation concern) are influenced by changes to water quality, so check your project site for any karst features and make every effort to protect groundwater in the project area. Please see Management Recommendations for Construction and Development Projects Affecting Missouri Karst Habitat (mo.gov).

- **Gray Bats:** Gray Bats (*Myotis grisescens*, federal and state-listed endangered) occur in St. Louis County and could occur in the project area, as they forage over streams, rivers, and reservoirs. Avoid entry or disturbance of any cave inhabited by gray bats and when possible, retain forest vegetation along the stream and from the gray bat cave opening to the stream. Please see Best Management Practices for Construction and Development Projects Gray bat (mo.gov).

- **Tri-colored Bats:** Tri-colored bats (*Perimyotis subflavus*, federally proposed endangered) are known to occur in St. Charles County. In Missouri, most tri-colored bats hibernate in winter in the most humid and warm parts of caves. In summer, they roost in trees, in crannies about cliffs or buildings, in barns, or sometimes in high domes of caves. Tri-colored bats have been significantly impacted by White-nose syndrome. Please contact U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 Ext. 100 for Ecological Services) for further coordination under the Endangered Species Act.

- **Indiana Bats and Northern Long-eared Bats: If this project has the potential to alter habitat (e.g. tree removal, projects in karst habitat) or cause direct mortality of bats, please coordinate directly with U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 Ext. 100 for Ecological Services) for further coordination under the Endangered Species Act.**

  Though Indiana and Northern Long-eared bats are not known to occur in the project area, these species should be assumed present wherever habitat exists because they occur in St. Louis County and could occur in the project area. Indiana Bats *(Myotis sodalis*, federal and state-listed

endangered) and Northern Long-eared Bats (*Myotis septentrionalis,* federal-listed endangered) hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana Bats and/or Northern Long-eared Bats, especially from September to April.

- Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, larvae, and aquatic plant material may be moved to new sites on boats or construction equipment, so inspect and clean equipment thoroughly before moving between project sites.
  - Remove any mud, soil, trash, plants (or plant material) or animals from equipment before leaving any water body or work area.
  - Drain water from boats and machinery that has operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
  - When possible, wash and rinse equipment thoroughly with hard spray or HOT water (≥140° F, typically available at do-it-yourself carwash sites), and dry in the hot sun before using again.

These recommendations are ones project managers might prudently consider based on a general understanding of species needs and landscape conditions. Natural Heritage records largely reflect sites visited by specialists in the last 30 years. Many privately owned tracts have not been surveyed and could host remnants of species once but no longer common.

Appendix 3
Section 106
Coordination

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

March 14, 2024

Engineering and Construction
Curation and Archives Analysis Branch (ECZ)

Subject: Howard Bend Levee District, Maryland Heights, St. Louis County, MO

Amy Rubingh
Review, Compliance, Records Coordinator
Missouri State Historic Preservation Office
1101 Riverside Drive
Jefferson City, Missouri 65101

Dear Ms. Rubingh:

The U.S. Army Corps of Engineers, St. Louis District (District), is contacting your office to initiate consultation for a proposed undertaking to repair flood damage to the Howard Bend Levee (levee) in Maryland Heights, St. Louis County, Missouri (Figure 1), in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. The District will provide assistance to the levee district to repair damage that took place during the July 2022 high water event. This assistance is provided under Public Law 84-99, the Flood Control and Coastal Emergency Act.

Levee damage includes a large scour hole in the outfall structure (Figure 2). The scour hole created instability and failure of multiple channel banks and structures located on the unprotected side slopes of the levee and is undermining the existing double culvert foundation. The repair work will be undertaken from the levee itself. Existing paved roads will be utilized to haul the commercial borrow to the levee and existing paved areas will be utilized for laydown areas. No ground disturbing activity will take place outside of previously disturbed areas. For these reasons, the District has determined no historic properties will be affected by this project.

If you have any questions or comments, please feel free to contact me at (314) 331-8855 or Meredith Hawkins Trautt (Archaeologist and Tribal Liaison) at (314) 925-5031, or email Meredith.M.Trautt@usace.army.mil.

Sincerely,

Jennifer L. Riordan
Chief, Curation and Archives
Analysis Branch

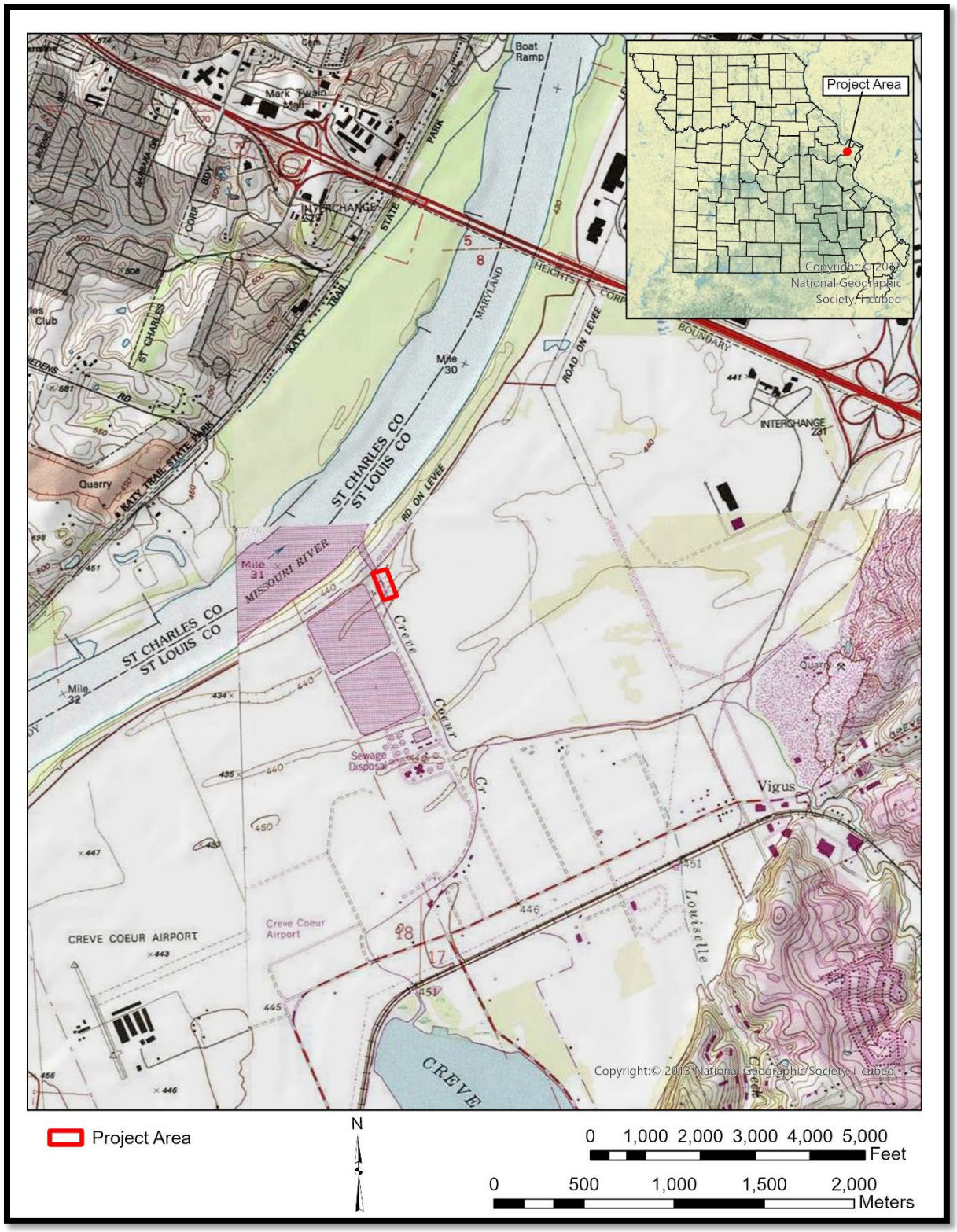

Figure 1. Location map of Howard Bend Levee.

Figure 2. Scour hole in levee caused by July 2022 high water event.

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Michael L. Parson
Governor

Dru Buntin
Director

April 10, 2024

U.S. Army Corps of Engineers
St. Louis District
Attn: Meredith Hawkins Trautt
1222 Spruce Street
St. Louis, MO 63103-2833

Re: **SHPO Project Number: 052-SL-24** – Howard Bend Levee (PL84-99) – Levee Repair, 3455 Creve Coeur Mill Road, Maryland Heights, St. Louis County, Missouri (USACE)

Dear Meredith Hawkins Trautt:

Thank you for submitting information to the State Historic Preservation Office (SHPO) regarding the above-referenced project for review pursuant to Section 106 of the National Historic Preservation Act, P.L. 89-665, as amended (NHPA), and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which require identification and evaluation of historic properties.

We have reviewed the information regarding the above-referenced project and have included our comments on the following page(s). Please retain this documentation as evidence of consultation with the Missouri SHPO under Section 106 of the NHPA. SHPO concurrence does not complete the Section 106 process as federal agencies will need to conduct consultation with all interested parties. **Please be advised that, if the current project area or scope of work changes, such as a borrow area being added, or cultural materials are encountered during construction, appropriate information must be provided to this office for further review and comment.**

If you have questions please contact the SHPO at (573) 751-7858 or call/email Amy Rubingh, (573) 751-4589, amy.rubingh@dnr.mo.gov. If additional information is required please submit the information via email to MOSection106@dnr.mo.gov.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

Brian K. Do

Brian Stith
Deputy Director Division of State Parks and
Deputy Missouri State Historic Preservation Officer

SHPO Project Number: 052-SL-24 – Howard Bend Levee (PL84-99) – Levee Repair, 3455 Creve Coeur Mill Road, Maryland Heights, St. Louis County, Missouri (USACE)

COMMENTS:

Adequate documentation has been provided as outlined in 36 CFR Section 800.11. After review of the initial submission, the project area has no known historic properties present and a low potential for the occurrence of cultural resources. SHPO concurs with your determination of **No Historic Properties Affected**.

SHPO Reviewer: Amy Rubingh, (573) 751-4589, amy.rubingh@dnr.mo.gov

Appendix 4
Tribal Coordination

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

March 15, 2024

Engineering and Construction
Curation and Archives Analysis Branch (ECZ)

Subject: Howard Bend Levee District, Maryland Heights, St. Louis County, MO

The Honorable, Governor John Raymond Johnson
c/o Representative Alicia Miller
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Dear Governor Johnson:

The U.S. Army Corps of Engineers, St. Louis District (District), is contacting your Tribe to initiate consultation for a proposed undertaking to repair flood damage to the Howard Bend Levee (levee) in Maryland Heights, St. Louis County, Missouri (Figure 1), in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. The District will provide assistance to the levee district to repair damage that took place during the July 2022 high water event. This assistance is provided under Public Law 84-99, the Flood Control and Coastal Emergency Act.

Levee damage includes a large scour hole in the outfall structure (Figure 2). The scour hole created instability and failure of multiple channel banks and structures located on the unprotected side slopes of the levee and is undermining the existing double culvert foundation. The repair work will be undertaken from the levee itself. Existing paved roads will be utilized to haul the commercial borrow to the levee and existing paved areas will be utilized for laydown areas. No ground disturbing activity will take place outside of previously disturbed areas. For these reasons, the District has determined no historic properties will be affected by this project.

If your Tribe has any questions, comments, or areas of concern please contact me at (314) 331-8855 or Meredith Hawkins Trautt (Tribal Liaison) at (314) 925-5031, or email Meredith.M.Trautt@usace.army.mil. A copy of this letter has been furnished to Ms. Carol Butler and Ms. Devon Frazier Smith.

Sincerely,

Jennifer L. Riordan
Chief, Curation and Archives
Analysis Branch

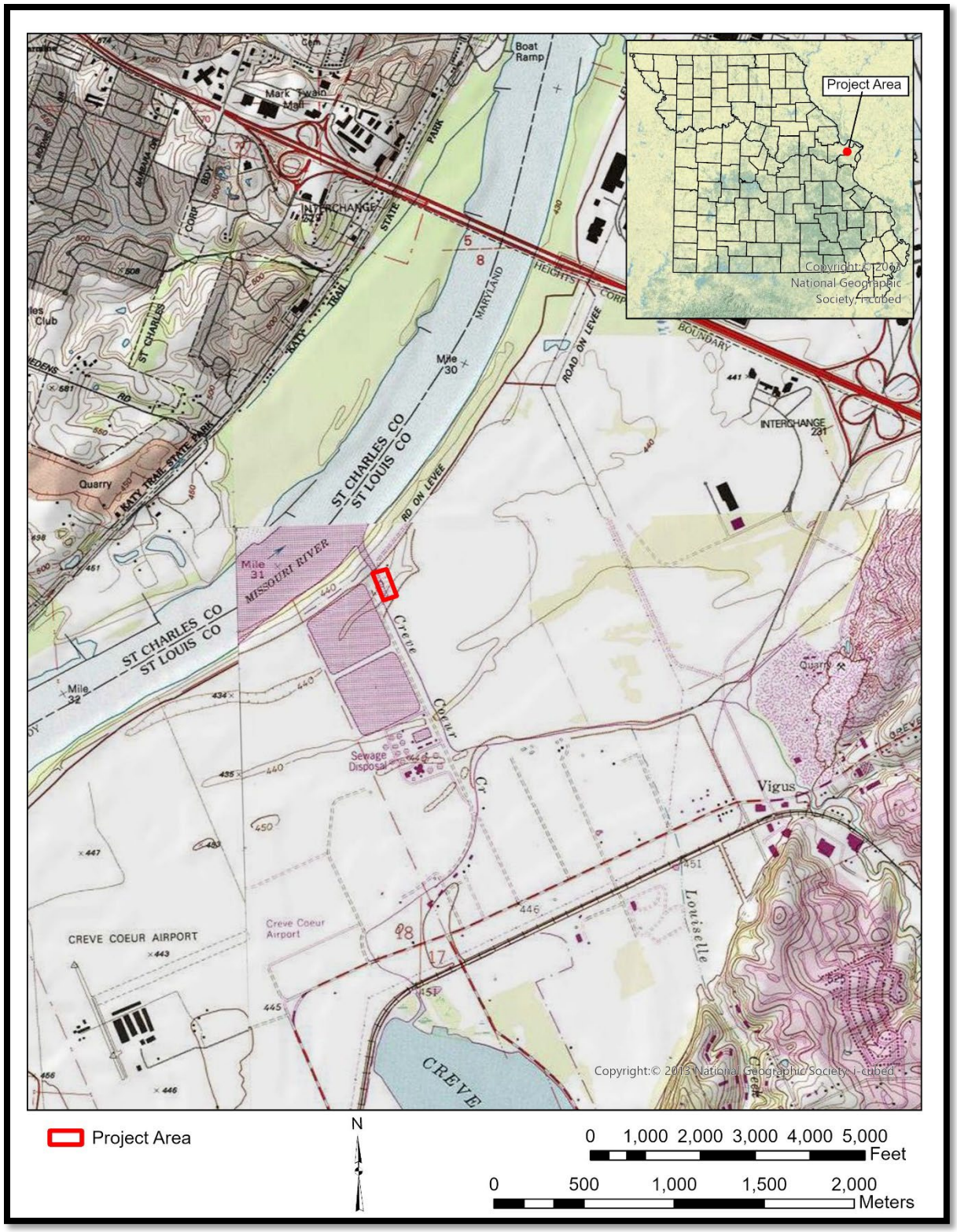

Figure 1. Location map of Howard Bend Levee.

Figure 2. Scour hole in levee caused by July 2022 high water event.

MVS Leaders

Absentee-Shawnee Tribe of Indians of Oklahoma	Gov. John Raymond Johnson c/o Representative Alicia Miller	2025 S. Gordon Cooper Drive	Shawnee	OK	74801	Ms. Carol Butler and Ms. Devon Frazier Smith
Caddo Nation of Oklahoma	Chairman Bobby Gonzalez	P.O. Box 487	Binger	OK	73009	Mr. Jonathan M. Rohrer
Citizen Potawatomi Nation, Oklahoma	Chairman John Barrett	1601 S. Gordon Cooper Drive	Shawnee	OK	74801	Ms. Tracy Wind
Eastern Shawnee Tribe of Oklahoma	Chief Glenna J. Wallace	12755 S. 705 Road	Wyandotte	OK	74370	Ms. Lora Nuckolls
Forest County Potawatomi Community, Wisconsin	Chairman James A. Crawford	P.O. Box 340, 5416 Everybody's Road	Crandon	WI	54520	Mr. Benjamin Rhodd
Hannahville Indian Community, Michigan	Chairman Kenneth Meshigaud	N 14911 Hannahville B-1 Road	Wilson	MI	49896	Ms. Molly Meshigaud
Ho-Chunk Nation of Wisconsin	President Jon Greendeer	P.O. Box 667	Black River Falls	WI	54615	Mr. William Quackenbush
Iowa Tribe of Kansas and Nebraska	Chairman Tim Rhodd	3345 Thrasher Road, #8	White Cloud	KS	66094	Mr. Lance Foster and Mr. Alan Kelley
Iowa Tribe of Oklahoma	Chairman Jake Keyes	335588 E. 750 Rd	Perkins	OK	74059	Ms. Candace Pershall
Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas	Chairman Lester Randall	824 111th Drive	Horton	KS	66439	Ms. Johanna Thomas
Kickapoo Tribe of Oklahoma	Chairman Darwin Kaskaske	P.O. Box 70	McCloud	OK	24851	Ms. Kristen Wilson
Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians	Chairman Bob Peters	2872 Mission Dr.	Shelbyville	MI	49344	Ms. Lakota Hobia
Miami Tribe of Oklahoma	Chief Douglas Lankford	P.O. Box 1326	Miami	OK	74355	Mr. Logan York

Nottawaseppi Huron Band of the Potawatomi, Michigan	Chairman Jamie Stuck	2221—1 & 1/2 Mile Road	Fulton	MI	49052	Ms. Onyleen Zapata
Peoria Tribe of Indians of Oklahoma	Chief Craig Harper	P.O. Box 1527	Miami	OK	74355	Ms. Burgundy Fletcher
Prairie Band Potawatomi Nation	Chairman Joseph Rupnick	Government Center, 16281 Q Road	Mayetta	KS	66509	Ms. Tara Mitchell
Sac & Fox Nation of Missouri in Kansas and Nebraska	Chairperson Tiauna Carnes	305 N. Main Street	Reserve	KS	66434	Mr. Gary Bahr
Sac & Fox Nation, Oklahoma	Principal Chief Randle Carter	920963 S Highway 99	Stroud	OK	74079	Mr. Chris Boyd
Sac & Fox Tribe of the Mississippi in Iowa	Chairman Vern Jefferson	349 Meskwaki Road	Tama	IA	52339	Mr. Johnathan Buffalo
Shawnee Tribe	Chief Benjamin Barnes	29 S Hwy 69A	Miami	OK	74354	Ms. Tonya Tipton
United Keetoowah Band of Cherokee of Oklahoma	Chief Joe Bunch	P.O. Box 746	Tahlequah	OK	74464	Mr. Acee Watt

MVS Reps – Hard Copy

Tribe	Name	Position	Street Address	City	State	Zip
Absentee-Shawnee Tribe of Indians of Oklahoma	Ms. Carol Butler	Cultural Preservation Director	2025 S. Gordon Cooper Drive	Shawnee	OK	74801
Caddo Nation of Oklahoma	Mr. Jonathan M. Rohrer	Tribal Historic Preservation Officer	P.O. Box 487	Binger	OK	73009
Hannahville Indian Community, Michigan	Ms. Molly Meshigaud	Tribal Historic Preservation Officer	N14911 Havvahville B-1 Rd	Wilson	MI	49896
Iowa Tribe of Kansas and Nebraska	Mr. Lance Foster	Tribal Historic Preservation Officer	3345B Thrasher Road	White Cloud	KS	66094
Iowa Tribe of Oklahoma	Ms. Candace Pershall	Cultural Preservation	335588 E. 750 Rd	Perkins	OK	74875
Kickapoo Tribe of Oklahoma	Ms. Kristen Wilson	Tribal Historic Preservation Officer	P.O. Box 70	McCloud	OK	24851
Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians	Ms. Lakota Hobia	Tribal Historic Preservation Officer	ATTN: THPO, 2872 Mission Drive	Shelbyville	MI	49344
Prairie Band Potawatomi Nation	Ms. Tara Mitchell	Deputy Tribal Historic Preservation Officer	Government Center, 16281 Q Road	Mayetta	KS	66509
Sac & Fox Nation, Oklahoma	Mr. Chris Boyd	NAGPRA/Historic Preservation Office	920963 S Highway 99	Stroud	OK	74079
Sac & Fox Tribe of the Mississippi in Iowa	Mr. Johnathan Buffalo	Historic Preservation Office	349 Meskwaki Road	Tama	IA	52339

MVS Reps – Email Copy

Tribe	Name	Position	Street Address	City	State	Zip	Email
Absentee-Shawnee Tribe of Indians of Oklahoma	Ms. Devon Frazier Smith	Tribal Historic Preservation Officer	2025 S. Gordon Cooper Drive	Shawnee	OK	74801	dfrazier@astribe.com
Citizen Potawatomi Nation, Oklahoma	Ms. Tracy Wind	Assistant Tribal Historic Preservation Officer	Cultural Heritage Center, 1601 S. Gordon Cooper Drive	Shawnee	OK	74801	cpnthpo@potawatomi.org
Eastern Shawnee Tribe of Oklahoma	Ms. Lora Nuckolls	Tribal Historic Preservation Officer	70500 E. 128 Road	Wyandotte	OK	74370	THPO@estoo.net
Forest County Potawatomi Community, Wisconsin	Mr. Benjamin Rhodd	Tribal Historic Preservation Officer	8130 Mish ko Swen Dr., P.O. Box 340	Crandon	WI	54520	Benjamin.Rhodd@fcp-nsn.gov
Ho-Chunk Nation of Wisconsin	Mr. William Quackenbush	Tribal Historic Preservation Officer	P.O. Box 667	Black River Falls	WI	54615	bill.quackenbush@ho-chunk.com
Iowa Tribe of Kansas and Nebraska	Mr. Alan Kelley	Deputy Tribal Historic Preservaiton Officer	3345 Thrasher Road	White Cloud	KS	66094	akelley@iowas.org
Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas	Ms. Johanna Thomas	Vice Chairman	824 111th Drive	Horton	KS	66439	johannathomas83@yahoo.com
Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians	Ms. Lakota Hobia	Tribal Historic Preservation Officer	2872 Mission Drive	Shelbyville	MI	49344	section106@glt-nsn.gov

Miami Tribe of Oklahoma	Mr. Logan York	Tribal Historic Preservation Officer	202 S. Eight Tribes Trail, P.O. Box 1326	Miami	OK	74355	THPO@MiamiNation.com
Nottawaseppi Huron Band of the Potawatomi, Michigan	Ms. Onyleen Zapata	Tribal Historic Preservation Officer	1485 MNO--Bmadzen Way	Fulton	MI	49052	Onyleen.Zapata@nhbp-nsn.gov
The Osage Nation	Dr. Andrea Hunter	Historic Preservation Office	627 Grandview Avenue	Pawhuska	OK	74056	s106@osagenation-nsn.gov
Peoria Tribe of Indians of Oklahoma	Ms. Burgundy Fletcher	Tribal Historic Preservation Specialist	118 S. Eight Tribes Trail	Miami	OK	74354	bfletcher@peoriatribe.com
Quapaw Nation	Ms. Billie Burtrum	Preservation Officer/QHPP Director	ATTN: QNHPP, P.O. Box 765	Quapaw	OK	74363	section106@quapawnation.com
Sac & Fox Nation of Missouri in Kansas and Nebraska	Mr. Gary Bahr	Vice Chairperson	305 N. Main Street	Reserve	KS	66434	gary.bahr@sacfoxks.com
Shawnee Tribe	Ms. Tonya Tipton	Historic Preservation Office	P.O. Box 189	Miami	OK	74355	Section106@shawnee-tribe.com
United Keetoowah Band of Cherokee of Oklahoma	Mr. Acee Watt	Tribal Historic Preservation Officer	P.O. Box 746	Tahlequah	OK	74464	ukbthpo@ukb-nsn.gov

NOTTAWASEPPI HURON BAND OF THE POTAWATOMI

A FEDERALLY RECOGNIZED TRIBAL GOVERNMENT

March 18, 2024

Meredith Hawkins Trautt

Tribal Liason

U.S Army Corps of Engineers

Meredith.M.Trautt@usace.army.mil

RE: Howard Bend Levee District

Bozho (Hello)

On behalf of the Nottawaseppi Huron Band of the Potawatomi (NHBP), we appreciate you for including us in your Section 106 consultation process. Upon looking at the description of the proposed project(s) Howard Bend Levee District located in Maryland Heights, Missouri in St. Louis County, it does not appear to us that there would be any cultural or religious concerns. We therefore have no objections to you moving forward with the proposed project(s). Of course, if the scope of the project were to change significantly or if any inadvertent findings are discovered during the project, we ask that you contact us for further consultation. However, at this time we will defer all project decisions to the Osage Nation, Chickasaw Nation, Quapaw Nation, Ioway Tribe, Kickapoo Tribe & Otoe-Missouria Tribe.

Igwiyen (Thank you)

ONYLEEN ZAPATA (she/her/hers) | Tribal Historic Preservation Officer
NOTTAWASEPPI HURON BAND OF THE POTAWATOMI
Pine Creek Indian Reservation
1301 T Drive South, Fulton, MI 49052
o: 269.704.8347 | **c:** 269.406.1524 |
Onyleen.Zapata@nhbp-nsn.gov | www.nhbp-nsn.gov

From: Alan Kelley
To: Trautt, Meredith M CIV USARMY CEMVS (USA)
Subject: [Non-DoD Source] Re: USACE St. Louis District, Howard Bend Levee Repairs, St. Louis Co., MO
Date: Friday, March 22, 2024 11:28:12 AM

Yes I Concur

On Fri, Mar 15, 2024 at 10:10 AM Trautt, Meredith M CIV USARMY CEMVS (USA) <Meredith.M.Trautt@usace.army.mil> wrote:

> Dear Mr. Kelley,
>
> Please see the attached letter pertaining to a proposed undertaking to assist the Howard Bend Levee District in Maryland Heights, St. Louis County, MO to fix damages to the levee by the July 2022 high water event. Assistance to the levee district is authorized under PL84-99.
>
>
>
> Sincerely,
>
>
>
> Meredith Hawkins Trautt, M.S., RPA
>
> Archaeologist and Tribal Liaison
>
> U.S. Army Corps of Engineers, St. Louis District
>
> MCX CMAC, EC Z
>
> 1222 Spruce Street
>
> St. Louis, MO 63103
>
> Office: (314) 925-5031
>
> Mobile: (314) 798-2169
>
> Pronouns: she/her
>
>

--
Alan Kelley
Deputy THPO
Iowa Tribe of KS & NE
3345 Thrasher RD
White Cloud KS 66094
785-351-0080

Appendix 5
Nationwide
Permits

DEPARTMENT OF THE ARMY PERMIT

Regional General Permit: PERMANENT PROTECTION/REPAIR OF FLOOD DAMAGED STRUCTURES, LANDS OR FILLS WITHIN THE STATE OF MISSOURI

Permit No.: 2008-00066-GP-41

Issuing Office: Department of the Army
Little Rock District, Regulatory Division
700 West Capitol Avenue, Room 6323
Little Rock, Arkansas 72201-3221

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work, within the Little Rock District's boundary, in accordance with the terms and conditions specified below.

Project Description: To excavate or place fill material for the permanent protection of and/or the repair of existing damaged structures, damaged land areas, and/or damaged fill areas, that are the result of the disaster event, as follows:

a. Repair of levees to preexisting elevations and cross-section, including breach closures and associated borrow operations.

b. Repair of road culverts and/or bridges within the existing roadway/railway alignment including the placement of suitable stone (riprap) to protect embankments and abutments.

c. In-kind repair of existing roadway or railway embankments and the replacement or the addition of suitable stone protection, at the damage site, including repair to previously authorized fill.

d. In-kind repair of existing utility structures within the current footprint of that structure, including previously authorized fill.

e. Placement of rock and/or earth materials for stream/ditch bank protection and/or stream/ditch bank restoration.

f. Drainage channel/ditch restoration to pre-disaster capacity and flow line unless the flow line must be altered due to other damage associated with the disaster event.

g. Restoration of creek channels to pre-disaster alignment and capacity.

h. Construction of temporary roads and temporary fill required to facilitate the completion of any of the above listed activities. Temporary fill must be removed to the original soil surface after repair activities are completed.

If the proposed work involves any activity included in the following list you must provide preconstruction notification (PCN) to the Little Rock District, Corps of Engineers, prior to completing any of the listed work, and you must submit application materials as outlined in Appendix 1. Additionally, you must submit a mitigation plan, as outlined in the federal mitigation regulation found at 33 CFR 332, prior to completing any of the following disaster recovery/repair activities:

- Work that may affect a Corps of Engineers Civil Works project (Section 408 authorization, from the Corps is required prior to commencing work);
- Excavating earth material (borrow) from forested wetlands, from potential migratory bird nesting areas, and/or from other offsite locations;
- Dredging or excavating material from any stream channel in Missouri, or placing fill material into any stream with known federally listed threatened or endangered species (see special condition "20");
- Repair activities that require any clearing of trees, any soil excavation or other soil disturbance for construction of temporary roads;
- Flood repairs in areas with known exotic/sensitive species listed in Special Condition "5";
- Repair work that requires working in Exceptional State Waters and/or Special Aquatic Life Use Waters;
- Activities associated with the restoration of a stream channel back to the original, pre-flood, location;
- The repair of any structure that is beyond the scope of the originally authorized structure or moved to a different location.

All application materials and post construction reports must be submitted to the U.S. Army Corps of Engineers, Little Rock District, Regulatory Division, 700 West Capitol Avenue, Room 6323, Little Rock, Arkansas 72201-3221.

All disaster repair activities supervised by the Corps of Engineers, pursuant to Public Law 84-99 or to Section 14 projects, and/or all repairs supervised by the United States Department of Agriculture, pursuant to any USDA Program authorized for disaster recovery can be completed without pre-construction notification to the Corps of Engineers. However, all completed disaster repair work, authorized by this permit, must be reported to the Little Rock District, Corps of Engineers, Regulatory Division, within 60 days of completing the project. The project report must include the location of the work, as-built drawings of the structure(s) and/or fill(s), and a discussion of the avoidance and minimization measures incorporated into the project and mitigation measures employed. Reports must be submitted to the U.S. Army Corps of Engineers, Little Rock District Regulatory Division, 700 West Capitol Avenue, Room 6323, Little Rock, Arkansas 72201-3221.

NOTE: In addition, maintenance of existing disaster damaged structures and/or disaster damaged fills, which have been previously authorized, may be authorized by Nationwide Permit No. 3 or exempted by Part 323.4 of Federal Regulations 33 CFR 320-332. The repair of uplands damaged by storms, floods or other discrete events may be authorized by Nationwide Permit No. 45 upon notification and review by the Little Rock District, Corps of Engineers, Regulatory Division. Construction of new structures and/or fills, not in existence prior to the discrete event, are not authorized by this DA permit.

Project Location: In waters of the United States (rivers, lakes, streams and wetlands) within the Little Rock District's regulatory boundary in the State of Missouri, that are declared flood disaster areas by the Governor of the State of Missouri and/or by the President of the United States.

Permit Conditions:

General Conditions:

1. This general permit expires on **22 April 2023**, unless it is modified, revoked or specifically extended, and the time limit for completing the authorized work ends on this date, unless your individual general permit verification letter specifies an earlier date. Provided the verification letter does not specify an earlier date, if you have started the work or are under contract to begin this activity before the general permit expires, you will have twelve (12) months from that expiration date to complete the activity under the present terms and conditions of this general permit.

2. You must maintain the activity authorized by this permit in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned 401 water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this permit.

NOTE: In addition, review Appendix 1 for information required to be submitted to the Corps of Engineers if your project requires PCN before beginning work. Appendix 1 also contains the list of information you must submit after completing your project if PCN is not required for your particular project.

Special Conditions:

1. You must sign and return the attached "Compliance Certification" after the authorized work and any required mitigation is completed. Your signature will certify that you completed the work in accordance with this permit, including the general and the special conditions, and that any required mitigation was completed in accordance with the permit conditions.

2. *(Activities occurring in navigable waters under Section 10 of the Rivers and Harbors Act of 1899 Only)*. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

3. If the work, authorized by this permit, requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized Civil Works project, the prospective permittee must submit a pre-construction notification as outlined on the first page of this permit. An activity that requires Section 408 determination is not authorized by GP-41 until the Little Rock District issues the Section 408 authorization to alter, occupy, or use the Corps of Engineers project and the district engineer issues a written GP-41 verification.

4. If any part of the authorized work is performed by a contractor, before starting work you must discuss the terms and conditions of this permit with the contractor; and, you must give a copy of this entire permit to the contractor.

5. You must contact the Corps if any work is proposed in areas of listed sensitive species or in special status waters. The list of sensitive species in Missouri can be found at: http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/nationwidepermits/2017/MORC7AquaticSpecies.pdf

6. You must employ measures to prevent spilled fuels, lubricants, excessive suspended solids including dredged material, and/or wet concrete from entering the waters of the United States and formulate a contingency plan to be effective in the event of a spill.

7. You must use clean, uncontaminated materials for fill in order to minimize excessive turbidity by leaching of fines, as well as to preclude the entrance of deleterious and/or toxic materials into the waters of the United States by natural runoff or by leaching. Use of small aggregate material less than 20 lbs per aggregate, such as creek gravel, for stabilization and erosion control is prohibited.

8. You must excavate or fill in the watercourse so as to minimize increases in suspended solids and turbidity which may degrade water quality and damage aquatic life outside the immediate area of operation. Activities should be conducted during low water periods and must be conducted outside major spawning season for fish, unless a waiver is obtained from the Corps of Engineers. The list of waters with seasonal spawning restrictions in Missouri can be found at: http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/nationwidepermits/2017/MORC2SpawningList.pdf

9. You must use the stream crossing guidelines for any temporary stream crossing constructed in a regulated waterway. The guidelines for Missouri can be found at: http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/nationwidepermits/2017/MORC1Streams.pdf. **Stream crossings and use of construction machinery in waterways should be limited to the minimum extent necessary.**

10. You must immediately remove and properly dispose of all debris during every phase of the project in order to prevent the accumulation of unsightly, deleterious and/or toxic materials in or near the water body. All construction debris must be disposed of in an upland site, outside the floodplain, and in such a manner that it cannot enter into a waterway or into a wetland.

11. You must store all construction materials, equipment, and/or petroleum products, when not in use, above anticipated high water levels.

12. You must restrict the clearing of timber and other vegetation to the absolute minimum required to accomplish the work. You must avoid the removal of mature trees to prevent potential impacts to bald eagle roost sites. If the work is adjacent to an active eagle nest, you must contact the U.S. Fish and Wildlife Service to determine if an eagle permit is needed. Work should be limited to one side of the channel only. However, work from both sides of the channel is permitted if it is demonstrated that it results in minimizing tree clearing. Vegetated riparian buffer areas should be included along both sides of any channel restoration projects. All wooded areas cleared for site access must be allowed to return to forested habitat. You must contact the Corps of Engineers (PCN) prior to any timber clearing.

13. Upon completion of earthwork operations, you must seed, replant or otherwise protect from erosion all fills in the water or on shore, and other areas on shore disturbed during construction. All plant material, including seed mixes, should be composed of native species. If seeding does not successfully stabilize the disturbed soil areas by the end of the first growing season, you must implement alternate measures, such as placing riprap, slope terracing with untreated railroad ties, gabions or concrete blocks, or additional vegetative plantings, to protect the disturbed areas from further erosion. Clearing, grading, and replanting should be planned and timed so that only the smallest area is in a bare soil condition. You must contact the Corps of Engineers prior to beginning work on any additional erosion control measures in order for the Corps to determine if additional authorization is required.

14. You must dispose of excess concrete and wash water from concrete trucks and other concrete mixing equipment in an upland area above the ordinary high water mark and at a location where the concrete and wash water cannot enter the water body or an adjacent wetland area.

15. You must not dispose of any construction debris or waste materials below the ordinary high water mark of any water body, in a wetland area, or at any location where the materials could be introduced into the water body or an adjacent wetland as a result of runoff, flooding, wind, or other natural forces.

16. You must use only graded rock, quarry-run rock and/or clean concrete rubble for riprap. The material must be reasonably well graded, consisting of pieces varying in size from 20 pounds up to and including at least 150 pound pieces. Generally, the maximum weight of any piece should not be more than 500 pounds. Gravel and dirt should not

exceed 15 percent of the total fill volume. If you use concrete rubble, you must break all large slabs to conform to the well graded requirement, and remove all exposed reinforcement rods, trash, asphalt, and other extraneous materials before you place the concrete rubble in the waters of the United States. Graded rock requirements can be altered provided approval is received from the Corps Regulatory Division prior to placement. Grouting the riprap material is prohibited.

17. You must completely remove all temporary fills, including sand bags (to the extent practicable), in the waters of the United States within 30 days of the end of the flood emergency. If sand bags are needed for a longer duration until permanent repairs are made, you must request a waiver of this condition in writing.

18. You must avoid impacts to wetlands to the fullest extent practicable. When wetlands impacts are unavoidable, borrow site selection will be based on the following order of preference: upland (non-wetland) sources, areas riverward of the levee previously used for borrow, currently farmed prior converted cropland, farmed wetlands, or other authorized excavation sites. You must mitigate for all unavoidable proposed wetland excavation or fill activities authorized by this permit. You must develop mitigation plans on a case-by-case basis which must be approved by the Corps. This permit does not authorize actions designed to drain or otherwise convert wetlands to other uses, nor actions where a practicable alternative to impacting wetlands is available unless the Corps of Engineers, in consultation with other resource agencies, determine that sediment removal from existing wetlands will restore wetland functions and create valued habitat diversity. All borrow areas should have 5:1 horizontal to vertical side slopes and the water depth should be three feet deep or less under normal circumstances.

19. You must place all fills and structures in waterways such that they do not result in stream channel constriction, they do not cause redirection of flows in such a way as to cause upstream or downstream erosion, and/or they do not restrict aquatic organism movement, especially during periods of low flow. Channelization projects or shortening of waterways, other than restoration of creek channels to pre-flood alignment, are not authorized by this permit.

20. No activity is authorized under this general permit which is likely to adversely affect a threatened or endangered species or a species proposed for such a designation, as identified under the Federal Endangered Species Act, or which is likely to destroy or adversely modify critical habitat of such species. See Appendix II, paragraph No. 1 for permitting requirements if these species are likely to be present or their habitat would be adversely modified. A list of threatened & endangered species in Missouri can be found at: http://ecos.fws.gov/tess_public/pub/stateListingAndOccurrenceIndividual.jsp?state=MO

Additionally, any work within the identified stream reaches, highlighted in Appendix III, requires a PCN to the Corps of Engineers.

21. You must avoid activity in the proximity of a property listed in or eligible for listing in the National Register of Historic Places unless, after coordination with Corps and the State Historic Preservation Office of the affected state and/or the Advisory Council on Historic Preservation, a determination of "no effect" or "no adverse effect" is made in accordance with criteria established by 36 CFR 800. If an inadvertent discovery of any cultural or archaeological resource occurs during construction activities you must immediately stop work and contact this office and you must suspend work in the area until a determination of eligibility for listing in the National Register of Historic Places is determined and any necessary consultation under Section 106 of the National Historic Preservation Act is completed. In the case of discovering human remains, you must immediately stop work and contact local law enforcement and you must contact the Missouri Department of Natural Resources, Historic Preservation Office at 573-751-7858.

22. You must NOT undertake any activity that results in a new structure or replacement of a previously authorized structure that increases the scope or design of the original structure. Small changes that do not affect elevations, such as the reconstruction of a levee around a scour hole at pre-existing elevations, that do not convert wetland to upland (non-wetland) or a different wetland use beyond what is unavoidable such as to go around a scour hole, may be authorized upon notification to the Corps. Levee breach repairs constructed on new alignments must be setback farther from the stream channel than the original alignment.

23. You must contact the Missouri Department of Natural Resources, Water Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102-0176, in order to determine the need for a state permit for land disturbance, return water, or other activities that normally require such permits. Use of GP-41 shall not be construed or interpreted to imply that the requirements for all other federal, state, and/or local permits are replaced or superseded by this permit. Any national pollutant discharge elimination system (NPDES) permits, general permits for land disturbance, or any other permit requirements must be obtained and complied with.

24. You must notify the Corps of Engineers if one of the following common exotic species occurs in the project area: the zebra mussel *(Dreissena polymorpha)*, Eurasian watermilfoil *(Myriophyllum spicatum*), purple loosestrife *(Lythrum salicaria)*, Johnson grass *(Sorghum halepense)*, sericia lespedeza *(Lespedeza cuneata)*, salt cedar *(Tamarix spp.)*, and reed canary grass *(Phalaris arundinacea)*. You must take appropriate actions to prevent

the spread of any exotic animal species and noxious and invasive plant species. The following link for Missouri:
http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/nationwidepermits/2017/MOInvasivePlants.pdf **provides a list of plant species that shall not be used on any project unless this requirement is waived by the district engineer based on a case specific analysis of the planting plan. Best management practices should be used to reduce the risk of transferring invasive plant and animal species to or from the project site.**
Best management practices can be found at:
http://www.invasivespeciesinfo.gov/toolkit/prevention.shtml**. The following best management practice can help prevent the spread of these species. Clean and certified weed-free seed should be used for plantings. Equipment brought on the project site should be washed to remove dirt, seeds and plant parts. If the equipment has been used in a body of water in the last 30 days it can be washed at a commercial car wash or dried for five or more days before using the equipment in another body of water. In addition, before transporting equipment from the project site all water, mud, plants and animals should be removed. Waters that the zebra mussel is known to inhabit in Missouri can be found at the following website:**
http://nas.er.usgs.gov/queries/zmbyst.asp

25. Section 401 Water Quality Certification for GP-41 has been issued by the State of Missouri. You must comply with the conditions of the 401 certification when performing any authorized work.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(**X**) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(**X**) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization:

a. This permit does not obviate the need to obtain other Federal, state, or local authorization required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability: In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. Failure to comply with the terms and conditions of this permit.

b. The information provided by the project proponent in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General condition 1 establishes a time limit for the completion of the activity authorized by this permit.

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____ _____

(TRANSFEREE) (DATE)

APPENDIX I

CRITERIA FOR AUTHORIZATION BY GENERAL PERMIT NO. 2008-00066-GP-41

1. This general permit authorizes activities proposed by the general public, railroads, transportation departments, pipeline and utility companies, and government agencies.

2. If you propose to work under the authority of this General Permit and the project requires preconstruction notification as outlined in the permit, you must notify the Little Rock District, Corps of Engineers, within two (2) years of the end of the flood event (when the nearest river gauge drops below flood stage for two months), and receive authorization prior to starting work within the Corps regulatory jurisdiction. This two year period may be waived by the district engineer provided the individual/entity can demonstrate a delay based on available funding, contracting, or other similar delays. You must submit the following information:

a. Submit a completed permit application form ENG 4345 or a letter which includes all information required by form ENG 4345. The ENG 4345 is available at: www.swl.usace.army.mil/Missions/Regulatory/Applying-for-a-Permit/

b. Provide a complete description of the proposed work, including a statement describing compensatory mitigation to replace aquatic resources lost as a result of the project or a statement justifying why compensatory mitigation is not required, and a proposed plant list to restore all disturbed areas that result from the construction activities so that we can clearly and readily determine whether or not the proposed work complies with this General Permit and determine if compensatory mitigation is warranted. If required, compensatory mitigation plans must be in accordance with the mitigation regulations found at 33 CFR 332. Additionally, all wetland and stream mitigation credits proposed at the mitigation site must be determined using the current version of the Missouri Stream Mitigation Method, or the Missouri Wetland Mitigation Method. The credit worksheets for the assessment method must be included in the submitted mitigation plan.

c. Describe and illustrate the location of the disaster repair activities on an aerial photograph. The activity must be in counties where a current disaster declaration is issued by the Governor of the State of Missouri or the President of the United States. Include an 8 1/2” x 11” map with the location of the proposed project clearly marked, including the Section, Township, and Range and the Latitude and Longitude (decimal degrees) of the specific work site.

d. Submit an 8 1/2" x 11" drawing(s) showing the details of the proposed repair work. Include a list of plant materials proposed for restoration and/or erosion control. The plant list should include both the common name and the Latin binomial.

e. Discussion of possible alternatives and why the preferred alternative was selected.

f. Also, as project proponent, you must send copies concurrently to the following addresses. We will not necessarily solicit comments from these agencies unless warranted. These agencies may request that we take discretionary authority on the proposed work and require application for an individual permit if a significant issue is identified.

(1) For all repair projects, you must contact:

U.S. Environmental Protection Agency
Watershed Planning and Implementation Branch
11201 Renner Boulevard
Lenexa, Kansas 66219
(913) 551-7003

* Federal Emergency Management Agency
Region VII
9221 Ward Parkway, Suite 300
Kansas City, Missouri 64114-3372
(816) 283-7063

* *You must contact FEMA for all proposed development located in the 100-year floodplain of a National Flood Insurance Program (NFIP) participating community in order to comply with local floodplain management regulations and secure a floodplain development permit from that community.*

(2) For repair projects in Missouri, you must contact:

U.S. Fish and Wildlife Service
Columbia Field Office
101 Park DeVille Drive, Suite A
Columbia, Missouri 65203
(573) 234-2132

Missouri Department of Natural Resources
Water Pollution Control Branch
P.O. Box 176
Jefferson City, Missouri 65102
1-800-361-4827 or (573) 751-1300

Missouri Department of Conservation
Policy Coordination
P.O. Box 180
Jefferson City, Missouri 65102-0180
(573) 522-4115

Missouri Department of Natural Resources
Historic Preservation Program
P.O. Box 176
Jefferson City, Missouri 65102
(573) 751-7958

3. For projects NOT requiring pre-construction notification, a report of the completed repair activities must be submitted to the Corps that includes the work location (including an aerial photograph), as-built drawings of the structure(s) and/or fill(s), a list of plant materials (including Latin binomial name) incorporated into the project, and a discussion of the avoidance and minimization measures incorporated into the project and mitigation measures employed. The report must be submitted within 60 days of project completion.

4. We may reevaluate the cumulative impacts of this general permit at our discretion at any time. We will reevaluate cumulative impacts at least every five (5) years as part of the review process for the reissuance of GP-41.

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5. The following is a list of damaged structures, damaged land areas and/or damaged fills that are the result of the disaster event that are authorized to be repaired under this general permit:

a. Repair of levees to preexisting elevation and cross-section, including breach closures and associated borrow operations.

b. Repair of road culverts and/or bridges within the existing roadway/railway alignment including the placement of suitable stone (riprap) to protect embankments and abutments.

c. In-kind repair of existing roadway or railway embankments and the replacement or the addition of suitable stone protection at the damage site, including repair to previously authorized fill.

d. In-kind repair of existing utility structures within the current footprint of that structure, including previously authorized fill.

e. Placement of rock and/or earth materials for stream/ditch bank protection and/or stream/ditch bank restoration.

f. Drainage channel/ditch restoration to pre-disaster capacity and flow line unless the flow line must be altered due to other damage associated with the flood event.

g. Restoration of creek channels to pre-disaster alignment and capacity.

h. Construction of temporary roads and temporary fill required to facilitate the completion of any of the above listed activities.

6. The District Engineer may require an individual permit on a case-by-case basis for any activity authorized herein.

7. You must complete the authorized work within the five year issuance period of the GP. If you need additional time to complete repairs or if flood damage occurs within the last two years of the GP's expiration date applicants must contact the Little Rock District, Corps of Engineers, for an extension of the authorization to complete the needed work. Contact should be made at least 60 days in advance of the GP expiration date.

Appendix I

8. Disaster repair activities, supervised by the U. S. Army Corps of Engineers, pursuant to Public Law 84-99, and/or supervised by the United States Department of Agriculture (USDA), pursuant to any USDA program authorized for disaster recovery, do not require preconstruction notification to the Corps of Engineers, Regulatory Division. It is the responsibility of these federal agencies to comply with all environmental laws and Presidential Executive Orders. However, agencies of the USDA and the Corps of Engineers must report all work completed under the authorization of GP-41 to the Little Rock District, Regulatory Division as outlined on page one of the permit. Submit reports to U.S. Army Corps of Engineers, Little Rock District, Regulatory Division, 700 West Capitol Avenue, Room 6323, Little Rock, Arkansas 72201-3221.

APPENDIX II

CORPS REVIEW PROCEDURES FOR SECTION 7 COMSULTATION AND RESULTING AUTHORIZATION BY GENERAL PERMIT NWK-GP-41

1. **ENDANGERED SPECIES CONSULTATION**.

a. The repair activity must not be located in areas containing potential habitat for federally listed species unless, following Endangered Species Act Section 7 consultation with the U.S. Fish and Wildlife Service (Service), a "not likely to adversely affect" determination is agreed upon between the Corps and the Service. If the proposed activity authorized under this permit is located in any area potentially supporting federally listed species or designated critical habitat, the following conditions must be met and will be coordinated by the appropriate Corps District: The Corps will coordinate with the Service to investigate potential species occurrence via the Service's Information for Planning and Conservation (IPaC) website at https://ecos.fws.gov/ipac. For each species on the Service's Official Species List, an effects determination must be made by the Corps. Concurrence from the Service must be obtained for "may affect" determinations; however, "no effect" determinations do not require concurrence from the Service.

b. As conditioned under the GP, additional project specific conditions must be imposed if, through informal consultation between the Service and the Corps, they are determined to be necessary to avoid the likelihood of adverse effects to listed species or designated critical habitat.

c. In the event that the likelihood of adverse effects to listed species or designated critical habitat cannot be avoided, GP authorization will not be provided until such time as: i) formal consultation between the Service and the Corps is completed; ii) a non-jeopardy Biological Opinion is issued; and iii) the terms and conditions of any associated Incidental Take Statement are incorporated as enforceable conditions to the project authorization under GP-41.

d. Conference via early interagency cooperation may also be necessary for species expected to become federally listed during the permit period. Conferences are required for proposed federal actions likely to jeopardize proposed species or destroy or adversely modify proposed critical habitat.

2. **PROJECT DOCUMENTATION AND COMPLIANCE**. The proposed repair activities must be documented by the project proponent and provided to the Corps of Engineers for review. If the repair project contains multiple sites then project documentation must be provided for each site. The documentation must include the T&E species of concern, any critical habitat effected, and a complete description of the timing and the work proposed at the location. This information will be utilized by the Corps to complete an effects determination and consult with the Service as appropriate.

APPENDIX III
Seasonal Restrictions for Activities Proposed in Fish Spawning Areas
January 2017 - Listing Criteria Noted at Bottom of Table

ID	Stream Name	Downstream Boundary (From)	Upstream Boundary (To)	Closure Period	Listing Criteria	Length (Miles)	County
1	Baker Branch	the tributary (Unnamed Creek ⑦) confluence immediately downstream of CR-SW 1075	the upstream MDC boundary (Taberville Prairie CA)	15 May - 15 July	2,4,5	4.4	St. Clair
2	Barren Fork ①	its mouth (confluence with Tavern Creek)	MO-17	15 March - 15 June	2,4	2.9	Miller
3	Barren Fork ②	its mouth (confluence with Sinking Creek)	CR-A-D	15 Nov. - 15 Feb.	6	3.4	Shannon
4	Bass Creek	its mouth (confluence with Turkey Creek)	US-63	15 May - 15 July	2,5,7	4.4	Boone
5							
6	Beaver Creek	Bull Shoals Lake (654' AMSL)	MO-76	15 March - 31 July	2,4	24.3	Taney
7	Big Buffalo Creek	Lake of the Ozarks (660' AMSL)	its headwaters	1 April - 30 June	2,5	10.8	Benton, Morgan
8	Big Cane Creek	the Missouri-Arkansas border	its source (convergence of Cane Creek & Little Cane Creek)	1 March - 15 June	2,7	4.2	Butler
9	Big Creek	its mouth (confluence with St. Francis River)	MO-143	15 March - 15 June	5,6	12.3	Wayne, Iron
10	Big Piney River	its mouth (confluence with Gasconade River)	MO-17	15 March - 15 June	2,4,6,7	84.8	Pulaski, Phelps, Texas
11	Big River	its mouth (confluence with Meramec River)	the upstream MDC boundary (Leadwood Access)	15 March - 15 June	2,6	108.4	Jefferson, Washington, St. Francois
12	Black River ①	the Missouri-Arkansas border	Clearwater Dam	1 Feb. - 15 June	2,4,6,7	91.8	Butler, Wayne
13	Black River ②	Clearwater Lake (498' AMSL)	its source (convergence of West Fork Black River & East Fork Black River)	1 April - 31 July	2,4	27	Reynolds
14	Blue River	the Missouri-Kansas border	RT-W (Bannister RD)	1 April - 30 June	4,7	10.8	Jackson
15	Blue Spring Branch	its mouth (confluence with Bois Brule Creek)	RT-M	1 Dec. - 31 March	2	6.3	Perry
16	Blue Springs Branch	its mouth (confluence with Blue Springs Creek)	its source (Blue Springs)	15 Nov. - 15 Feb.	6	0.2	Crawford
17	Blue Springs Creek	its mouth (confluence with Meramec River)	the confluence of Blue Springs Branch	15 Nov. - 15 Feb.	5,6	4.3	Crawford
18	Bonne Femme Creek	CR-Andrew Sapp RD	US-63	15 May - 15 July	2,5,7	9.8	Boone
19	Bourbeuse River	its mouth (confluence with Meramec River)	the confluence of Clear Creek	15 March - 15 June	2,4	139.6	Franklin, Crawford, Gasconade, Phelps
20	Brush Creek ①	its mouth (confluence with Shoal Creek)	its headwaters	15 March - 15 June	2,4,5	8.4	Caldwell
21							
22							
23							
24	Cane Creek ①	its mouth (convergence with Little Cane Creek & source of Big Cane Creek)	the north section line (11, 22N, 5E)	1 Feb. - 15 June	2	5.5	Butler

25	Cane Creek ②	MO-158	the confluence of Tenmile Creek	1 Feb. - 15 June	2	14.2	Butler
26	Castor River	its mouth (confluence with Castor River Diversion Channel)	CR-208	1 Feb. - 31 May	2,4	59.8	Bollinger, Wayne, Madison
27	Chariton River	US-136	the Missouri-Iowa border	1 March - 30 April	2,4,5,7	19	Schuyler, Putnam
28	Cinque Hommes Creek	the confluence of Bois Brule Creek	US-61	1 Dec. - 31 March	2	11.5	Perry
29	Clear Creek ①	its mouth (confluence with Fishing River)	RT-W	1 June - 31 August	2	23.2	Clay, Clinton
30	Clear Creek ②	its mouth (confluence with Lamine River)	its headwaters	15 May - 15 July	2	12.7	Cooper
31	Courtois Creek	its mouth (confluence with Huzzah Creek)	MO-8	15 March - 15 June	4,5,6	15.8	Crawford
32	Crabapple Creek	its mouth (confluence with Shoal Creek)	its headwaters	15 March - 15 June	2,4,5	9.3	Caldwell
33	Crane Creek	Quail Spur RD	CR-1240	15 Nov. - 15 Feb.	6	10	Stone, Lawrence
34	Crooked River	MO-10	its headwaters	15 March - 15 June	2,4	65.5	Ray, Caldwell, Clinton
35	Culley Creek	its mouth (confluence with Moniteau Creek)	the north section line (14, 46N, 17W)	15 May - 15 July	2	1.9	Cooper
36	Current River	the Carter-Ripley county line (downstream NPS boundary (Ozark National Scenic Riverways))	its source (convergence of Pigeon Creek & Montauk Spring Branch)	15 March - 15 June	2,5,6	112	Carter, Shannon, Texas, Dent
37	Des Moines River	its mouth (confluence with Mississippi River)	US-27	1 March - 15 June	2	14.8	Clark
38	Dousinbury Creek	its mouth (confluence with Niangua River)	RT-JJ	15 March - 15 June	2	0.8	Dallas
39	Draffen Branch	its mouth (confluence with Moniteau Creek)	CR-Harned RD	15 May - 15 July	2	3.3	Cooper
40	Dry Fork	its mouth (confluence with Meramec River)	MO-8	15 Nov. - 15 Feb.	6	5.8	Crawford, Phelps
41	East Fork Big Creek	its mouth (convergence with West Fork Big Creek & source of Big Creek)	the Missouri-Iowa border	15 March - 15 June	2,4	39.5	Harrison
42	East Fork Crooked River	its mouth (confluence with Crooked River)	its headwaters	15 May - 15 July	2,4	32.2	Ray, Caldwell
43							
44	Eleven Point River	the Missouri-Arkansas border	the Middle Fork Eleven Point River confluence	15 March - 15 June	5,6	54.4	Oregon
45	Elk River	the Missouri-Oklahoma border	its source (convergence of Big Sugar Creek & Little Sugar Creek)	15 March - 15 June	4,6	24.7	McDonald
46							
47	First Nicholson Creek (East Drywood Creek)	the downstream MDNR boundary (Prairie State Park)	the most upstream crossing of CR-West Central RD	15 March - 15 June	4,5,7	4.1	Barton
48	Flat Creek	Table Rock Lake (915' AMSL)	MO-39	15 March - 15 June	2	16.1	Stone, Barry
49	Fleck Creek	the downstream MDNR boundary (Prairie State Park)	the first tributary (Unnamed Creek ⑧) confluence upstream	15 March - 15 June	4,7	1	Barton
50							

51	Gans Creek	its mouth (convergence with Clear Creek & source of Little Bonne Femme Creek)	US-63	15 March - 15 June	5,7	5.4	Boone
52	Gasconade River	its mouth (confluence with Missouri River)	MO-5	15 March - 15 June	2,4,6,7	289.9	Gasconade, Osage, Maries, Phelps, Pulaski, Laclede, Wright
53	Grand River	its mouth (confluence with Missouri River)	the Thompson River confluence	1 March – 15 June	2,4	61.3	Carroll, Chariton, Livingston
54	Greasy Creek	its mouth (confluence with Niangua River)	the south section line (34, 33N, 20W)	15 March - 15 June	2,4	14.2	Dallas
55	Greer Spring Branch	its mouth (confluence with Eleven Point River)	its source (Greer Spring)	15 Nov. - 15 Feb.	4,6	1.4	Oregon
56	Grindstone Creek	its mouth (confluence with Grand River)	its headwaters	15 May - 15 July	2,4	42.5	Daviess, DeKalb, Clinton
57	Hickory Creek ①	MO-6	its headwaters	15 May - 15 July	2	8.6	Grundy, Daviess
58	Hickory Creek ②	its mouth (confluence with Shoal Creek)	CR-Monark DR	15 Feb. - 15 July	2	7.6	Newton
59	High Creek	the confluence of McElroy Creek	its headwaters	1 June - 31 August	2	10.7	Atchison
60	Howard Creek	its mouth (confluence with Smiley Creek)	its headwaters	15 May - 15 July	2	4.1	Cooper, Moniteau
61	Huzzah Creek	its mouth (confluence with Meramec River)	CR-Willhite RD	15 March - 15 June	4,5,6	35.8	Crawford
62	Jack Buster Creek	its mouth (confluence with Saline Creek)	RT-MM	15 March - 15 June	2	3.6	Miller
63	Jack's Fork	its mouth (confluence with Current River)	its source (convergence of North Prong Jack's Fork & South Prong Jack's Fork)	15 March - 15 June	5,6	46.7	Shannon, Texas
64	James River	Table Rock Lake (915' AMSL)	Lake Springfield Dam	15 March - 15 June	2,6	51.1	Stone, Christian, Greene
65	Joachim Creek	RT-A	RT-V	15 March - 15 June	6	18.3	Jefferson
66							
67	Kelley Branch	its mouth (confluence with Silver Fork)	RT-U	15 March - 15 July	2,4,7	6.6	Boone
68							
69	La Barque Creek	its mouth (confluence with Meramec River)	its headwaters	15 March - 15 June	4,7	6.2	Jefferson
70	Lane Spring Branch	its mouth (confluence with Little Piney Creek)	its source (Lane Spring)	15 Nov. - 15 Feb.	6	0.2	Phelps
71	Little Black River	the east section line (25, 24N, 3E)	its source (convergence of North Prong Little Black River & South Prong Little Black River)	15 March - 15 June	2,4,5	8.6	Ripley
72							
73							
74	Little Piney Creek	the confluence of Beaver Creek	the Phelps-Dent county line	15 Nov. - 15 Feb.	2,5,6	15.1	Phelps
75							
76	Little Saline Creek	its mouth (confluence with Saline Creek)	its headwaters	15 March - 15 June	2	9.8	Miller
77							
78	Locust Creek	MO-6	US-136	1 March - 30 April	2,4,7	36.5	Sullivan, Putnam

79	Log Creek	its mouth (confluence with Shoal Creek)	its headwaters	15 March - 15 June	2,4,5	14.7	Caldwell
80	Lost Creek	the Missouri-Oklahoma border	RT-CC	1 May - 31 July	2	7.1	Newton
81	Macks Creek	its mouth (confluence with Little Niangua River)	Coffey Hollow RD	15 March - 15 June	2	2.2	Camden
82							
83							
84	McElroy Creek	its mouth (confluence with High Creek)	the Missouri-Iowa border	1 June - 31 August	2	6.6	Atchison
85	Meramec River ①	CR-Thurman Lake RD (upstream boundary of Scott's Ford Access)	MO-8	15 Nov. - 15 Feb.	6	8.8	Crawford, Phelps
86	Meramec River ②	its mouth (confluence with Mississippi River)	MO-19	15 March - 15 June	2,4,5,6	205.8	St. Louis, Jefferson, Franklin, Crawford, Dent
87	Meyers Branch	its mouth (confluence with Tavern Creek)	its headwaters	1 May - 31 July	2,7	2.5	Callaway
88	Mill Creek ①	MO-111	its headwaters	15 March - 15 June	2,4	9.7	Atchison
89	Mill Creek ②	its mouth (confluence with Little Piney Creek)	the confluence of Deep Hollow Creek	15 Nov. - 15 Feb.	5,6	9.3	Phelps
90	Mill Creek ③	its mouth (confluence with Wet Glaize Creek)	MO-7	15 March - 15 June	7	4.9	Camden
91	Mineral Fork	its mouth (confluence with Big River)	RT-F	15 March - 15 June	4,6	14.9	Washington
92	Mississippi River	the Missouri River confluence	Mel Price Lock & Dam	1 April - 15 June	2	5.6	St. Charles
93	Moniteau Creek	MO-87	its headwaters	15 March - 15 July	2	30.9	Moniteau, Cooper
94							
95							
96	North Fork River	Norfork Lake (554' AMSL)	the Ozark-Douglas county line	15 Nov. - 15 Feb.	4,5,6	23.9	Ozark
97							
98	Osage Fork of the Gasconade River	its mouth (confluence with Gasconade River)	RT-F	15 March - 15 June	2,6,7	68.6	Laclede, Wright, Webster
99	Osage River	its mouth (confluence with Missouri River)	Bagnell Dam	15 March - 15 June	2,4,7	85.6	Cole, Osage, Miller
100							
101	Piney Spring Branch	its mouth (confluence with Little Piney Creek)	its source (Piney Spring)	15 Nov. - 15 Feb.	6	0.2	Phelps
102	Pisgah Creek	its mouth (confluence with Moniteau Creek)	RT-W	15 May - 15 July	2	8.1	Cooper
103	Pomme de Terre River ①	Pomme de Terre Reservoir (839' AMSL)	RT-D	15 March - 15 June	4	12.4	Polk
104							
105	Roubidoux Creek ①	the north section line (10, 34N, 12W)	MO-32	15 March - 15 June	2	24.4	Pulaski, Texas
106	Roubidoux Creek ②	its mouth (confluence with Gasconade River)	the upstream MDC boundary (Roubidoux Creek CA)	15 Nov. - 15 Feb.	6	2.2	Pulaski

107	Sac River ①	from Harry S. Truman Reservoir (706’ AMSL)	the west section line (14, 36N, 26W)	1 March - 1 June	4	3.2	St. Clair
108	Sac River ②	Stockton Lake (867’ AMSL)	CR-34	15 March - 15 June	4	13	Dade, Green
109	Saint Francis River ①	the Missouri-Arkansas border	Wappapello Dam	1 Feb. - 31 June	2,4	113	Dunklin, Butler, Stoddard, Wayne
110	Saint Francis River ②	Wappapello Lake (355' AMSL)	MO-72	1 Feb. - 31 May	2,4,6	63.2	Wayne, Madison
111	Saline Creek	its mouth (confluence with Osage River)	US-54	15 March - 15 June	2	13.1	Miller
112	Salt Creek	its mouth (confluence with Missouri River)	its headwaters	1 June - 31 August	2,7	5.9	Howard
113	Shoal Creek	RT-D	its headwaters	15 May - 15 July	2,4,5	74.8	Livingston, Caldwell, Clinton
114	Silver Fork	US-63	RT-V	15 March - 15 July	2,4,7	9.6	Boone
115	Smiley Creek	its mouth (confluence with Moniteau Creek)	its headwaters	15 May - 15 July	2	8.2	Cooper, Moniteau
116	South Fabius River	US-24/US-61	the Marion-Shelby county line	15 March - 15 June	4,7	42.1	Marion
117							
118	South Fork Turkey Creek	its mouth (convergence with North Fork Turkey Creek & source of Turkey Creek)	RT-H	15 March - 15 July	2,7	2.7	Boone
119							
120	South Prong Little Black River	its mouth (convergence with North Prong Little Black River & source of Little Black River)	MO-21	15 March - 15 June	2,4,5	5.5	Ripley
121	Spring Creek	its mouth (confluence with Big Piney River)	the confluence of Bradford Branch	15 Nov. - 15 Feb.	5,6	7.9	Phelps
122	Spring River ①	RT-H	US-60	15 Nov. - 15 Feb.	2,4	14.1	Lawrence
123	Spring River ②	the Missouri-Kansas border	MO-43	15 April - 15 July	2,4	12.3	Jasper
124							
125	Sugar Creek ①	MO-146	its headwaters	15 March - 15 July	2,4	25.7	Grundy, Harrison
126	Sugar Creek ②	its mouth (confluence with Cuivre River)	RT-B	15 March - 15 June	4,5,7	13.5	Lincoln
127	Swan Creek	Bull Shoals Lake (654' AMSL)	the upstream USACE boundary	15 March - 15 June	2	4.6	Taney
128	Tavern Creek ①	its mouth (confluence with Missouri River	its headwaters	1 May - 31 July	2,7	8.4	Callaway
129	Tavern Creek ②	its mouth (confluence with Osage River)	Bennett RD	15 March - 15 June	1,2,4	43.8	Miller
130	Tenmile Creek	its mouth (confluence with Cane Creek)	RT-B	15 March - 15 June	6	15.4	Butler, Carter
131							
132	Thompson River	the south section line (11, 66N, 26W)	the Missouri-Iowa border	15 March - 15 June	2,4	6.9	Harrison
133	Tombstone Creek	its mouth (confluence with Sugar Creek)	its headwaters	15 May - 15 July	2,4	10.9	Harrison, Daviess
134	Turkey Creek	its mouth (confluence with Boone Femme Creek)	its source (convergence of North Fork Turkey Creek & South Fork Turkey Creek)	15 March - 15 July	2,5,7	7.2	Boone
135	Turnback Creek	Stockton Lake (867’ AMSL)	the Old Dilday Mill Dam	15 March - 15 June	4	13.4	Dade

136	Unnamed Creek ①	its mouth (confluence with Sugar Creek)	its headwaters	15 May - 15 July	2	5	Harrison
137	Unnamed Creek ②	its mouth (confluence with Sugar Creek)	its headwaters	15 May - 15 July	2	5.9	Harrison
138	Unnamed Creek ③	its mouth (confluence with Moniteau Creek)	its headwaters	15 May - 15 July	2	3.9	Cooper
139	Unnamed Creek ④	its mouth (confluence with Bass Creek)	the south section line (33, 47N, 12W)	15 May - 15 July	2	1.8	Boone
140	Unnamed Creek ⑤	its mouth (confluence with Baker Branch)	its headwaters	15 May - 15 July	2,4	0.9	St. Clair
141	Unnamed Creek ⑥	its mouth (confluence with Baker Branch)	its headwaters	15 May - 15 July	2,4	3.5	St. Clair
142	Unnamed Creek ⑦	its mouth (confluence with Baker Branch)	its headwaters	15 May - 15 July	2,4	2.7	St. Clair
143	Unnamed Creek ⑧	its mouth (confluence with Fleck Creek)	CR-West Central RD	15 March - 15 June	4,7	2.5	Barton
144	Weaubleau Creek	the downstream MDC boundary (Kings Prairie Access)	the St. Clair-Hickory county line	15 May - 15 July	2,4	14	St. Clair
145	West Brush Creek	its mouth (confluence with Moniteau Creek)	RT-O	15 March - 15 July	2	3.4	Cooper, Moniteau
146	West Fork Big Creek	its mouth (convergence with East Fork Big Creek & source of Big Creek)	the Missouri-Iowa border	15 March - 15 June	2,4	38.7	Harrison
147	West Fork Crooked River	its mouth (confluence with Crooked River)	its headwaters	15 May - 15 July	2,4	21.5	Ray
148	West Fork Niangua River	its mouth (convergence with East Fork Niangua River & source of Niangua River)	the south section line (33, 32N, 18W)	15 March - 15 June	2	0.3	Webster
149	West High Creek	its mouth (confluence with High Creek)	the Missouri-Iowa border	1 June - 31 August	2	6.2	Atchison
150	Wet Glaize Creek	its mouth (convergence with Dry Auglaize Creek & source of Grand Glaize Creek)	the confluence of Mill Creek	15 March - 15 June	7	6.6	Camden
151	Whetstone Creek	its mouth (confluence with Loutre River)	I-70	15 March - 15 June	2,4,5,7	17.7	Montgomery, Callaway
152	Whitewater River	its mouth (confluence with Castor River Diversion Channel)	RT-K	1 Feb. - 31 May	2,7	40.7	Cape Girardeau, Bollinger
153	Wilkins Spring Branch	its mouth (confluence with Mill Creek)	its source (Wilkins Spring)	15 Nov. - 15 Feb.	6	0.2	Phelps

Spawning Season Listing Criteria – 1/2017

1. **Stream reaches designated by the U.S. Fish and Wildlife Service as critical habitat for aquatic species of conservation concern.**
   - **Determination of Threatened Status & Critical Habitat for Niangua Darter - http://ecos.fws.gov/docs/federal_register/fr964.pdf**
2. **Stream reaches that have not been designated as critical habitat, but which may be considered critical to the maintenance or recovery of aquatic species of conservation concern.**
   - **Missouri Species and Communities of Conservation Concern Checklist – January 2017 - http://mdc.mo.gov/145**
3. **To be determined (TBD).**
4. **Remnant examples of historic habitats, especially in areas where streams have been severely impacted by channelization, levee construction, snagging, clearing or similar activities.**
5. **Designated Outstanding National or State Resource Waters as defined by the Missouri Department of Natural Resources when these waters support significant biological resources that may be impacted by activities during periods of spawning, incubation or rearing.**
   - **Rules of Department of Natural Resources, Division 20-Clean Water Commission, Chapter 7-Water Quality, 10 CSR 20-7 - http://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-7a.pdf**
6. **Agency management areas (i.e., streams with special area regulations or where stocking occurs).**
   - **A Summary of Missouri Fishing Regulations (effective March 1, 2016) - http://huntfish.mdc.mo.gov/sites/default/files/downloads/2016_FishRegs.pdf**
7. **Stream reaches with unique fish communities or unexpected high biodiversity due to the presence of species generally considered atypical to the area and, in the opinion of biologists, are of sufficient scarcity to require protection.**

COMPLIANCE CERTIFICATION

Special condition "1" of this permit document requires that you submit a signed certification regarding the completed work and any required mitigation. This certification page satisfies this condition if it is provided to the Little Rock District at the address shown at the bottom of this page upon completion of the project. Submit a separate certification page for each individual authorized project.

PERMIT NUMBER: **2008-00066-GP-41**

PERMITTEE (Enter permittee's name and mailing address):

PROJECT LOCATION (Enter latitude & longitude (decimal degrees) and Section, Township and Range, County, State; for linear projects (ditches, streams, utilities, etc.) enter the latitude and longitude of the start and end points):

a. I certify that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions.

b. I certify that any required mitigation was completed in accordance with the permit conditions.

c. Your signature below, as permittee, indicates that you have completed the authorized project as certified in paragraph "a" and in paragraph "b" above.

_____ _____

(PERMITTEE) (DATE)

Return this certification to:
U.S. Army Corps of Engineers
Little Rock District, Regulatory Division
700 West Capitol Avenue, Room 6323
Little Rock, Arkansas 72201-3221

Nationwide Permit 3 - Maintenance

Effective Date: February 25, 2022; Expiration Date: March 14, 2026
(NWP Final Notice, 86 FR 73522)

Nationwide Permit 3 - Maintenance. (a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP also authorizes the removal of previously authorized structures or fills. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project. This NWP also authorizes the removal of accumulated sediment and debris within, and in the immediate vicinity of, the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.). The removal of sediment is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend farther than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

(c) This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows.

After conducting the maintenance activity, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Authorities: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (Sections 10 and 404))

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

2021 Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. **Navigation.** (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from

the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. **Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. **Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. **Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-

construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. **Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. **Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. **Removal of Temporary Structures and Fills.** Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. **Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. **Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. **Wild and Scenic Rivers.** (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. **Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. **Endangered Species.** (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and

designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world

wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. **Migratory Birds and Bald and Golden Eagles.** The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. **Historic Properties.** (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the

historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. **Discovery of Previously Unknown Remains and Artifacts.** Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. **Designated Critical Resource Waters.** Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. **Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental

effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual

and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine

credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. **Safety of Impoundment Structures.** To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. **Water Quality.** (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. **Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual

coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. **Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. **Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1⁄3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. **Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

_____
(Transferee)

_____
(Date)

30. **Compliance Certification.** Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. **Activities Affecting Structures or Works Built by the United States.** If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. **Pre-Construction Notification.** (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete.

The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification*: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse

environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the

name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

2021 District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually

satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed

mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

2021 Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

2021 Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm

surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a “water of the United States.” If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

ADDITIONAL INFORMATION

Information about the U.S. Army Corps of Engineers Regulatory Program, including nationwide permits, may also be accessed at http://www.swt.usace.army.mil/Missions/Regulatory.aspx or http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx

Nationwide Permit 45 - Repair of Uplands Damaged by Discrete Events
Effective Date: February 25, 2022; Expiration Date: March 14, 2026
(NWP Final Notice, 86 FR 73522)

Nationwide Permit 45 - Repair of Uplands Damaged by Discrete Events. This NWP authorizes discharges of dredged or fill material, including dredging or excavation, into all waters of the United States for activities associated with the restoration of upland areas damaged by storms, floods, or other discrete events. This NWP authorizes bank stabilization to protect the restored uplands. The restoration of the damaged areas, including any bank stabilization, must not exceed the contours, or ordinary high water mark, that existed before the damage occurred. The district engineer retains the right to determine the extent of the pre-existing conditions and the extent of any restoration work authorized by this NWP. The work must commence, or be under contract to commence, within two years of the date of damage, unless this condition is waived in writing by the district engineer. This NWP cannot be used to reclaim lands lost to normal erosion processes over an extended period.

This NWP does not authorize beach restoration or nourishment.

Minor dredging is limited to the amount necessary to restore the damaged upland area and should not significantly alter the pre-existing bottom contours of the waterbody.

Notification: The permittee must submit a pre-construction notification to the district engineer (see general condition 32) within 12 months of the date of the damage; for major storms, floods, or other discrete events, the district engineer may waive the 12-month limit for submitting a pre-construction notification if the permittee can demonstrate funding, contract, or other similar delays. The pre-construction notification must include documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration. (Authorities: Sections 10 and 404)

Note: The uplands themselves that are lost as a result of a storm, flood, or other discrete event can be replaced without a Clean Water Act Section 404 permit, if the uplands are restored to the ordinary high water mark (in non-tidal waters) or high tide line (in tidal waters). (See also 33 CFR 328.5.) This NWP authorizes discharges of dredged or fill material into waters of the United States associated with the restoration of uplands.

2021 Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an

NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. **Navigation.** (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. **Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. **Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. **Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. **Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. **Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. **Removal of Temporary Structures and Fills.** Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. **Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. **Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. **Wild and Scenic Rivers.** (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. **Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. **Endangered Species.** (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district

engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. **Migratory Birds and Bald and Golden Eagles.** The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. **Historic Properties.** (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP),

determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. **Discovery of Previously Unknown Remains and Artifacts.** Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. **Designated Critical Resource Waters.** Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. **Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are

determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP

authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. **Safety of Impoundment Structures.** To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. **Water Quality.** (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. **Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. **Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. **Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1⁄3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under

NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. **Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. **Compliance Certification.** Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. **Activities Affecting Structures or Works Built by the United States.** If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. **Pre-Construction Notification.** (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of

receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification*: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent

has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

2021 District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not

practicable or not necessary to ensure timely completion of the required compensatory mitigation.

2021 Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

2021 Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological

reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently

adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily

submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

ADDITIONAL INFORMATION

Information about the U.S. Army Corps of Engineers Regulatory Program, including nationwide permits, may also be accessed at http://www.swt.usace.army.mil/Missions/Regulatory.aspx or http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx