



Gulf Coast Ecosystem Restoration Council
Finding of No Significant Impact
Norton Creek Sanitary Sewer Inflow and Infiltration Rehabilitation Project
PEAX-586-00-000-1723104677

The Gulf Coast Ecosystem Restoration Council (Council) hereby adopts the U.S. Army Corps of Engineers Environmental Assessment for Nationwide Permit 58, January 4, 2021 (EA). The Council adopts the EA in order to address requirements of the *National Environmental Policy Act* (42 U.S.C. §§ 4321 et seq.) (NEPA) associated with the approval of funding for the Norton Creek Sanitary Sewer Inflow and Infiltration Rehabilitation Project (Project). The Project includes cured-in-place pipe lining of gravity sewer main and rehabilitation of associated manholes, relocation and replacement of gravity sewer main and associated manholes, and relocation of a lift station in the City of Saraland, Alabama.

The Council has reviewed the EA and determined that it addresses the environmental effects of the activity to be funded. On July 18, 2024, the Council provided the public with a 30-day review period in which to comment on the pProject and the associated environmental compliance documentation, including the EA. The Council has reviewed and responded as appropriate to public comments applicable to the Project. The Council has determined that approval of funding for the Project would not result in a significant effect on the human environment. Following is a brief description of the Project, the EA and contact information pertaining to this action.

Funded Activity

The Council is approving \$7,500,000 for implementation of the pProject as part of the Council's Funded Priorities List 3b (FPL 3b), which has been developed pursuant to the *Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012* (RESTORE Act) (33 U.S.C. 1321(t) and note).

The Project is sponsored by the Alabama Department of Conservation and Natural Resources (ADCNR). The implementation funds were originally budgeted in Category 2 of FPL 3b. This project will be implemented as a component of the FPL 3b Coastal Alabama Regional Water Quality Program.

The Norton Creek sanitary sewer collection system experiences excessive inflow and infiltration due in part to the City's low-lying areas and its adjacency to the Mobile-Tensaw Delta. The Project includes cured-in-place pipe lining of gravity sewer main and rehabilitation of associated manholes, relocation and replacement of gravity sewer main and associated manholes, and relocation of the Police Club Lift Station to the end of Commerce Street.

The City of Saraland is located adjacent to the Mobile-Tensaw Delta in Mobile County, Alabama. The area's raw sewer is conveyed to the Saraland Wastewater Treatment Plant where it is treated, and effluent is discharged into Bayou Sara, flowing downstream into the Mobile River and ultimately Mobile Bay. Inflow and Infiltration into the sewer collection lines causes increased sanitary sewer overflows which negatively impact water quality in Norton Creek and surrounding water bodies. Inflow and infiltration cause a large strain on the sanitary sewer lift stations in the collection system as well. The lift station pumps are forced to run continuously, reducing their useful life and increasing their susceptibility for failure. Failures of pump stations result in sanitary sewer overflows and sewer spills which pollute waterways, threatening wildlife, and creating dangerous public health and safety conditions for nearby residents. Environmental benefits of the Project include fewer sanitary sewer overflows, reducing dangerous pollution entering Norton Creek, Bayou Sara, Mobile River and Mobile Bay. Further, less inflow and infiltration will reduce the volume of effluent to be treated at the WWTP, improving efficiency, and reducing treated discharge in the waterways of the Mobile-Tensaw Delta.

More information on the RESTORE Act, FPL 3b and the Project can be found at www.restorethegulf.gov.

Environmental Assessment Adopted

The attached Nationwide Permit 58 EA is hereby incorporated by reference into this Council finding, consistent with the Council's NEPA Procedures (80 FR 25680-25691 (May 5, 2015)). Prepared pursuant to NEPA, the EA includes a programmatic assessment of alternatives and associated environmental consequences of the Project, including potential cumulative effects. The analysis of environmental consequences includes information pertaining to other potentially applicable environmental laws, including the *National Historic Preservation Act* and the *Endangered Species Act*.

Environmental Conditions

In addition to NEPA, the Council has an independent responsibility to comply with all other applicable Federal laws. The Council has received concurrence on the Finding of No Significant Impact (FONSI) set forth below and the associated FPL funding approval from the Federal agencies with responsibility for administering the laws applicable to this action. To ensure compliance with applicable laws, the Council's funding award for the Project will require that the sponsor adhere to all applicable permit conditions set forth in the U.S. Army Corps of Engineers Nationwide Permit 58 authorization letter, January 22, 2024 (SAM-2008-01303-DEM). Adherence to these conditions is nondiscretionary and serves to limit the environmental effects of an action to those that are insignificant, discountable or beneficial and never result in take or adverse effects to designated critical habitat. The sponsor is also responsible for ensuring that any contractors who may work on the Project are aware of and comply with all of these environmental compliance requirements.

Finding of No Significant Impact

Based on an independent review of the information and analysis provided in the subject EA, the Council hereby issues this FONSI for the Project. This determination is based on consideration of the Council on Environmental Quality's (CEQ) NEPA regulations (40 CFR Parts 1500 Through 1508), May 1, 2024. The EA is attached to the FONSI and is incorporated herein by reference. In making this determination, the Council has coordinated with the ADCNR, the sponsor of the Project, and the U.S. Army Corps of

Engineers, the author of the EA. The Council has authorized the Executive Director of the Council to execute the FONSI on its behalf.

Determination by Responsible Official

I have determined that this proposed activity would not have a significant effect on the human environment.

Mary S. Walker
Executive Director, Gulf Coast Ecosystem Restoration Council

(Signature) _____

For Further Information

For further information, please contact John Ettinger, Director of Policy and Environmental Compliance, Gulf Coast Ecosystem Restoration Council, at (504) 444-3522 or by e-mail at john.ettinger@restorethegulf.gov.



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, MOBILE DISTRICT
P.O. BOX 2288
MOBILE, AL 36628-0001

January 22, 2024

Special Projects Branch
Regulatory Division

SUBJECT: Department of the Army Nationwide Permit, File Number SAM-2008-01303-DEM, Board of Water and Sewer - City of Saraland, Saraland, Mobile County, Alabama

Board of Water and Sewer
Attention: Ron Mitchell
Email Address: saralandwater@bellsouth.net
307 Shelton Beach Road
Saraland, Alabama 36571

Dear Mr. Mitchell:

This letter is in response to your request for verification of Department of the Army Nationwide Permit (NWP) authorization to perform sewer maintenance and improvements adjacent to Norton Creek. The project has been assigned file number SAM-2008-01303-DEM, which should be referred to in any future correspondence with this office concerning this project. The project is located near Station Street along Norton Creek in the City of Saraland; in Section 4, Township 3 South, and Range 1 West; starting at Latitude 30.815087° North and Longitude -88.341058° West; ending at Latitude 30.710752 and Longitude -88.077307; in Saraland, Mobile County, Alabama.

Department of the Army permit authorization is necessary because your project involves the placement of fill in waters of the United States, including wetlands, under our regulatory jurisdiction. The project activities include the following:

Activities authorized under Nationwide Permit (NWP) 58, *Utility Line Activities for Water and Other Substances*:

- a. Maintenance and repair of existing sewer infrastructure adjacent to Commerce Drive, resulting in 0.003 acre of temporary wetland impacts; and
- b. Maintenance and repair of existing sewer infrastructure along Norton Creek in Saraland, Alabama, resulting in 0.69 acre of temporary wetland impacts.

Project activities result in approximately 0.693 acre of temporary impacts to riparian bottomland hardwood wetlands associated with the sewer infrastructure repairs. Fill from the maintenance activity must be removed and the area restored to pre-construction elevations following the completion of construction activities.

Based upon the information and plans you provided, we hereby verify the work described above, which would be performed in accordance with the attached drawings, is authorized by NWP 58, *Utility Line Activities for Water and Other Substances*, in accordance with 33 CFR Part 330 of our regulations. This NWP and associated General Conditions are attached for your review and compliance.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2022. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

Your use of these NWPs are subject to the following special conditions:

- a. The activity shall be conducted in accordance with the information submitted and meets the conditions applicable to the NWP, as described at Parts B and C of the NWP Program and State Regional Conditions.
- b. Within 30 days of completion of the work authorized, the attached Compliance Certification must be completed and submitted to the USACE.
- c. The attached yellow Notice of Authorization sign must be posted prominently at the site during construction of the permitted activity.
- d. It is the permittee's responsibility to ensure the contractors and subcontractors working on this project are aware of all general and special permit conditions.
- e. Best management practices shall be implemented to adequately retain fill material, minimizing erosion, siltation, turbidity, and damage to adjacent wetlands and waters of the United States. Appropriate control measures must be used and maintained in effective operating condition during construction and shall remain in place until permanent stabilization measures have been installed and become fully effective. The most recent edition of the *Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas*, may be found online at [https://alconservationdistricts.gov/wp-content/uploads/2018/09/2018-Handbook-Vol-2.pdf](https://alconserervationdistricts.gov/wp-content/uploads/2018/09/2018-Handbook-Vol-2.pdf).
- f. The disposal of trees, brush and other project related debris in any wetland, stream corridor or other surface water outside the proposed project footprint is prohibited. Trees, brush, other debris, excess soil and other materials generated from project construction must be removed to an upland disposal area. Building materials, tools or other equipment associated with project construction shall not be stockpiled in

wetlands or other waters of the United States. All excess materials, tools, and equipment shall be removed immediately upon completion of the activity.

g. The movement of heavy equipment through wetlands and/or waters of the United States shall be limited to the minimum necessary to accomplish the work authorized herein. All equipment required to traverse wetlands or waters of the United States shall be supported on mats or other equivalent measures, which shall be used to minimize wetland soil disturbance and rutting. Upon completion of construction activities at the project site, all temporarily disturbed areas shall be returned to pre-construction elevations and revegetated.

h. Should historic properties, archaeological material, or cultural resources be encountered during project activities, all work shall cease and the USACE, Mobile District, shall be consulted immediately, such that appropriate coordination with federal, state, and tribal organizations may be initiated. The USACE, Mobile District must be contacted at (251) 510-1162 or (251) 690-2658. It is the permittee's responsibility to ensure that contractors are aware of this requirement.

Nothing in this letter shall be construed as excusing you from compliance with other federal, state, or local statutes, ordinances, or regulations which may affect this work. Revisions to your proposal may invalidate this authorization. In the event changes to this project are contemplated, it is recommended that you coordinate with us prior to proceeding with the work.

Electronic copies of this letter are also being sent to your agent, Volkert, Inc., Attention: Mr. Trent Farris, at trent.farris@volkert.com; and to the Alabama Department of Environmental Management, Mobile Branch / Coastal Section, Attention: Mr. Scott Brown, at coastal@adem.alabama.gov.

Please contact me at 251-386-4037, or at samuel.t.barber@usace.army.mil if you have any questions. For additional information about our Regulatory Program, visit our web site at <http://www.sam.usace.army.mil/Missions/Regulatory.aspx>, and please take a moment to complete our customer satisfaction survey. Your responses are appreciated and will allow us to improve our services.

Sincerely,

Samuel T. Barber
Project Manager
Special Projects Branch
Regulatory Division

Attachments

When the structures or work authorized by this nationwide permit (file number **SAM-2008-01303-DEM**) 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)

COMPLIANCE CERTIFICATION



**US Army Corps of Engineers
Mobile District**

Permit Number: **SAM-2008-01303-DEM**

Name of Permittee: **Board of Water and Sewer – City of Saraland**

Date of Issuance: **January 22, 2024**

Upon completion of the activity authorized by this permit and any mitigation required by the permit, please sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Mobile District
Regulatory Division
Post Office Box 2288
Mobile, Alabama 36628-0001

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with all terms and conditions of this permit, the permit is subject to permit suspension, modification, or revocation and you are subject to an enforcement action by this office.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit including any general or specific conditions, and the required mitigation was completed in accordance with the permit conditions and documentation required by 33 CFR 332.3(l)(3) has been provided to this office.

Signature of Permittee

Date



US Army Corps
of Engineers®

This notice of authorization must be
conspicuously displayed at the site of work.

A permit to perform work authorized by statutes and regulations of the Department of the Army at

_____ has been issued to _____ on _____

Address of Permittee:

PERMIT NUMBER

For the District Commander

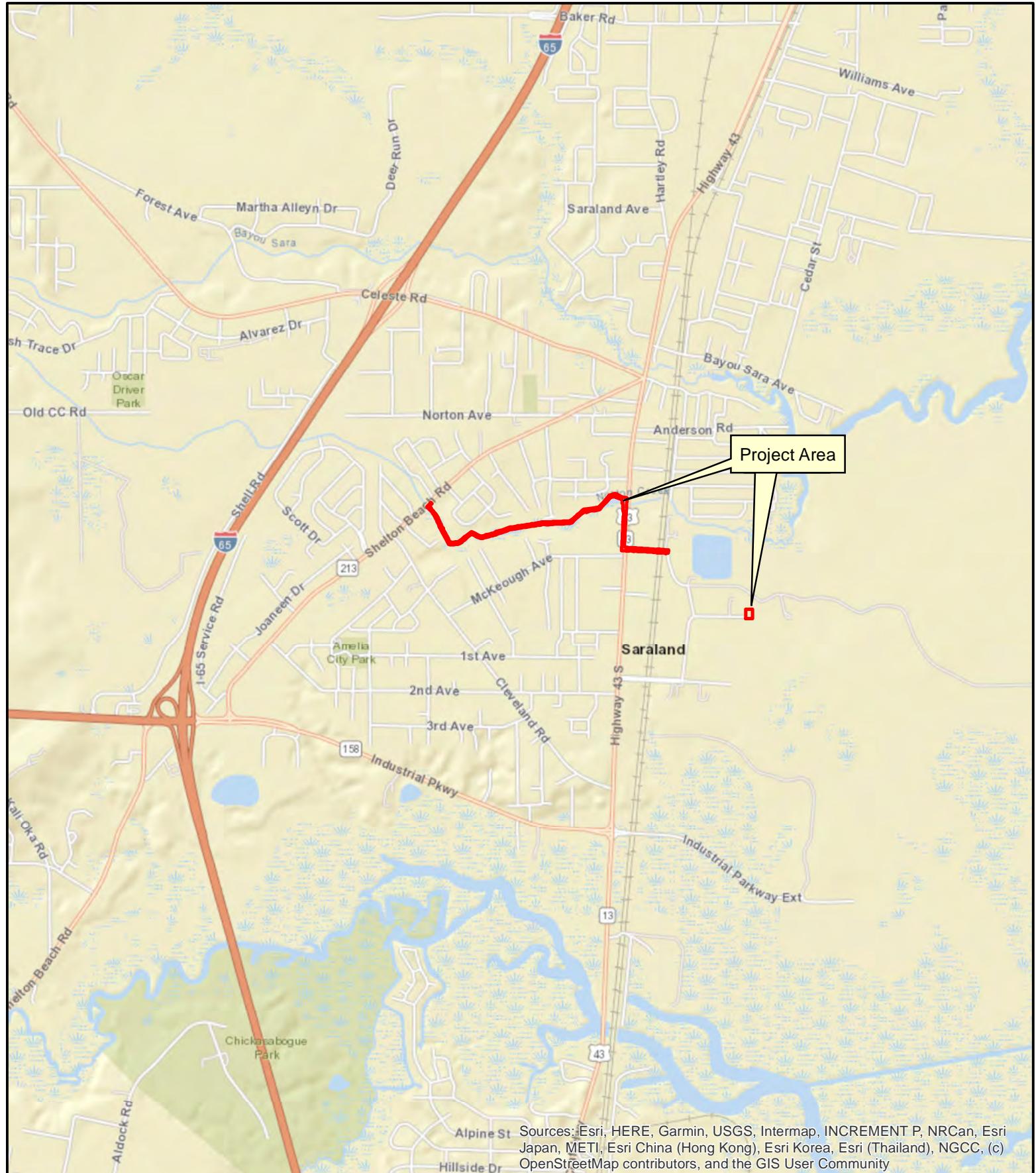


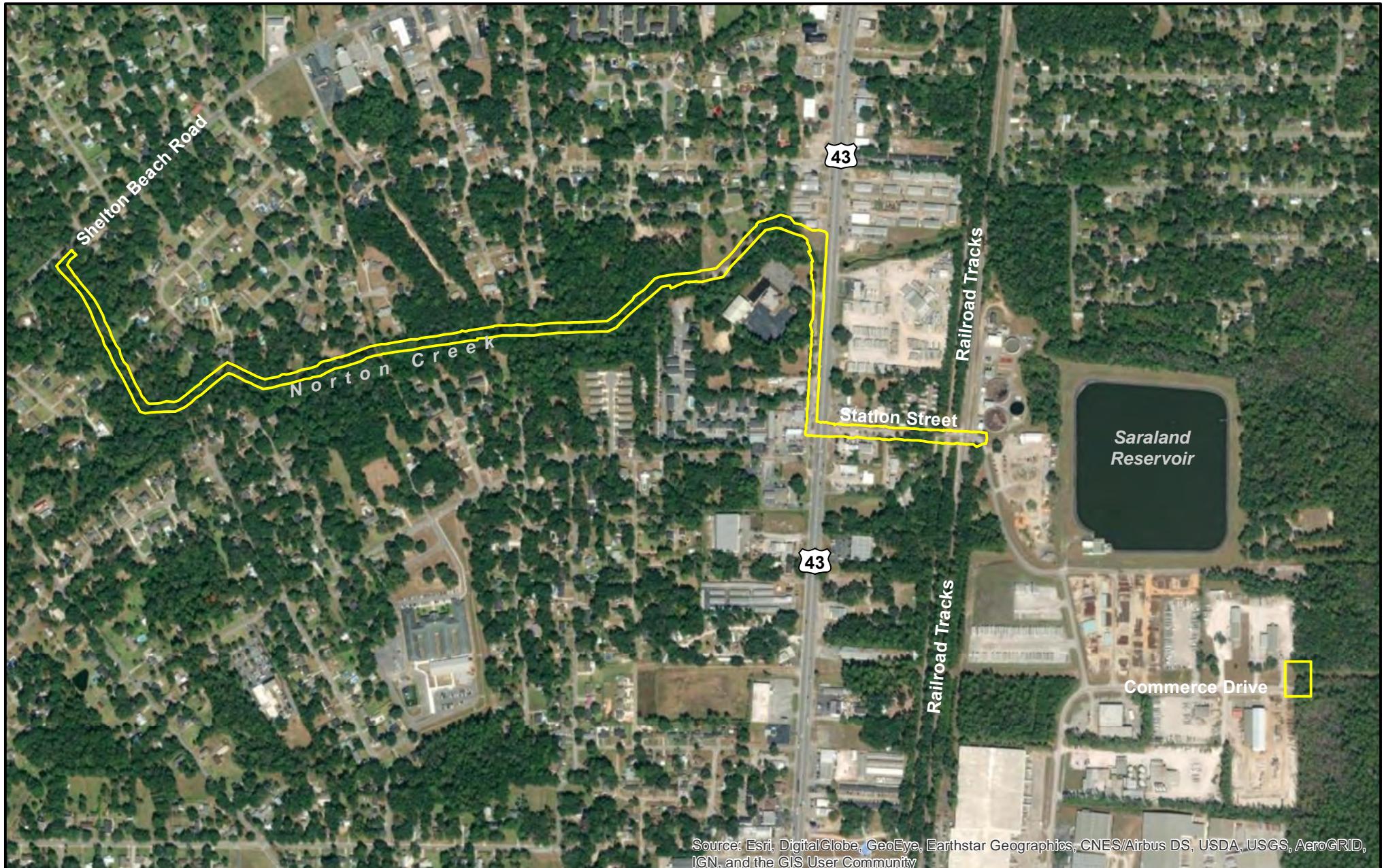
Figure 1
Vicinity Map
Saraland, Mobile County, AL

Legend

 Project Area

0 2,500 5,000 10,000
Feet

N
W
E
S
1 inch = 3,000 feet



Legend

Project Area

Figure 2
Aerial
Saraland, Mobile County, AL

0 500 1,000 2,000
Feet



1 inch = 800 feet

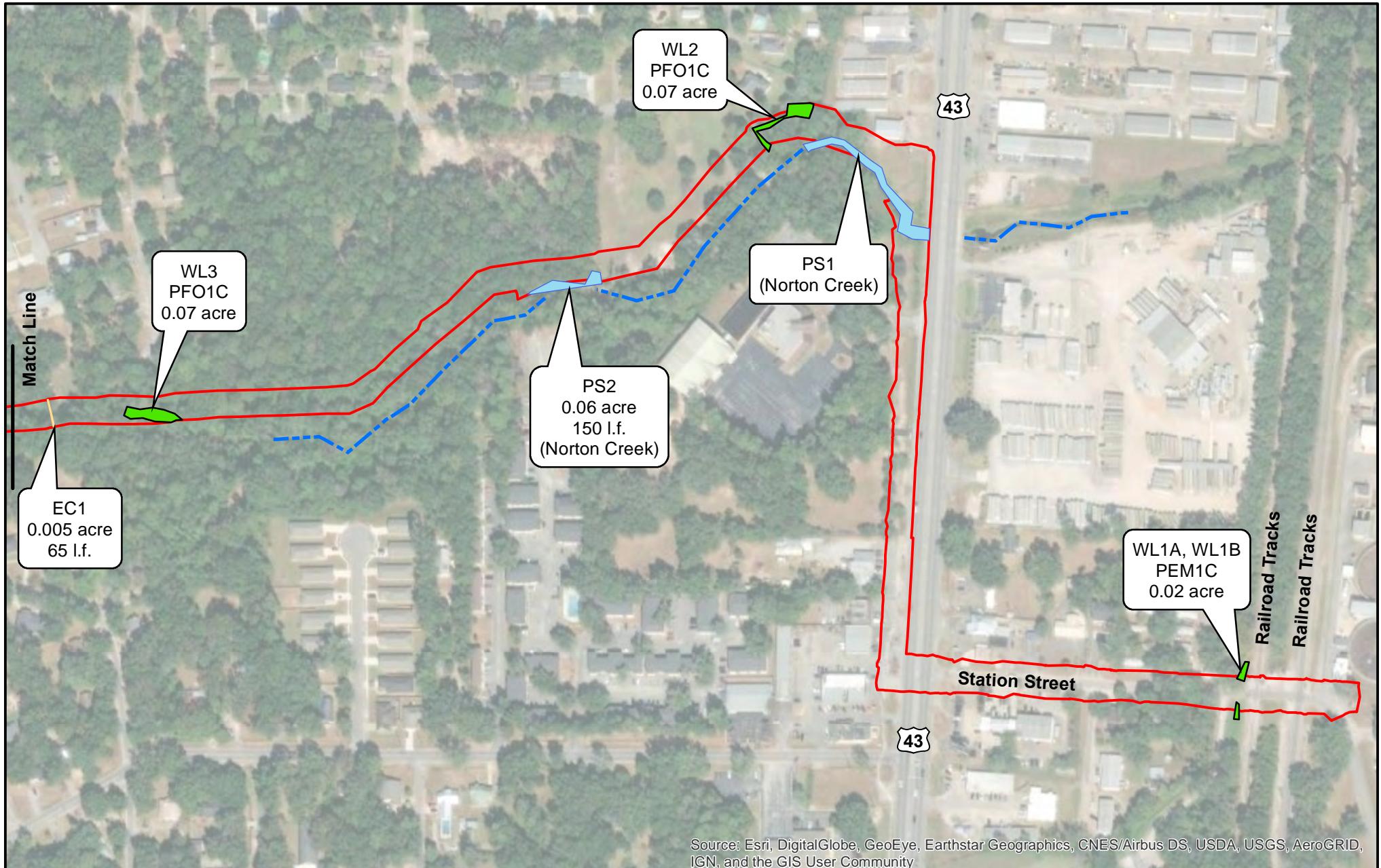
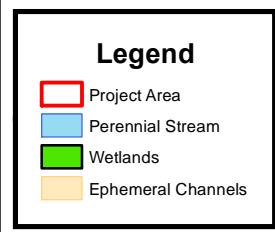


Figure 6A
Wetland and Stream Map
Saraland, Mobile County, AL



0 200 400 800
Feet



1 inch = 300 feet

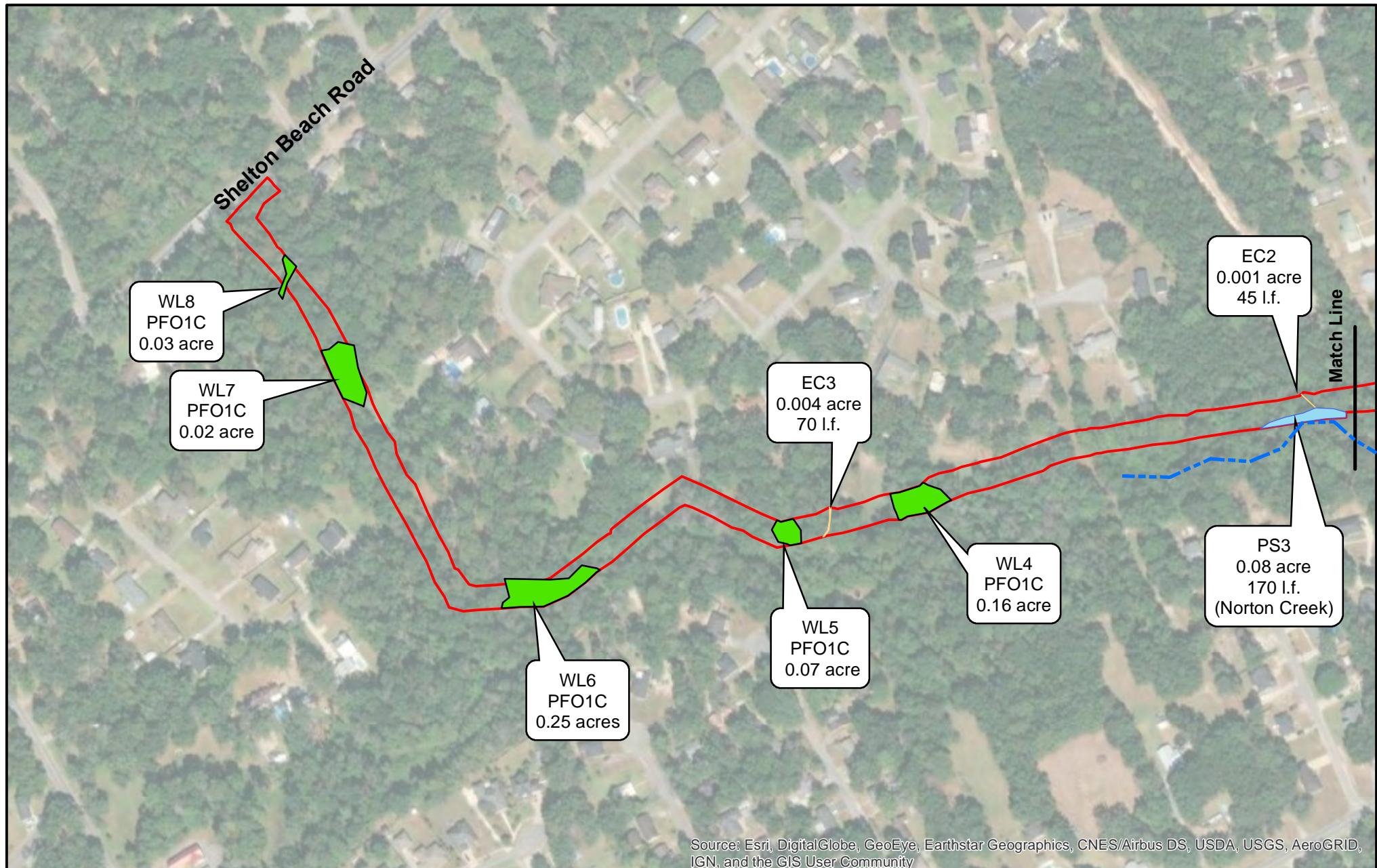
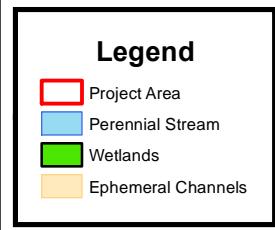


Figure 6B
Wetland and Stream Map
Saraland, Mobile County, AL



0 200 400 800 Feet



1 inch = 300 feet

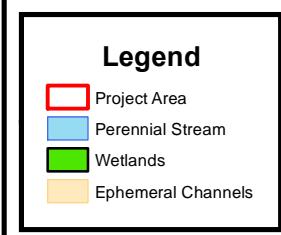


Figure 6C
Wetland and Stream Map
Saraland, Mobile County, AL

0 50 100 200
Feet

N
W E
S
1 inch = 100 feet



U S Army Corps of
Engineers

2021 Nationwide Permit Summary

33 CFR Part 330; Issuance of Nationwide
Permits – March 15, 2021

58. Utility Line Activities for Water and Other Substances.

Activities required for the construction, maintenance, repair, and removal of utility lines for water and other substances, excluding oil, natural gas, products derived from oil or natural gas, and electricity. Oil or natural gas pipeline activities or electric utility line and telecommunications activities may be authorized by NWPs 12 or 57, respectively. This NWP also authorizes associated utility line facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines for water and other substances, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A “utility line” is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquefied, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. Examples of activities authorized by this NWP include utility lines that convey water, sewage, stormwater, wastewater, brine, irrigation water, and industrial products that are not petrochemicals. The term “utility line” does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a utility line in non-tidal waters of the United States,

provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for above-ground utility lines: This NWP authorizes the construction or maintenance of foundations for above-ground utility lines in all waters of the United States, provided the foundations are the minimum size necessary.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the

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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 construction, 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.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if:

- (1) a section 10 permit is required; or
- (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed, installed, or maintained in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 4: Pipes or pipelines used to transport gaseous, liquid, liquefied, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to the General Bridge Act of 1946. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 5: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For activities that require pre-construction notification, the PCN must include 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 that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the

authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

A. 2021 Regional Conditions

1. [Alabama Water Quality Certification - See Attached](#)
2. [Alabama Coastal Zone Management Conditions - See Attached](#)

B. 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 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: <https://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 <https://www.fws.gov/> or <https://www.fws.gov/ipac/> and <https://www.fisheries.noaa.gov/topic/endangered-species-conservation> 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 110(k) 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.

C. 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.

D. 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).

E. 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 coarse 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 channel ward 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)).

December 14, 2020

Colonel Sebastien P. Joly
Commander, Mobile District
U.S. Army Corps of Engineers
P.O. Box 2288
Mobile, AL 36628-0001

RE: Clean Water Act (CWA) Section 401 Water Quality Certification (WQC), U.S. Army Corps of Engineers (COE) 2020 Proposed Issuance of Alabama Nationwide Permits (ALNWPs) For Activities Within the State of Alabama

Dear Colonel Joly:

This office has completed a review of the above-referenced notice and all associated materials submitted related to the proposed ALNWPs. Any comments made during the public notice period have also been forwarded to the Department for review.

1. Aids to Navigation
2. Structures in Artificial Canals
3. Maintenance
4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities
5. Scientific Measurement Devices
6. Survey Activities
7. Outfall Structures and Associated Intake Structures
8. Oil and Gas Structures on the Outer Continental Shelf
9. Structures in Fleeting and Anchorage Areas
10. Mooring Buoys
11. Temporary Recreational Structures
12. Oil or Natural Gas Pipeline Activities
13. Bank Stabilization
14. Linear Transportation Projects
15. U.S. Coast Guard Approved Bridges
16. Return Water From Upland Contained Disposal Areas
17. Hydropower Projects
18. Minor Discharges
19. Minor Dredging
20. Response Operations for Oil or Hazardous Substances
21. Surface Coal Mining Activities
22. Removal of Vessels
23. Approved Categorical Exclusions
24. Indian Tribe or State Administered Section 404 Programs
25. Structural Discharges
26. [Reserved]
27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities
28. Modifications of Existing Marinas

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- 29. Residential Developments
- 30. Moist Soil Management for Wildlife
- 31. Maintenance of Existing Flood Control Facilities
- 32. Completed Enforcement Actions
- 33. Temporary Construction, Access, and Dewatering
- 34. Cranberry Production Activities
- 35. Maintenance Dredging of Existing Basins
- 36. Boat Ramps
- 37. Emergency Watershed Protection and Rehabilitation
- 38. Cleanup of Hazardous and Toxic Waste
- 39. Commercial and Institutional Developments
- 40. Agricultural Activities
- 41. Reshaping Existing Drainage Ditches
- 42. Recreational Facilities
- 43. Stormwater Management Facilities
- 44. Mining Activities
- 45. Repair of Uplands Damaged by Discrete Events
- 46. Discharges in Ditches
- 47. [Reserved]
- 48. Commercial Shellfish Mariculture Activities
- 49. Coal Remining Activities
- 50. Underground Coal Mining Activities
- 51. Land-Based Renewable Energy Generation Facilities
- 52. Water-Based Renewable Energy Generation Pilot Projects
- 53. Removal of Low-Head Dams
- 54. Living Shorelines
 - A. Seaweed Mariculture Activities
 - B. Finfish Mariculture Activities
 - C. Electric Utility Line and Telecommunications Activities
 - D. Utility Line Activities for Water and Other Substances
 - E. Water Reclamation and Reuse Facilities

Because action pertinent to WQC is required by Section 401(a)(1) of the CWA, 33 U.S.C. Section 1251, et seq., we hereby issue certification that there is reasonable assurance that the discharge resulting from the proposed activities as submitted will not violate applicable water quality standards established under Section 303 of the CWA and Title 22, Section 22-22-9(g), Code of Alabama, 1975, provided the applicant acts in accordance with the following conditions as specified. We further certify that there are no applicable effluent limitations under Sections 301 and 302 nor applicable standards under Sections 306 and 307 of the CWA in regard to the activities specified. This certification shall expire at the same time as the expiration date for the above-referenced Alabama Nationwide Permits for activities within the State of Alabama.

To minimize adverse impacts to State waters, by copy of this letter we are requesting the Mobile District Corps of Engineers to incorporate the following as special conditions as appropriate to the type, location, scope, duration, and potential impact of each activity in Alabama authorized by the COE NWPs:

1. During project implementation, the applicant shall ensure compliance with applicable requirements of ADEM. Admin. Code Chapter 335-6-6 [National Pollutant Discharge Elimination System (NPDES)], Chapter 335-6-10 (Water Quality Criteria), and Chapter 335-6-11 (Water Use Classifications for Interstate and Intrastate Waters).

2. ADEM permit coverage may be required prior to commencing and/or continuing certain activities/operations relating to or resulting from the project. If an applicant has any questions regarding ADEM regulated activity or the need for NPDES permit coverage, the applicant can contact ADEM's Water Division at (334) 271-7823. If an applicant has any questions regarding ADEM regulated activity or the need for air permit coverage, the applicant can contact ADEM's Air Division at (334) 271-7869. If the applicant has any questions regarding ADEM regulated activity or the need for hazardous, toxic, and/or solid waste permit coverage, the applicant can contact ADEM's Land Division at (334) 271-7730.
3. Upon the loss or failure of any treatment facility, Best Management Practice (BMP), or other control, the applicant shall, where necessary to maintain compliance with this certification, suspend, cease, reduce or otherwise control work/activity and all discharges until effective treatment is restored. It shall not be a defense for the applicant in a compliance action that it would have been necessary to halt or reduce work or other activities in order to maintain compliance with the conditions of this certification.
4. The applicant shall retain records adequate to document activities authorized by this certification for a period of at least three years after completion of work/activity authorized by the certification. Upon written request, the applicant shall provide ADEM with a copy of any record/information required to be retained by this paragraph.
5. The applicant shall conduct or have conducted, at a minimum, weekly comprehensive site inspections until completion of the proposed activity to ensure that effective BMPs are properly designed, implemented, and regularly maintained (i.e. repair, replace, add to, improve, implement more effective practice, etc.) to prevent/minimize to the maximum extent practicable discharges of pollutants in order to provide for the protection of water quality.
6. The applicant shall implement a project-specific or a detailed general BMP Plan prepared by an ADEM recognized qualified credentialed professional (QCP) applicable to and commensurate with activities of the type proposed. Effective BMPs shall be implemented and continually maintained for the prevention and control of turbidity, sediment, and other sources of pollutants, including measures to ensure permanent revegetation or cover of all disturbed areas, during and after project implementation.
7. The applicant shall implement a Spill Prevention Control and Countermeasures (SPCC) Plan for all temporary and permanent onsite fuel or chemical storage tanks or facilities consistent with the requirements of ADEM Admin. Code R. 335-6-6-.12(r), Section 311 of the Federal Water Pollution Control Act, and 40 CFR Part 112. The applicant shall maintain onsite or have readily available sufficient oil & grease absorbing material and flotation booms to contain and clean-up fuel or chemical spills and leaks. The applicant shall immediately notify ADEM after becoming aware of a significant visible oil sheen in the vicinity of the proposed activity. In the event of a spill with the potential to impact groundwater or other waters of the State, the applicant should immediately call the National Response Center at 1-800-424-8802 and the Alabama Emergency Management Agency at 1-800-843-0699. The caller should be prepared to report the name, address and telephone number of person reporting spill, the exact location of the spill, the company name and location, the material spilled, the estimated quantity, the source of spill, the cause of the spill, the nearest downstream water with the potential to receive the spill, and the actions taken for containment and cleanup.

8. Additional, effective BMPs shall be fully implemented and maintained on a daily basis as needed to prevent to the maximum extent possible potential discharges of pollutants from activities authorized by this certification, directly to or to a tributary or other stream segment, that have the potential to impact a State water currently considered impaired [waterbody is identified on the Alabama 303(d) list, a total maximum daily load (TMDL) has been finalized for the waterbody, and/or the waterbody is otherwise considered a Tier 1 water pursuant to ADEM Admin. Code Ch. 335-6-10]. The applicant shall inspect all BMPs as often as is necessary (daily if needed) for effectiveness, need for maintenance, and the need to implement additional, effective BMPs. Additional effective BMPs shall immediately be implemented as needed to ensure full compliance with ADEM requirements and the protection of water quality in the impaired waterbody.
9. All construction and worker debris (e.g. trash, garbage, etc.) must be immediately removed and disposed in an approved manner. If acceptable offsite options are unavailable, effective onsite provisions for collection and control of onsite worker toilet wastes or gray waste waters (i.e. port-a-lot, shower washdown, etc.) must be implemented and maintained. Soil contaminated by paint or chemical spills, oil spills, etc. must be immediately cleaned up or be removed and disposed in an approved manner. Also, the applicant shall manage and dispose of any trash, debris, and solid waste according to applicable state and federal requirements.
10. All materials used as fill, or materials used for construction of structures in a waterbody, must be non-toxic, non-leaching, non-acid forming, and free of solid waste or other debris. This requirement does not preclude the use of construction materials authorized by the COE that are typically utilized in marine or other aquatic applications.
11. The applicant shall implement appropriate measures to minimize the potential for a decrease of instream dissolved oxygen concentrations as a result of project implementation. In addition, the applicant shall ensure that the activities authorized by this certification do not significantly contribute to or cause a violation of applicable water quality standards for instream dissolved oxygen.
12. The applicant shall implement appropriate, effective BMPs, including installation of floating turbidity screens as necessary, to minimize downstream turbidity to the maximum extent practicable. The applicant shall visually monitor or measure background turbidity. The applicant must suspend operations should turbidity resulting from project implementation exceed background turbidity by more than 50 NTUs. Operations may resume when the turbidity decreases to within acceptable levels.
13. The applicant shall evaluate, characterize, and as necessary, conduct regular analysis of any material proposed to be dredged/removed/disturbed in order to ensure that potential pollutants are not present in concentrations that could cause or contribute to a violation of applicable water quality standards. Information regarding the evaluation, characterization, or detailed results of any analyses shall be made available to ADEM upon request.
14. If upland disposal areas are utilized, the applicant shall be responsible for the condition of the disposal area, including the structural integrity of any embankments, until the disposal area is permanently reclaimed or adequately stabilized, to ensure that sediment and/or turbidity in the return water and/or stormwater runoff will not cause substantial visible contrast with the receiving waters, or result in an increase of 50 NTUs above background turbidity levels in the receiving waters.
15. For proposed activities associated with new or updated docks, marinas, multiple boat slips, floating docks, large or multiple piers, etc. or that increase the number of berthing areas, the applicant shall

ensure that these facilities are equipped with appurtenances (i.e. trash receptacles, receptacles for fish offal and carcasses, SPCC for fueling facilities, and a sewage pump out system where appropriate) as needed to protect water quality.

16. The applicant is encouraged to consider additional pollution prevention practices, low impact development (LID), and other alternatives to assist in complying with applicable regulatory requirements and possible reduction/elimination of pollutant discharges. LID is an approach to land development or re-development that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to implement these sustainable ideas such as bio-retention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed.
17. The applicant is encouraged to consider and implement a site design plan/strategy for post-construction hydrology to mimic pre-construction hydrology to the extent feasible, and for post-construction stormwater runoff peak flows and total stormwater volume to minimize potential downstream channel and stream bank erosion.
18. In recognition that projects are site specific in nature and conditions can change during project implementation, ADEM reserves the right to require the submission of additional information or require additional management measures to be implemented, as necessary on a case-by-case basis, in order to ensure the protection of water quality. Liability and responsibility for compliance with this certification are not delegable by contract or otherwise. The applicant shall ensure that any agent, contractor, subcontractor, or other person employed by, under contract, or paid a salary by the applicant complies with this certification. Any violations resulting from the actions of such person may be considered violations of this certification.
19. Issuance of a certification by ADEM neither precludes nor negates an operator/owner's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals. This certification does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations, and in no way purports to vest in the applicant title to lands now owned by the State of Alabama, nor shall it be construed as acquiescence by the State of Alabama of lands owned by the State of Alabama that may be in the applicant's possession.

Please feel free to contact me at 334/394-4304 in the event you have any questions.

Sincerely,



Anthony Scott Hughes, Chief
Field Operations Division

File: WQ401

c: Nashville District COE & EPA Region IV

December 15, 2020

Colonel Sebastien P. Joly
District Commander
U. S. Army Corps of Engineers, Mobile District
109 St. Joseph Street
Mobile, Alabama 36619

RE: U. S. Army Corps of Engineers Nationwide Permits (NWPs) Program
State of Alabama Coastal Consistency Concurrence
2020 NWP Reissuance
ACAMP-2016-301.1 | COE-2020-0002

Dear Colonel Joly:

The NWPs listed below have been determined by the ADEM, based on their scope or nature, not to have a significant impact on coastal resources when implemented in accordance with the specific conditions described herein and are therefore categorically certified to be consistent with the ACAMP pursuant to ADEM Administrative Code 335-8-1-03(4).

1. **Aids to Navigation**
No additional coastal consistency conditions.
2. **Structures in Artificial Canals**
The permittee must obtain all appropriate authorizations required by the Alabama Department of Conservation and Natural Resources – State Lands Division (ADCNR-SLD) prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.
3. **Maintenance**
 - A. Activities authorized under Nationwide Permit 3 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
 - B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.
4. **Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities**
The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.
5. **Scientific Measurement Devices**
 - A. Activities authorized under Nationwide Permit 5 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
 - B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.
6. **Survey Activities**
No additional coastal consistency conditions.



7. Outfall Structures and Associated Intake Structures

- A. Activities authorized under Nationwide Permit 7 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. There must be no placement of new riprap in previously unarmored areas.
- C. There must be no construction of new outfall and/or intake structures on properties fronting the Gulf of Mexico, Pelican Bay, Weeks Bay, Dauphin Island Audubon Sanctuary, or the Point aux Pines wetland system owned by the Board of Trustees of the University of Alabama.
- D. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

8. Oil and Gas Structures on the Outer Continental Shelf

No additional coastal consistency conditions.

9. Structures in Fleeting and Anchorage Areas

The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

11. Temporary Recreational Structures

The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

12. Utility Line Activities

- A. The permittee must submit a copy of the Pre-Construction Notification (PCN) required by the Corps to the ADEM Mobile-Coastal office.
- B. Activities authorized under Nationwide Permit 12 must not be located within or in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.
- C. The permittee must demonstrate avoidance and minimization of wetland impacts to the maximum extent practicable. Wetland impacts may be considered only after utilization of all available uplands.
- D. The permittee must undertake restoration of any wetland areas or State waterbottoms temporarily impacted as a result of activities authorized under Nationwide Permit 12. Disturbed areas must be returned to preproject elevations and wetland areas must be revegetated.
- E. The permittee must provide compensatory mitigation for any authorized permanent wetland impacts and must submit supporting documentation (e.g. certificate of credit purchase) to the ADEM Mobile-Coastal office for verification.
- F. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

14. Linear Transportation Crossings

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. Nationwide Permit 14 may not be used to authorize wetland dredge or fill activities on residential or commercial lots, except on legally platted lots or parcels in existence on or before 14 August 1979. This condition does not apply to uses of regional benefit such as roads, highways, railways, trails, airport runways, and taxiways.
- C. The permittee must demonstrate avoidance and minimization of wetland impacts to the maximum extent practicable. Wetland impacts may be considered only after utilization of all available uplands.
- D. The permittee must provide compensatory mitigation for any authorized permanent wetland impacts and must submit supporting documentation (e.g. certificate of credit purchase) to the ADEM Mobile-Coastal office for verification.
- E. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

15. U.S. Coast Guard Approved Bridges

The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

16. Return Water from Upland Contained Disposal Areas

- A. The permittee must ensure the salinity of return waters from dredge disposal sites is similar to the salinity of the receiving waters.
- B. The discharge from the upland contained disposal area(s) must not cause a violation of State water quality standards or applicable conditions of the State Clean Water Act Section 401 Water Quality Certification.

17. Hydropower Projects

No additional coastal consistency conditions.

18. Minor Discharges

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office. The PCN must include a copy of the legal plat.
- B. There must be no dredging or filling of wetlands, except on legally platted lots or parcels in existence on or before 14 August 1979.
- C. Nationwide Permit 18 must not be used to authorize fill to accommodate construction of swimming pools, boat ramps, tennis courts, lawns, play areas or other ancillary projects or activities not directly related to the construction of residential dwellings and/or associated access drives and parking.
- D. Activities authorized under Nationwide Permit 18 must not be located in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.
- E. The permittee must demonstrate avoidance and minimization of wetland impacts to the maximum extent practicable. Wetland impacts may be considered only after utilization of all available uplands.
- F. The permittee must provide compensatory mitigation for any authorized permanent wetland impacts and must submit supporting documentation (e.g. certificate of credit purchase) to the ADEM Mobile-Coastal office for verification.
- G. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

19. Minor Dredging

- A. Activities authorized under Nationwide Permit 19 must not be located in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. Dredging is prohibited in the Gulf of Mexico or Pelican Bay in an area from the ADEM Construction Control Line to a point 1,500 feet seaward of Mean High Tide.
- C. Dredging is prohibited in the Gulf of Mexico in an area from the City of Gulf Shores Construction Control Line to a point 1,500 feet seaward of Mean High Tide.
- D. Dredged material must be placed in an upland disposal area and properly contained to prevent re-entering the waterway or wetlands unless specifically authorized by other approved permits or exemptions.
- E. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

20. Response Operations for Oil and Hazardous Substances

The permittee must undertake restoration of any wetland areas or State waterbottoms temporarily impacted as a result of activities authorized under Nationwide Permit 20. Disturbed areas must be returned to preproject elevations and wetland areas must be revegetated.

22. Removal of Vessels

- A. The permittee must undertake restoration of any wetland areas or State waterbottoms temporarily impacted as a result of activities authorized under Nationwide Permit 22. Disturbed areas must be returned to preproject elevations and wetland areas must be revegetated.
- B. Vessel removal related to a catastrophic natural disaster (e.g. hurricane, discrete flooding event, etc.) is not authorized during the time an applicable Temporary State/Regional General Permit for Emergency Vessel Removal related to the natural disaster recovery is in effect.

23. Approved Categorical Exclusions

No additional coastal consistency conditions.

25. Structural Discharges

- A. Activities authorized under Nationwide Permit 25 must not be located in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. There must be no construction of open water areas in existing wetlands unless the impacted wetland acreage is replaced elsewhere within the restoration, establishment, and/or enhancement project area.
- C. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

28. Modifications of Existing Marinas

- A. The permittee must submit notification to the ADEM Mobile-Coastal office prior to reconfiguration of existing docking facilities at marinas having 10 or more wet slips.
- B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

31. Maintenance of Existing Flood Control Facilities

No additional coastal consistency conditions.

32. Completed Enforcement Actions

No additional coastal consistency conditions.

33. Temporary Construction, Access and Dewatering

No additional coastal consistency conditions.

35. Maintenance Dredging of Existing Basins

- A. Dredged material must be placed in an upland disposal area and properly contained to prevent re-entering the waterway or wetlands unless specifically authorized by other approved permits or exemptions.
- B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

36. Boat Ramps

- A. Activities authorized under Nationwide Permit 36 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. Nationwide Permit 36 must not allow construction of boat ramps on properties fronting the Gulf of Mexico, Pelican Bay, Weeks Bay, Dauphin Island Audubon Sanctuary, or the Point aux Pines wetland system owned by the Board of Trustees of the University of Alabama.
- C. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

37. Emergency Watershed Protection and Rehabilitation

No additional coastal consistency conditions.

38. Cleanup of Hazardous and Toxic Waste

No additional coastal consistency conditions.

45. Repair of Uplands Damaged by Discrete Events

- A. Activities authorized under Nationwide Permit 45 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

46. Discharges in Ditches and Canals

No additional coastal consistency conditions.

48. Commercial Shellfish Aquaculture Activities

- A. Activities and structures authorized under Nationwide Permit 48 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources. The permittee may be required to submit a submersed grassbed survey to the ADEM Mobile-Coastal office prior to commencement of work.
- B. There must be no placement or addition of fill onto State-Owned Submerged Lands.
- C. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

53. Removal of Low-Head Dams

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. The permittee must undertake the restoration of any wetland areas or State waterbottoms temporarily impacted as a result of activities authorized under Nationwide Permit 53. Disturbed areas must be restored to preproject elevations and wetland areas must be revegetated.
- C. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

54. Living Shorelines

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. Activities and structures authorized under Nationwide Permit 54 must not be located within or in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources. The permittee may be required to submit a submersed grassbed survey to the ADEM Mobile-Coastal office prior to commencement of work.

NWP C Electric Utility Line and Telecommunications Activities

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. Activities and structures authorized under NWP C must not be located within or in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.

NWP D Utility Line Activities for Water or Other Substances

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. Activities and structures authorized under NWP D must not be located within or in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.

Recognizing that projects are site specific in nature and scope and that conditions may change during project implementation, the ADEM reserves the right to require a permittee to submit additional information or require additional management measures to be implemented, as necessary on a case-by-case basis, in order to ensure that activities authorized under one or more NWPs are being conducted in a manner that protects water quality and coastal resources.

These coastal consistency concurrences only addresses activities which are also regulated under the enforceable policies of the ACAMP as codified in ADEM Admin. Code R. 335-8. These concurrences do not convey any property rights in either real or personal property, or any exclusive privileges, nor do they authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations and in no way purports to vest in any person title to lands now owned by the State of Alabama nor may it be construed as acquiescence by the State of Alabama of lands owned by the State that may be in anyone's possession. These concurrences do not obviate the responsibility of any applicant to acquire all other needed permits nor do these concurrences, in any way, imply that proposed activities comply with the requirements of any other jurisdictional entity nor do they imply that the projects can or should be approved by any other jurisdictional entity.

The following NWPs have been found to be inconsistent with the ACAMP and are not authorized for use within the coastal area of Alabama without individual review of the applicant's certification of coastal consistency.

- 10. Mooring Bouys
- 13. Bank Stabilization
- 21. Surface Coal Mining Activities
- 24. Indian Tribe or State Administered Section 404 Programs
- 26. Reserved
- 29. Residential Developments
- 30. Moist Soil Management for Wildlife
- 34. Cranberry Production Activities
- 39. Commercial and Institutional Developments
- 40. Agricultural Activities
- 41. Reshaping Existing Drainage Ditches
- 42. Recreational Facilities
- 43. Stormwater Management Facilities
- 44. Mining Activities
- 47. Reserved
- 49. Coal Remining Activities
- 50. Underground Coal Mining Activities
- 51. Land-Based Renewable Energy Generation Facilities

52. Water-Based Renewable Energy Generation Pilot Projects

NWP A – Seaweed Mariculture Activities

NWP B – Finfish Mariculture Activities

NWP E – Water Reclamation and Reuse Facilities

Call, write, or email the Mobile-Coastal office anytime with questions. Always include the ADEM tracking code above when corresponding on this matter. The ADEM contact for this and other coastal zone management issues is J. Scott Brown. He may be reached by telephone at 251. 304.1176 or via e-mail (jsb@adem.alabama.gov).

Sincerely,



A. Scott Hughes, Chief
Field Operations Division

cc: DCNR.Coastal@dcnr.alabama.gov



DECISION DOCUMENT NATIONWIDE PERMIT 58

This document discusses the factors considered by the Corps of Engineers (Corps) during the issuance process for this Nationwide Permit (NWP). This document contains: (1) the public interest review required by Corps regulations at 33 CFR 320.4(a)(1) and (2); (2) a discussion of the environmental considerations necessary to comply with the National Environmental Policy Act; and (3) the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230). This evaluation of the NWP includes a discussion of compliance with applicable laws, consideration of public comments, an alternatives analysis, and a general assessment of individual and cumulative effects, including the general potential effects on each of the public interest factors specified at 33 CFR 320.4(a).

1.0 Text of the Nationwide Permit

Utility Line Activities for Water and Other Substances. Activities required for the construction, maintenance, repair, and removal of utility lines for water and other substances, excluding oil, natural gas, products derived from oil or natural gas, and electricity. Oil or natural gas pipeline activities or electric utility line and telecommunications activities may be authorized by NWPs 12 or 57, respectively. This NWP also authorizes associated utility line facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines for water and other substances, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A “utility line” is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquefied, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. Examples of activities authorized by this NWP include utility lines that convey water, sewage, stormwater, wastewater, brine, irrigation water, and industrial products that are not petrochemicals. The term “utility line” does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States

(e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for above-ground utility lines: This NWP authorizes the construction or maintenance of foundations for above-ground utility lines in all waters of the United States, provided the foundations are the minimum size necessary.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line 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 construction, 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.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) a section 10 permit is required; or (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed, installed, or maintained in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 4: Pipes or pipelines used to transport gaseous, liquid, liquefied, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to the General Bridge Act of 1946. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 5: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For activities that require pre-construction notification, the PCN must include 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 that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, “District Engineer’s Decision.” The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

1.1 Requirements

General conditions of the NWPs are in the Federal Register notice announcing the issuance of this NWP. Pre-construction notification requirements, additional conditions, limitations, and restrictions are in 33 CFR part 330.

1.2 Statutory Authorities

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 404 of the Clean Water Act (33 U.S.C. 1344)

1.3 Compliance with Related Laws (33 CFR 320.3)

1.3.1 General

Nationwide permits are a type of general permit designed to authorize certain activities that have no more than minimal individual and cumulative adverse environmental effects and generally comply with the related laws cited in 33 CFR 320.3. Activities that result in more than minimal individual and cumulative adverse environmental effects cannot be authorized by NWPs. Individual review of each activity authorized by an NWP will not normally be performed, except when pre-construction notification to the Corps is required or when an applicant requests verification that an activity complies with an NWP. Potential adverse impacts and compliance with the laws cited in 33 CFR 320.3 are controlled by the terms and conditions of each NWP, regional and case-specific conditions, and the review process that is undertaken prior to the issuance of NWPs.

The evaluation of this NWP, and related documentation, considers compliance with each of the following laws, where applicable: Section 10 of the Rivers and Harbors Act of 1899; Sections 401, 402, and 404 of the Clean Water Act; Section 307(c) of the Coastal Zone Management Act of 1972, as amended; Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended; the National Environmental Policy Act of 1969; the Fish and Wildlife Act of 1956; the Migratory Marine Game-Fish Act; the Fish and Wildlife Coordination Act, the Federal Power

Act of 1920, as amended; the National Historic Preservation Act of 1966; the Interstate Land Sales Full Disclosure Act; the Endangered Species Act; the Deepwater Port Act of 1974; the Marine Mammal Protection Act of 1972; Section 7(a) of the Wild and Scenic Rivers Act; the Ocean Thermal Energy Act of 1980; the National Fishing Enhancement Act of 1984; the Magnuson-Stevens Fishery and Conservation and Management Act, the Bald and Golden Eagle Protection Act; and the Migratory Bird Treaty Act. In addition, compliance of the NWP with other Federal requirements, such as Executive Orders and Federal regulations addressing issues such as floodplains, essential fish habitat, and critical resource waters is considered.

1.3.2 Terms and Conditions

Many NWPs have pre-construction notification requirements that trigger case-by-case review of certain activities. Two NWP general conditions require case-by-case review of all activities that may adversely affect Federally-listed endangered or threatened species or historic properties (i.e., general conditions 18 and 20, respectively). General condition 16 restricts the use of NWPs for activities that are located in Federally-designated wild and scenic rivers. None of the NWPs authorize the construction of artificial reefs. General condition 28 addresses the use of an NWP with other NWPs to authorize a single and complete project, to ensure that the acreage limits of each of the NWPs used to authorize that project are not exceeded.

In some cases, activities authorized by an NWP may require other federal, state, or local authorizations. Examples of such cases include, but are not limited to: activities that are in marine sanctuaries or affect marine sanctuaries or marine mammals; the ownership, construction, location, and operation of ocean thermal conversion facilities or deep water ports beyond the territorial seas; activities that result in discharges of dredged or fill material into waters of the United States and require Clean Water Act Section 401 water quality certification; or activities in a state operating under a coastal zone management program approved by the Secretary of Commerce under the Coastal Zone Management Act. In such cases, a provision of the NWPs states that an NWP does not obviate the need to obtain other authorizations required by law. [33 CFR 330.4(b)(2)]

Additional safeguards include provisions that allow the Chief of Engineers, division engineers, and/or district engineers to: assert discretionary authority and require an individual permit for a specific activity; modify NWPs for specific activities by adding special conditions on a case-by-case basis; add conditions on a regional or nationwide basis to certain NWPs; or take action to suspend or revoke an NWP or NWP authorization for activities within a region or state. Regional conditions are imposed to protect important regional concerns and resources. [33 CFR 330.4(e) and 330.5]

1.3.3 Review Process

The analyses in this document and the coordination that was undertaken prior to the issuance of the NWP fulfill the requirements of the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act, and other acts promulgated to protect the quality of the environment.

All NWPs that authorize activities that may result in discharges into waters of the United States require compliance with the water quality certification requirements of Section 401 of the Clean Water Act. NWPs that authorize activities within, or affecting land or water uses within a state that has a Federally-approved coastal zone management program, must also be certified as consistent with the state's program, unless a presumption of concurrence occurs. The procedures to ensure that the NWPs comply with these laws are described in 33 CFR 330.4(c) and (d), respectively.

1.4 Public Comments and Responses

For a summary of the public comments received in response to the September 15, 2020, Federal Register notice, refer to the preamble in the Federal Register notice announcing the issuance of this NWP. The substantive comments received in response to the September 15, 2020, Federal Register notice were used to improve the NWP by changing NWP terms and limits, pre-construction notification requirements, and/or NWP general conditions, as necessary.

The Corps proposed this new NWP as NWP D, to discharges of dredged or fill material into waters of the United States, and structures and work in navigable waters of the United States, for utility line activities for water and other substances, such as potable water, sewage, stormwater, and wastewater.

Several commenters stated that they support the issuance of new NWP D for water, wastewater, and stormwater utility lines because of the national legal uncertainty of oil and gas pipeline projects. Many commenters said they support the issuance of NWP D because it streamlines the permitting process, clarifies the PCN requirements, separates activities based on the utility types, and ensures the activities will cause no more than minimal adverse environmental effects. Several commenters stated they were opposed to the issuance of NWP D and recommend withdrawing NWP D because it authorizes activities that cause significant adverse impacts, and these activities should require individual permits. These commenters stated, that at a minimum, additional PCN requirements should be added to the proposed NWP.

The activities authorized by NWP D will generally result in no more than minimal individual and cumulative adverse environmental impacts, and certain activities require pre-construction notification to the district engineer. District engineers will review PCNs for proposed NWP D activities, and may add permit conditions, including mitigation requirements, to the NWP authorization to help ensure that the

authorized activities cause no more than minimal adverse environmental effects. District engineers can also exercise discretionary authority and suspend or revoke the NWP authorization for proposed activities that will result in more than minimal adverse environmental effects. The Corps believes that the two PCN thresholds in proposed NWP D will provide district engineers with the opportunity to review utility line activities for water and other substances that have the potential to cause more than minimal adverse environmental effects.

Several commenters expressed opposition to allowing multiple segments as “single and complete projects” of the same pipeline qualify for NWP authorization because it violates the Clean Water Act’s minimal impact limitation, the National Environmental Policy Act, the Endangered Species Act, and other legal requirements for rigorous and transparent environmental reviews and safeguards. In addition, several of these commenters stated the authorizing multiple segments as single and complete projects does not capture cumulative effects.

The use of NWPs to authorize separate and distant crossings of waters of the United States for utility lines and roads as single and complete has been in the Corps’ NWP regulations at 33 CFR 330.2(i) since 1991. The National Environmental Policy Act is a procedural statute that does not prohibit any specific regulatory approaches or mandate specific outcomes. Activities authorized by NWP D must comply with general condition 18, endangered species. The requirements of paragraph (b)(4) of general 32 help ensure that district engineers have information regarding the crossings of waters of the United States that require PCNs or do not require PCNs, so that the cumulative adverse environmental effects can be assessed during the review process.

Several commenters stated opposition to the removal of the five PCN requirements from the 2017 NWP 12 because they believe the Corps will no longer receive notice of activities that cause more than minimal adverse effects, nor will other federal and state natural resource agencies be able to review and provide comments. Many commenters opposed the removal of the non-PCN requirements for right-of-way mechanized land clearing through forested wetlands because this activity causes fragmentation and a loss/conversion of wetland type and associated functions. The commenters requested addition of a requirement for the submittal of a PCN for land clearing associated with utility line rights-of-way within wetlands so that the Corps and interested stakeholders can ensure impacts are appropriately avoided and mitigated. A few commenters stated that the 500 linear foot PCN threshold from the 2017 NWP 12 should be added to NWP D. One commenter said that the PCN requirement for temporary access roads should be retained. One commenter stated that a PCN should be required when the proposed activities would run parallel with a stream bed.

The removal of the five PCN thresholds from NWP 12 are discussed in the preamble discussion of NWP 12 and the same reasoning applies to the removal of these PCNs from NWP 58. That preamble discussion includes responses to

comments, and that discussion will not be repeated in this section of the preamble. The Corps declines to add the suggested PCN thresholds because this NWP requires restoration of temporary fills to pre-construction elevations. If utility line activities associated with the suggested PCN thresholds result in a permanent impact that causes the loss of greater than 1/10-acre of waters of the United States, then PCNs are required.

A few commenters said there needs to be an overall acreage limit on authorized impacts for this NWP, including a maximum acreage for non-PCN forest clearing activities, and a maximum length of impervious surface roads before a PCN is required. One commenter stated that the Corps needs to provide sound, scientific evidence that the removal or omission of any of the PCN thresholds from the 2017 NWP 12 would not harm river, stream, or wetland hydrologic functions.

The activities authorized by this NWP are subject to a 1/2-acre limit for each single and complete project. There was no PCN requirement for temporary access roads in the 2017 NWP 12 and the Corps continues to believe that it is not necessary to ensure no more than a minimal individual or cumulative adverse environmental effects. Pre-construction notification thresholds are established for proposed activities requiring DA authorization that have the potential to cause more than minimal adverse environmental effects. Pre-construction notifications are informed by science and the Corps experience in administering the NWP program. In this instance, the Corps has determined it can remove the respective PCN requirements without risking more than a minimal individual or cumulative adverse environmental effects.

Some commenters said that the reduction of the PCN thresholds will simplify NWP D and would not cause a negative impact on the environment. One commenter asserted that permanent access roads should be authorized under NWP 14, not NWP D. One commenter recommended adding a requirement for horizontal directional drilling under waters of the United States, as a national standard under NWP D. One commenter recommended adding a provision to NWP D requiring containment and clean up contingency plans.

The Corps declines to add a requirement for the use of horizontal directional drilling because that technique is not always practical or feasible for utility lines that convey water and other substances. The use of horizontal directional drilling is more appropriately determined on a case-by-case basis after considering the characteristics of the proposed utility line activity, including site characteristics. The Corps does not have the authority to require containment and cleanup contingency plans for the construction, expansion, maintenance, or repair of utility line activities for water and other substances.

One commenter stated that the Corps should define a “stand-alone project” as a utility line project that includes all crossing within a major watershed as evaluated together as single and complete, since the cumulative impacts are to one system.

The commenter said that an alternative approach would be to require a cumulative analysis for all proposed NWP D activities. Several commenters requested clarification of the status of ongoing, non-oil and gas utility projects verified under the 2017 NWP 12, specifically whether they will continue to be authorized under the 2017 NWP 12 until the March 18, 2022 expiration date, or if they will need to be reverified.

The Corps declines to add a definition of “stand-alone project” to this NWP. When reviewing PCNs for proposed NWP activities, district engineers evaluate the crossings of waters of the United States that require PCNs and the information provided on other crossings in accordance with paragraph (b)(4) of general condition 32. They will determine whether the proposed utility line for water and other substances will result in no more than minimal individual and cumulative adverse environmental effects. The grandfathering provisions for these NWPs, including the transition from 2017 NWP 12 to the 2021 NWP 12 and new NWPs 57 and 58, is discussed in Section I.D. of this final rule.

A few commenters requested that the Corps broaden the definition of the term “utility line” so that it includes other types of man-made conveyances, such as canals and other linear conveyances that are subject to Clean Water Act section 404 jurisdiction and can transport water. One commenter requested the addition of specific waterline ancillary facilities including, but not limited to pump plants, siphons, and tunnels to the text of this NWP. One commenter said that the Corps should clarify whether this NWP authorizes utility line activities that convey substances that are unclear as to whether they included in the definition of “oil or natural gas pipeline” in NWP 12, such as hydrogen and power-to-gas (i.e., hydrogen combined with carbon dioxide to create methane, or renewable natural gas). One commenter recommended further defining the term “other substances” in this NWP.

The Corps declines to add canals and ditches to the activities authorized by this NWP. Canals and ditches can be authorized by other NWPs, if the construction of those ditches involves discharges of dredged or fill material into waters of the United States or structures or work under Section 10 of the Rivers and Harbors Act of 1899. Substations for utility lines for water and other substances can include pump plants and siphons. Tunnels may be authorized if they are considered utility lines. Utility lines constructed to convey hydrogen or carbon dioxide can be authorized by NWP D, but utility line activities constructed to convey renewable natural gas should be authorized by NWP 12. In general, “other substances” includes substances not conveyed by utility lines authorized by NWPs 12 and 57. The Corps has added “products derived from oil or natural gas” to be consistent with the definition of “oil or natural gas pipeline” in NWP 12, and to clarify that regulated activities associated with pipelines that carry substances derived from oil or natural gas should be authorized by NWP 12, not NWP D.

One commenter said that Note 4 should refer to the General Bridge Act of 1946

instead of Section 9 of the Rivers and Harbors Act of 1899. The Corps has made this change to Note 4.

One commenter requested clarification on how temporal and cumulative impacts will be considered when evaluating activities authorized by NWP D. This commenter recommended conducting a separate analysis for temporal and cumulative impacts on streams, wetlands, and other waters. A few commenters recommended changing the provision condition that states “there must be no change in pre-construction contours of waters of the United States” to “there must be no change in pre-construction contours which results in permanent losses of waters of the United States.” One commenter requested clarification on the measures the Corps will take to ensure that the activities authorized by NWP D are not improperly divided into smaller sections to avoid an individual permit.

Temporal and cumulative impacts will be evaluated using the 10 criteria identified in paragraph 2 of Section D, District Engineer’s Decision. The Corps declines to change the text regarding the requirement for no changes in pre-construction contours, because that has been a BMP that has helped ensure that most utility line activities result in temporary impacts. The Corps applies the definitions of “single and complete linear project” to NWP D activities and to other NWPs that authorize utility lines to determine which activities can be authorized by an NWP and which activities require individual permits. The Corps also implements 33 CFR 330.6(d), which addresses the use of individual permits with NWPs.

Several commenters stated that BMPs should be site-specific and imposed as special conditions, if necessary, and not standardized in the text of NWP D. One commenter said that the inclusion of standards and BMPs would likely impede the objective of the NWP program by causing delays and increasing paperwork. This commenter asserted that attempting to establish national standards could cause conflicting requirements between the NWP and Clean Water Act Section 401.

The Corps agrees that most BMPs are site-specific and should be identified for specific utility line activities. Best management practices may also vary by region and by aquatic resource type. Best management practices that are necessary to ensure that activities authorized by NWP D have no more than minimal adverse environmental effects are more appropriately identified by district engineers and required through activity-specific conditions added to the NWP authorization or through the section 401 water quality certification process.

One commenter said that the Corps should adopt a policy of early consultation with the tribes and other interested parties for these types of projects over and above the NHPA section 106 process to avoid litigation, and other costly delays. This commenter also requested the Corps require consent on projects impacting tribes. One commenter recommended evaluating the direct, indirect, and cumulative effects on treaty reserved resources, including anadromous salmonids and their habitat to fully understand the potential extent of resource impacts.

The Corps consults with tribes when necessary to ensure that activities authorized by an NWP comply with general condition 17, tribal rights. As part of this rulemaking, Corps districts have consulted and coordinated with tribes to identify regional conditions and coordination processes to ensure protect tribal rights, as well as tribal trust resources. Activities authorized by NWPs do not require prior consent from tribes.

One commenter said that the Corps should end the practice of counting temporary impacts associated with matting for moving heavy machinery over a wetland, as a loss of greater than 1/10-acre, which triggers a requirement to submit a PCN. One commenter stated the Corps districts should maintain consistency with the PCN thresholds and should not be allowed to add regional conditions to this NWP that undercuts the reduction in PCN thresholds in this NWP. This commenter said that regional conditions cause confusion and inefficiencies, especially if the linear infrastructure crosses into multiple Corps districts.

The determination regarding whether the use of matting during utility line activities authorized by NWP D causes a loss of waters of the United States that may require a PCN is more appropriately made by district engineers on a case-by-case basis. Division engineers can add regional conditions to this NWP that replace PCN thresholds that were removed, if they determine those PCN thresholds are necessary to ensure that this NWP authorizes only those activities that have no more than minimal adverse environmental effects. Regional conditions are intended to address regional differences in aquatic resource functions, so there may be some inconsistency that must be dealt with, especially for utility lines that run through multiple states or Corps districts.

One commenter said that water mains are known to exceed the non-oil and gas pipeline diameters, identified in the preamble as 3 to 24 inches, as they may be 6 feet or wider. This commenter stated the Corps did not provide a robust analysis of the lengths of the various utility line, nor did they provide the total national mileage for these lines, as they could be quite long and have similar types of impacts as oil or gas pipelines. A few commenters recommended removing natural gas pipelines (i.e. residential lines), hydrogen transport lines for clean energy solutions, and local, intrastate utility lines operated as an independent municipally-owned distribution system from NWP 12, because they are typically similar or smaller in size with respect to materials, location, installation footprint, and constructed along with water and wastewater pipelines.

The intent of the preamble discussion in the 2020 Proposal regarding the proposal to issue separate NWPs for oil or natural gas pipelines, electric utility lines and telecommunications lines, and utility lines for water and other substances was to illustrate some of the differences among those utility line sectors. The discussion of pipeline diameters has no relevance to the text of these NWPs, or to the conditions that apply to those NWPs. Utility line activities authorized by NWP D can be used to

convey hydrogen, and for local distribution of water, sewage, wastewater, and other substances.

One commenter expressed concerns regarding the proposed issuance of NWP D to authorize utility line activities that carry wastewater. This commenter stated that distribution systems for wastewater reuse applications should be assumed to carry highly toxic and potentially hazardous substances that would degrade soils and groundwater if leaked or spilled. One commenter said that allowing activities under NWP D within or under coastal zone waters and wetlands will impermissibly degrade water quality, which is inconsistent with Section 404(e) of the Clean Water Act. One commenter stated that the NWP should be modified to require access roads to be built in accordance with local or state standards.

Prior versions of NWP 12 have authorized utility line activities that carry wastewater, so this is not a new issue for the NWP program. General condition 14 requires proper maintenance of activities authorized by NWPs, so utility lines carrying wastewater should minimize the potential for leaks and spills. The Corps does not have the authority to regulate leaks or spills from utility lines. Leaks and spills are more appropriately addressed through federal, state, and local laws that are administered by other federal agencies, or state or local government agencies. This NWP can be used to authorize utility line activities for water and other substances in coastal zones. Local and state governments are responsible for ensuring that access roads are constructed in accordance with their standards.

2.0 Purpose and Need for the Proposed Action

The proposed action is the issuance of this NWP to authorize discharges of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act and structures and work in navigable waters of the United States under Section 10 of the Rivers and Harbors Act of 1899 for the construction, maintenance, repair, and removal of utility lines for waters and other substances, excluding oil, natural gas, products derived from oil or natural gas, and electricity that result in no more than minimal individual and cumulative adverse environmental effects. This proposed action is needed for efficient implementation of the Corps Regulatory Program, by authorizing with little, if any, delay or paperwork this category of activities, when those activities have no more than minimal individual and cumulative adverse environmental effects. The NWP also provides an incentive to project proponents to reduce impacts to jurisdictional waters and wetlands to receive the required authorization under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 in less time than it takes to obtain individual permits for those activities. Issuing an NWP to authorize activities that have no more than minimal adverse environmental effects instead of processing individual permit applications for these activities, reduces regulatory burdens on the public, benefits the environment through reduced losses of jurisdictional waters and wetlands, and allows the Corps to allocate more of its resources towards evaluating

proposed activities requiring authorization under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 that have the potential to cause more substantial adverse environmental effects.

3.0 Alternatives

This evaluation includes an analysis of alternatives based on the requirements of NEPA, which requires a more expansive review than the Clean Water Act Section 404(b)(1) Guidelines. The alternatives discussed below are based on an analysis of the potential environmental impacts and impacts to the Corps, federal, tribal, and state resource agencies, general public, and prospective permittees. Since the consideration of off-site alternatives under the 404(b)(1) Guidelines does not apply to specific projects authorized by general permits, the alternatives analysis discussed below consists of a general NEPA alternatives analysis for the NWP.

3.1 No Action Alternative (Do Not Issue the Nationwide Permit)

The no action alternative would be to continue to use NWP 12 to authorize utility line activities for water and other substances until it expires on March 18, 2022. After NWP 12 expires on March 18, 2022, individual permits would be required for utility line activities for water and other substances that were authorized by NWP 12, unless Corps districts issued regional general permits to authorize a similar category of activities.

3.2 Issue the Nationwide Permit With Modifications

This alternative consists of issuing the NWP while considering the comments received in response to the proposal to issue this NWP with modifications, including the proposed changes identified by the Corps and changes suggested by commenters. This alternative includes changes to the terms and conditions of this NWP, including quantitative limits for this NWP, pre-construction notification thresholds and requirements, and other provisions of this NWP. This alternative also includes consideration of modifying, adding, or removing general conditions that apply to this NWP. In addition, this alternative includes the mechanisms in the Corps' NWP program regulations at 33 CFR 330.5(c) and (d) where division and district engineers can modify, suspend, or revoke NWP authorizations on a regional or case-by-case basis to ensure that the NWP authorizes only those activities that result in no more than minimal individual and cumulative adverse environmental effects. In the September 15, 2020, Federal Register notice, the Corps requested comments on the proposed issuance of this NWP.

Since the Corps' NWP program began in 1977, the Corps has continuously strived to develop NWPs that only authorize activities that result in no more than minimal

individual and cumulative adverse environmental effects. Every five years the Corps reevaluates the NWPs during the reissuance process, and may modify an NWP to address concerns for the aquatic environment. Utilizing collected data and institutional knowledge concerning activities authorized by the Corps regulatory program, the Corps reevaluates the potential impacts of activities authorized by NWPs. The Corps also uses substantive public comments on proposed NWPs to assess the expected impacts.

3.3 Issue the Nationwide Permit Without Modifications

This alternative consists of issuing the NWP as it was proposed in the September 15, 2020, proposal. This alternative also includes the mechanisms in the Corps' NWP program regulations where division and district engineers can modify, suspend, or revoke NWP authorizations on a regional or case-by-case basis to ensure that the NWP authorizes only those activities that result in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.5(c) and (d)).

4.0 Affected Environment

This environmental assessment is national in scope because the NWP may be used across the country, unless the NWP is revoked or suspended by a division or district engineer under the procedures in 33 CFR 330.5(c) and (d), respectively. The affected environment consists of terrestrial and aquatic ecosystems in the United States, as they have been directly and indirectly affected by past and present federal, non-federal, and private activities. The past and present activities include activities authorized by the various NWPs issued from 1977 to 2017, activities authorized by other types of Department of the Army (DA) permits, as well as other federal, tribal, state, and private activities that are not regulated by the Corps. Aquatic ecosystems are also influenced by past and present activities in uplands, because those land use/land cover changes in uplands and other activities in uplands have indirect effects on aquatic ecosystems (e.g., MEA 2005a, Reid 1993). Due to the large geographic scale of the affected environment (i.e., the entire United States), as well as the many past and present human activities that have shaped the affected environment, it is only practical to describe the affected environment in general terms. In addition, it is not possible to describe the environmental conditions for specific sites where the NWPs may be used to authorize eligible activities.

The total land area in the United States is approximately 2,260,000,000 acres, and the total land area in the contiguous United States is approximately 1,891,000,000 acres (Bigelow and Borchers 2017). Land uses in the United States as of 2012 is provided in Table 4.1 (Bigelow and Borchers 2017). Of the land area in the entire United States, approximately 60 percent (1,370,000,000 acres) is privately owned (Bigelow and Borchers 2017). Of the remaining lands in the United States, the

federal government hold 28 percent (644,000,000 acres), state and local governments own 8 percent (189,000,000 acres), and 3 percent (63,000,000 acres) is held in trust by the Bureau of Indian Affairs (Bigelow and Borchers 2017).

**Table 4.1. Major land uses in the United States – 2012
(Bigelow and Borchers 2017).**

| Land Use | Acres | Percent of Total |
|-------------------------------|----------------------|------------------|
| Agriculture | 1,186,000,000 | 52.5 |
| Forest land | 502,000,000 | 22.2 |
| Transportation use | 27,000,000 | 1.2 |
| Recreation and wildlife areas | 254,000,000 | 11.2 |
| National defense areas | 27,000,000 | 1.2 |
| Urban land | 70,000,000 | 3.1 |
| Miscellaneous use | 196,000,000 | 8.5 |
| Total land area | 2,260,000,000 | 100.0 |

4.1 Quantity of Aquatic Ecosystems in the United States

There are approximately 283.1 million acres of wetlands in the United States; 107.7 million acres are in the conterminous United States and the remaining 175.4 million acres are in Alaska (Mitsch and Hernandez 2013). Wetlands occupy less than 9 percent of the global land area (Zedler and Kercher 2005). According to Dahl (2011), wetlands and deepwater habitats cover approximately 8 percent of the land area in the conterminous United States. Rivers and streams comprise approximately 0.52 percent of the total land area of the continental United States (Butman and Raymond 2011). Therefore, the wetlands, streams, rivers, and other aquatic habitats that are potentially waters of the United States and subject to regulation by the Corps under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 comprise a minor proportion of the land area of the United States. The remaining land area of the United States (more than 92 percent, depending on the proportion of wetlands, streams, rivers, and other aquatic habitats that are subject to regulation under those two statutes) is outside the Corps regulatory authority.

Dahl (1990) estimated that approximately 53 percent of the wetlands in the conterminous United States were lost in the 200-year period from the 1780s to 1980s, while Alaska lost less than one percent of its wetlands and Hawaii lost approximately 12 percent of its original wetland acreage. In the 1780s, there were approximately 221 million acres of wetlands in the conterminous United States (Dahl 1990). California lost the largest percentage of its wetlands (91 percent), whereas Florida lost the largest acreage (9.3 million acres) (Dahl 1990). During that 200-year period, 22 states lost more than 50 percent of their wetland acreage, and 10 states have lost more than 70 percent of their original wetland acreage (Dahl

1990).

Frayer et al. (1983) evaluated wetland status and trends in the United States during the period of the mid-1950s to the mid-1970s. During that 20-year period, approximately 7.9 million acres of wetlands (4.2 percent) were lost in the conterminous United States. Much of the loss of estuarine emergent wetlands was due to changes to estuarine subtidal deepwater habitat, and some loss of estuarine emergent wetlands was due to urban development. For palustrine vegetated wetlands, nearly all of the losses of those wetlands were due to agricultural activities (e.g., conversion to agricultural production).

The U.S. Fish and Wildlife Service also examined the status and trends of wetlands in the United States during the period of the mid-1970s to the 1980s, and found that there was a net loss of more than 2.6 million acres of wetlands (2.5 percent) during that time period (Dahl and Johnson 1991). Freshwater wetlands comprised 98 percent of those wetland losses (Dahl and Johnson 1991). During that time period, losses of estuarine wetlands were estimated to be 71,000 acres, with most of that loss due to changes of emergent estuarine wetlands to open waters caused by shifting sediments (Dahl and Johnson 1991). Conversions of wetlands to agricultural use were responsible for 54 percent of the wetland losses, and conversion to other land uses resulted in the loss of 41 percent of wetlands (Dahl and Johnson 1991). Urban development was responsible for five percent of the wetland loss (Dahl and Johnson 1991). The annual rate of wetland loss has decreased substantially since the 1970s (Dahl 2011), when wetland regulation became more prevalent (Brinson and Malvárez 2002).

Between 2004 and 2009, there was no statistically significant difference in wetland acreage in the conterminous United States (Dahl 2011). According to the 2011 wetland status and trends report, during the period of 2004 to 2009 urban development accounted for 11 percent of wetland losses (61,630 acres), rural development resulted in 12 percent of wetland losses (66,940 acres), silviculture accounted for 56 percent of wetland losses (307,340 acres), and wetland conversion to deepwater habitats caused 21 percent of the loss in wetland area (115,960 acres) (Dahl 2011). Some of the losses occurred to wetlands that are not subject to Clean Water Act jurisdiction and some losses are due to activities not regulated under Section 404 of the Clean Water Act, such as unregulated drainage activities, exempt forestry activities, or water withdrawals. From 2004 to 2009, approximately 100,020 acres of wetlands were gained as a result of wetland restoration and conservation programs on agricultural land (Dahl 2011). Another source of wetland gain is conversion of other uplands to wetlands, resulting in a gain of 389,600 acres during the period of 2004 to 2009 (Dahl 2011). Inventories of wetlands, streams, and other aquatic resources are incomplete because the techniques used for those studies cannot identify some of those resources (e.g., Dahl (2011) for wetlands; Meyer and Wallace (2001) for streams).

Losses of vegetated estuarine wetlands due to the direct effects of human activities

have decreased significantly due to the requirements of Section 404 of the Clean Water Act and other laws and regulations (Dahl 2011). During the period of 2004 to 2009, less than one percent of estuarine emergent wetlands were lost as a direct result of human activities, while other factors such as sea level rise, land subsidence, storm events, erosion, and other ocean processes caused substantial losses of estuarine wetlands (Dahl 2011). The indirect effects of other human activities, such as oil and gas development, water extraction, development of the upper portions of watersheds, and levees, have also resulted in coastal wetland losses (Dahl 2011). Eutrophication of coastal waters can also cause losses of emergent estuarine wetlands, through changes in growth patterns of marsh plants and decreases in the stability of the wetland substrate, which changes those marshes to mud flats (Deegan et al. 2012).

The Emergency Wetlands Resources Act of 1986 (Public Law 99-645) requires the USFWS to submit wetland status and trends reports to Congress (Dahl 2011). The latest status and trends report, which covers the period of 2004 to 2009, is summarized in Table 4.2. The USFWS status and trends report only provides information on acreage of the various aquatic habitat categories and does not assess the quality or condition of those aquatic habitats (Dahl 2011).

Table 4.2. Estimated aquatic resource acreages in the conterminous United States in 2009 (Dahl 2011).

| Aquatic Habitat Category | Estimated Area in 2009 (acres) |
|--|--------------------------------|
| Marine intertidal | 227,800 |
| Estuarine intertidal non-vegetated | 1,017,700 |
| Estuarine intertidal vegetated | 4,539,700 |
| All intertidal waters and wetlands | 5,785,200 |
| Freshwater ponds | 6,709,300 |
| Freshwater vegetated | 97,565,300 |
| • Freshwater emergent wetlands | 27,430,500 |
| • Freshwater shrub wetlands | 18,511,500 |
| • Freshwater forested wetlands | 51,623,300 |
| All freshwater wetlands | 104,274,600 |
| Lacustrine deepwater habitats | 16,859,600 |
| Riverine deepwater habitats | 7,510,500 |
| Estuarine subtidal habitats | 18,776,500 |
| All wetlands and deepwater habitats | 153,206,400 |

The acreage of lacustrine deepwater habitats does not include the open waters of Great Lakes (Dahl 2011).

The Federal Geographic Data Committee has established the Cowardin system developed by the U.S. Fish and Wildlife Service (USFWS) (Cowardin et al. 1979) as the national standard for wetland mapping, monitoring, and data reporting (Dahl 2011) (see Federal Geographic Data Committee (2013)). The Cowardin system is a hierarchical system which describes various wetland and deepwater habitats, using structural characteristics such as vegetation, substrate, and water regime as defining characteristics. Wetlands are defined by plant communities, soils, or inundation or flooding frequency. Deepwater habitats are permanently flooded areas located below the wetland boundary. In rivers and lakes, deepwater habitats are usually more than two meters deep. The Cowardin et al. (1979) definition of “wetland” differs from the definition used by the Corps and U.S. EPA for the purposes of implementing Section 404 of the Clean Water Act. The Corps-U.S. EPA regulations defines wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” [33 CFR 328.3(c)(4); 40 CFR 230.3(o)(3)(iv)] The Cowardin et al. (1979) requires only one factor (i.e., wetland vegetation, soils, hydrology) to be present for an area to be a wetland, while the Corps-U.S. EPA wetland definition requires all three factors to be present under normal circumstances (Tiner 2017, Mitsch and Gosselink 2015). The NWI produced by applying the Cowardin et al. (1979) definition is the only national scale wetland inventory available. There is no national inventory of wetland acreage based on the Corps’ wetland definition at 33 CFR 328.3(c)(16).

There are five major systems in the Cowardin classification scheme: marine, estuarine, riverine, lacustrine, and palustrine (Cowardin et al. 1979). The marine system consists of open ocean on the continental shelf and its high energy coastlines. The estuarine system consists of tidal deepwater habitats and adjacent tidal wetlands that are usually partially enclosed by land, but may have open connections to open ocean waters. The riverine system generally consists of all wetland and deepwater habitats located within a river channel. The lacustrine system generally consists of wetland and deepwater habitats located within a topographic depression or dammed river channel, with a total area greater than 20 acres. The palustrine system generally includes all non-tidal wetlands and wetlands located in tidal areas with salinities less than 0.5 parts per thousand; it also includes ponds less than 20 acres in size. Approximately 95 percent of wetlands in the conterminous United States are freshwater wetlands, and the remaining 5 percent are estuarine or marine wetlands (Dahl 2011).

According to Hall et al. (1994), there are more than 204 million acres of wetlands and deepwater habitats in the State of Alaska, including approximately 174.7 million acres of wetlands. Wetlands and deepwater habitats comprise approximately 50.7 percent of the surface area in Alaska (Hall et al. 1994).

The National Resources Inventory (NRI) is a statistical survey conducted by the Natural Resources Conservation Service (NRCS) (USDA 2018) of natural resources on non-federal land in the United States. The NRCS defines non-federal land as privately owned lands, tribal and trust lands, and lands under the control of local and state governments. Acreages of palustrine and estuarine wetlands and the land uses those wetlands are subjected to are summarized in Table 4.3. The 2015 NRI estimates that there are 110,638,500 acres of palustrine and estuarine wetlands on non-Federal land and water areas in the United States (USDA 2018). The 2015 NRI estimates that there are 49,598,800 acres of open waters on non-Federal land in the United States, including lacustrine, riverine, and marine habitats, as well as estuarine deepwater habitats.

Table 4.3. The 2015 National Resources Inventory acreages for palustrine and estuarine wetlands on non-federal land, by land cover/use category (USDA 2018).

| National Resources Inventory Land Cover/Use Category | Area of Palustrine and Estuarine Wetlands (acres) |
|--|---|
| cropland, pastureland, and Conservation Reserve Program land | 17,300,000 |
| forest land | 65,800,000 |
| rangeland | 7,800,000 |
| other rural land | 14,600,000 |
| developed land | 1,500,000 |
| water area | 3,600,000 |
| Total | 111,000,000 |

The land cover/use categories used by the 2015 NRI are defined below (USDA 2018). Croplands are areas used to produce crops grown for harvest. Pastureland is land managed for livestock grazing, through the production of introduced forage plants. Conservation Reserve Program land is under a Conservation Reserve Program contract. Forest land is comprised of at least 10 percent single stem woody plant species that will be at least 13 feet tall at maturity. Rangeland is land on which plant cover consists mostly of native grasses, herbaceous plants, or shrubs suitable for grazing or browsing, and introduced forage plant species. Other rural land consists of farmsteads and other farm structures, field windbreaks, marshland, and barren land. Developed land is comprised of large urban and built-up areas (i.e., urban and built-up areas 10 acres or more in size), small built-up areas (i.e., developed lands 0.25 to 10 acres in size), and rural transportation land (e.g., roads, railroads, and associated rights-of-way outside urban and built-up areas). Water areas are comprised of waterbodies and streams that are permanent open waters.

The wetlands data from the Fish and Wildlife Service's Status and Trends study and the Natural Resources Conservation Service's National Resources Inventory should not be compared, because they use different methods and analyses to produce their results (Dahl 2011).

Leopold, Wolman, and Miller (1964) estimated that there are approximately 3,250,000 miles of river and stream channels in the United States. This estimate is based on an analysis of 1:24,000 scale topographic maps. Their estimate does not include many small streams. Many small streams, especially headwater streams, are not mapped on 1:24,000 scale U.S. Geological Survey (USGS) topographic maps (Leopold 1994) or included in other inventories (Meyer and Wallace 2001), including the National Hydrography Dataset (Elmore et al. 2013). Many small streams and rivers are not identified through maps produced by aerial photography or satellite imagery because of inadequate image resolution or trees or other vegetation obscuring the visibility of those streams from above (Benstead and Leigh 2012). In a study of stream mapping in the southeastern United States, only 20 percent of the stream network was mapped on 1:24,000 scale topographic maps, and nearly none of the observed intermittent or ephemeral streams were indicated on those maps (Hansen 2001). Another study in Massachusetts showed that 1:25,000 metric scale topographic maps exclude over 27 percent of stream miles in a watershed (Brooks and Colburn 2011). For a 1:24,000 scale topographic map, the smallest tributary found by using 10-foot contour interval has a drainage area of 0.7 square mile and length of 1,500 feet, and smaller stream channels are common throughout the United States (Leopold 1994). Benstead and Leigh (2012) found that the density of stream channels (length of stream channels per unit area) identified by digital elevation models was three times greater than the drainage density calculated by using USGS maps. Elmore et al. (2013) made similar findings in watersheds in the mid-Atlantic, where they determined that the stream density was 2.5 times greater than the stream density calculated with the National Hydrography Dataset. Due to the difficulty in mapping small streams, there are no accurate estimates of the total number of river or stream miles in the conterminous United States that might be considered as "waters of the United States."

The quantity of the Nation's aquatic resources presented by studies that estimate the length or number of stream channels (see above) or the acreage of wetlands (USFWS status and trends studies, National Wetland Inventory (NWI), and Natural Resources Inventory (NRI) are underestimates, because those inventories do not include many small wetlands and streams. The USFWS status and trends study does not include Alaska, Hawaii, or the territories. The underestimate of national wetland acreage by the USFWS status and trends study and the NWI is primarily the result of the minimum size of wetlands detected through remote sensing techniques and the difficulty of identifying certain wetland types through those remote sensing techniques. The remote sensing approaches used by the USFWS for its NWI maps and its status and trends reports result in errors of omission that exclude wetlands that are difficult to identify through photointerpretation (Tiner

2017). These errors of omission are due to wetland type and the size of target mapping units (Tiner 2017). Therefore, it is important to understand the limitations of the source data when describing the environmental baseline for wetlands using maps and studies produced by remote sensing, especially in terms of wetland quantity.

Factors affecting the accuracy of wetland maps made by remote sensing include: the degree of ease or difficulty in identifying a particular wetland type, map scale, the quality and scale of the source information (e.g., aerial or satellite photos), the environmental conditions when the imagery was obtained, the time of year the imagery was obtained (e.g., leaf-off versus leaf on), the quality of the images, the minimum mapping unit (or target mapping unit), the mapping equipment, and the skills of the people drawing the maps (Tiner 2017). In general, wetland types that are difficult to identify through field investigations are likely to be underrepresented in maps made by remote sensing (Tiner 2017). Wetlands difficult to identify through remote sensing include evergreen forested wetlands, wetlands at the drier end of the wetland hydrology continuum, and significantly drained wetlands (Tiner 2017). Wetland types that are more readily identified and delineated through remote sensing techniques include ponds, marshes, bogs, and fens (Tiner 2017). In the most recent wetland status and trends report published by the U.S. Fish and Wildlife Service, the target minimum wetland mapping unit was 1 acre, although some easily identified wetlands as small as 0.1 acre were identified in that effort (Dahl 2011). The National Wetland Inventory identifies wetlands regardless of their jurisdictional status under the Clean Water Act (Tiner 2017).

Activities authorized by NWPs will adversely affect a smaller proportion of the Nation's wetland base than indicated by the wetlands acreage estimates provided in the most recent status and trends report, or the NWI maps for a particular region.

Not all wetlands, streams, and other types of aquatic resources are subject to federal jurisdiction under the Clean Water Act (Mitsch and Gosselink 2015). Two U.S. Supreme Court decisions have identified limits to Clean Water Act jurisdiction. In 2001, in *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers* (531 U.S. 159) the U.S. Supreme Court held that the use of isolated, non-navigable, intrastate waters by migratory birds is not, by itself a sufficient basis for exercising federal regulatory authority under the Clean Water Act (see 80 FR 37056). In the Supreme Court's 2006 decision in *Rapanos v. United States*, (547 U.S. 715), one justice stated that waters and wetlands regulated under the Clean Water Act must have a "significant nexus" to downstream traditional navigable waters. Four justices (the plurality) concluded that Clean Water Act jurisdiction applies only to relatively permanent waters connected to traditional navigable waters and to wetlands that have a continuous surface connection to those relatively permanent waters. The remaining justices in *Rapanos* stated that Clean Water Act jurisdiction applies to waters and wetlands that meet either the significant nexus test or the Plurality's test.

There are 94,133 miles of shoreline in the United States (NOAA 1975). Of that shoreline, 88,633 miles are tidal shoreline and 5,500 miles are shoreline along the Great Lakes and rivers that connect those lakes to the Atlantic Ocean. More recently, Gittman et al. (2015) estimated that there are 99,524 miles of tidal shoreline in the conterminous United States.

4.2 Quality of Aquatic Ecosystems in the United States

The USFWS status and trends study does not assess the condition or quality of wetlands and deepwater habitats (Dahl 2011). Information on water quality in waters and wetlands, as well as the causes of water quality impairment, is collected by the U.S. EPA under Sections 305(b) and 303(d) of the Clean Water Act. Table 4.4 provides U.S. EPA's most recent national summary of water quality in the Nation's waters and wetlands.

**Table 4.4. National summary of water quality data (U.S. EPA,
https://iaspub.epa.gov/waters10/attains_nation_cy.control
accessed 11/27/2020).**

| Category of water | Total waters | Total waters assessed | Percent of waters assessed | Good waters | Threatened waters | Impaired waters |
|-------------------------------|----------------------|-----------------------|----------------------------|---------------------|-------------------|---------------------|
| Rivers and streams | 3,533,205 miles | 1,110,961 miles | 31.4 | 518,293 miles | 4,495 miles | 588,173 miles |
| Lakes, reservoirs and ponds | 41,666,049 acres | 18,629,795 acres | 44.7 | 5,390,570 acres | 30,309 acres | 13,208,917 acres |
| Bays and estuaries | 87,791 square miles | 56,141 square miles | 63.9 | 11,516 square miles | 0 square miles | 44,625 square miles |
| Coastal shoreline | 58,618 miles | 4,627 miles | 7.9 | 1,298 miles | 0 miles | 3,329 miles |
| Ocean and near coastal waters | 54,120 square miles | 6,944 square miles | 12.8 | 726 square miles | 0 square miles | 6,218 square miles |
| Wetlands | 107,700,000 acres | 1,242,252 acres | 1.2 | 569,328 acres | 0 acres | 672,924 Acres |
| Great Lakes shoreline | 5,202 miles | 4,460 miles | 85.7 | 106 miles | 0 miles | 4,354 miles |
| Great Lakes open waters | 196,343 square miles | 39,231 square miles | 20.0 | 1 square mile | 0 square miles | 39,230 square miles |

Waters and wetlands classified by states as “good” meets all their designated uses. Waters classified as “threatened” currently support all of their designated uses, but

if pollution control measures are not taken one or more of those uses may become impaired in the future. A water or wetland is classified by the state as “impaired” if any one of its designated uses is not met. The definitions of “good,” “threatened,” and “impaired” are applied by states to describe the quality of their waters (the above definitions were found in the metadata in U.S. EPA (2015)). Designated uses include the “protection and propagation of fish, shellfish and wildlife,” “recreation in and on the water,” the use of waters for “public water supplies, propagation of fish, shellfish, wildlife, recreation in and on the water,” and “agricultural, industrial and other purposes including navigation.” (40 CFR 130.3). These designated uses are assessed by states in a variety of ways, by examining various physical, chemical and biological characteristics, so it is not possible to use the categories of “good,” “threatened,” and “impaired” to infer the level of ecological functions and services these waters perform.

According to the latest U.S. EPA national summary data, 52.9 percent of assessed rivers and streams, 70.9 percent of assessed lakes, reservoirs, and ponds, 79.5 percent of assessed bays and estuaries, 71.9 percent of assessed coastal shoreline, 89.5 percent of assessed ocean and near coastal waters, 54.2 percent of assessed wetlands, 97.6 percent of assessed Great Lakes shoreline, and 100 percent of Great Lakes open water are impaired.

For rivers and streams, 34 causes of impairment were identified, and the top 10 causes are pathogens, sediment, nutrients, organic enrichment/oxygen depletion, temperature, metals (other than mercury), polychlorinated biphenyls, mercury, habitat alterations, and turbidity. The top 10 primary sources of impairment for the assessed rivers and streams are: unknown sources, agriculture, hydromodification, atmospheric deposition, habitat alterations not directly related to hydromodification, unspecified non-point source, municipal discharges/sewage, natural/wildlife, urban-related runoff/stormwater, and silviculture (forestry).

Thirty-three causes of impairment were identified for lakes, reservoirs, and ponds. The top 10 causes of impairment for these waters are: mercury, nutrients, polychlorinated biphenyls, turbidity, organic enrichment/oxygen depletion, metals (other than mercury), pH/acidity/caustic conditions, salinity/total dissolved solids/chlorides/sulfates, algal growth, and nuisance exotic species. For lakes, reservoirs, and ponds, the top 10 sources of impairment are: atmospheric deposition, unknown sources, agriculture, natural/wildlife, unspecified non-point source, other sources, urban-related runoff/stormwater, legacy/historic pollutants, municipal discharges/sewage, and hydromodification.

Twenty-eight causes of impairment were identified for bays and estuaries. The top 10 causes of impairment for these waters are: polychlorinated biphenyls, nutrients, mercury, turbidity, dioxins, toxic organics, metals (other than mercury), pesticides, pathogens, and organic enrichment/oxygen depletion. For bays and estuaries, the top 10 sources of impairment are: legacy/historic pollutants, urban-related runoff/stormwater, unknown sources, atmospheric deposition, municipal

discharges/sewage, unspecified non-point sources, other sources, natural/wildlife, agriculture, and industrial.

Coastal shorelines were impaired by 16 identified causes, the top 10 of which are: mercury, pathogens, turbidity, organic enrichment/oxygen depletion, pH/acidity/caustic conditions, nutrients, oil and grease, temperature, cause unknown – impaired biota, and algal growth. The top 10 sources of impairment of coastal shorelines are municipal discharges/sewage, urban-related runoff/stormwater, unknown sources, recreational boating and marinas, hydromodification, industrial, unspecified non-point sources, agriculture, legacy/historic pollutants, and land application/waste sites/tanks.

Ocean and near coastal waters were impaired by 16 identified causes, the top 10 of which are: mercury, organic enrichment/oxygen depletion, pathogens, metals (other than mercury), pesticides, turbidity, nuisance exotic species, total toxics, pH/acidity/caustic conditions, and polychlorinated biphenyls. The top 10 sources of impairment of ocean and near coastal waters are: atmospheric deposition, unknown sources, unspecified non-point sources, other sources, recreation and tourism (non-boating), recreational boating and marinas, urban-related runoff/stormwater, hydromodification, municipal discharges/sewage, and construction.

For wetlands, 23 causes of impairment were identified, and the top 10 causes are: organic enrichment/oxygen depletion, mercury, metals (other than mercury), salinity/total dissolved solids/chlorides/sulfates, pathogens, nutrients, toxic inorganics, temperature, pH/acidity/caustic conditions, and turbidity. The 10 primary sources for wetland impairment are: unknown sources, natural/wildlife, agriculture, atmospheric deposition, resource extraction, hydromodification, unspecified non-point sources, other, land application/waste sites/tanks, and groundwater loadings/withdrawals.

For Great Lakes shorelines, 12 causes of impairment were identified, and the top 10 causes are: polychlorinated biphenyls, dioxins, mercury, pesticides, toxic organics, pathogens, nutrients, nuisance exotic species, sediment, and habitat alterations. The 10 primary sources for Great Lakes shoreline impairment are: atmospheric deposition, unknown sources, legacy/historic pollutants, agriculture, municipal discharges/sewage, hydromodification, urban-related runoff/stormwater, habitat alterations (not directly related to hydromodifications), industrial, and unspecified non-point sources.

For Great Lakes open waters, 8 causes of impairment were identified, and those causes are: polychlorinated biphenyls, mercury, dioxins, pesticides, toxic organics, nutrients, metals (other than mercury), and sediment. The 8 sources for Great Lakes open water impairment are: atmospheric deposition, unknown sources, agriculture, municipal discharges/sewage, unspecified non-point sources, industrial, urban-related runoff/stormwater, and legacy/historic pollutants.

Water quality standards are established by states, with review and approval by the U.S. EPA (see Section 303(c) of the Clean Water Act and the implementing regulations at 40 CFR part 131). Under Section 401 of the Clean Water Act States review proposed discharges to determine compliance with applicable water quality standards.

Most causes and sources of impairment identified by states in the water quality summary discussed above are not due to activities regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Inputs of sediments into aquatic ecosystems can result from erosion occurring within a watershed (Beechie et al. 2013, Gosselink and Lee 1989). As water moves through a watershed it carries sediments and pollutants to streams (e.g., Allan 2004, Dudgeon et al. 2005, Paul and Meyer 2001) and wetlands (e.g., Zedler and Kercher 2005, Wright et al. 2006). Non-point sources of pollution (i.e., pollutants carried in runoff from farms, roads, and urban areas) are largely uncontrolled (Brown and Froemke 2012) because the Clean Water Act only requires permits for point sources discharges of pollutants (i.e., discharges of dredged or fill material regulated under section 404 and point source discharges of other pollutants regulated under section 402). Habitat alterations as a cause or source of impairment may be the result of activities regulated under section 404 and section 10 because they involve discharges of dredged or fill material or structures or work in navigable waters, but habitat alterations may also occur as a result of activities not regulated under those two statutes, such as the removal of vegetation from upland riparian areas. Hydrologic modifications may or may not be regulated under section 404 or section 10.

The indirect effects of changes in upland land use (which are highly likely not to be subject to federal control and responsibility, at least in terms of the Corps Regulatory Program), including the construction and expansion of upland developments, have substantial adverse effects on the quality (i.e. the ability to perform hydrologic, biogeochemical, and habitat functions) of jurisdictional waters and wetlands because those upland activities alter watershed-scale processes. Those watershed-scale processes include water movement and storage, erosion and sediment transport, and the transport of nutrients and other pollutants.

Habitat alterations as a cause or source of impairment may be the result of activities regulated under section 404 and section 10 because they involve discharges of dredged or fill material into jurisdictional waters or structures or work in navigable waters, but habitat alterations may also occur as a result of activities not regulated under those two statutes, such as the removal of vegetation from upland riparian areas. Hydrologic modifications may or may not be regulated under section 404 or section 10, depending on whether those hydrologic modifications are the result of discharges of dredged or fill material into waters of the United States regulated under Section 404 of the Clean Water Act or structures or work in navigable waters of the United States regulated under Section 10 of the Rivers and Harbors Act of

1899. When states, tribes, or the U.S. EPA establish total daily maximum loads (TMDLs) for pollutants and other impairments for specific waters, there may be variations in how these TMDLs are defined (see 40 CFR part 130).

As discussed below, many anthropogenic activities and natural processes affect the ability of jurisdictional waters and wetlands to perform ecological functions. Stream and river functions are affected by activities occurring in their watersheds, including the indirect effects of land uses changes (Beechie et al. 2013, Allan 2004, Paul and Meyer 2001). Booth et al. (2004) found riparian land use in residential areas also strongly affects stream condition because many landowners clear vegetation up to the edge of the stream bank. The removal of vegetation from upland riparian areas and other activities in those non-jurisdictional areas do not require DA authorization. Wetland functions are also affected by indirect effects of land use activities in the land area that drains to the wetland (Zedler and Kercher 2005, Wright et al. 2006). Human activities within a watershed or catchment that have direct or indirect adverse effects on rivers, streams, wetlands, and other aquatic ecosystems are not limited to discharges of dredged or fill material into waters of the United States or structures or work in a navigable waters. Human activities in uplands have substantial indirect effects on the structure and function of aquatic ecosystems, including streams and wetlands, and their ability to sustain populations of listed species. It is extremely difficult to distinguish between degradation of water quality caused by upland activities and degradation of water quality caused by the filling or alteration of wetlands (Gosselink and Lee 1989).

The U.S. Environmental Protection Agency (U.S. EPA) has undertaken the National Wetland Condition Assessment (NWCA), which is a statistical survey of wetland condition in the United States (U.S. EPA 2016). The NWCA assesses the ambient conditions of wetlands at the national and regional scales. The national scale encompasses the conterminous United States. The regional scale consists of four aggregated ecoregions: Coastal Plains, Eastern Mountains and Upper Midwest, Interior Plains, and West. In May 2016, U.S. EPA issued a final report on the results of its 2011 NWCA (U.S. EPA 2016).

The 2011 NWCA determined that, across the conterminous United States, 48 percent of wetland area (39.8 million acres) is in good condition, 20 percent of the wetland area (12.4 million acres) is in fair condition, and 32 percent (19.9 million acres) is in poor condition (U.S. EPA 2016). The 2011 NWCA also examined indicators of stress for the wetlands that were evaluated. The most prevalent physical stressors were vegetation removal, surface hardening via conversion to pavement or soil compaction, and ditching (U.S. EPA 2016). In terms of chemical stressors, most wetlands were subject to low exposure to heavy metals and soil phosphorous, but substantial percentages of wetland area in the West and Eastern Mountains and Upper Midwest ecoregions were found to have moderate stressor levels for heavy metals (U.S. EPA 2016). For soil phosphorous concentrations, stressor levels were high for 13 percent of the wetland area in the Eastern Mountains and Upper Midwest ecoregion (U.S. EPA 2016). Across the

conterminous United States, for biological stressors indicated by non-native plants, 61 percent of the wetland area exhibited low stressor levels (U.S. EPA 2016). When examined on an ecoregion basis, the Eastern Mountains and Upper Midwest and Coastal Plains ecoregions had high percentages of wetland area with low non-native plant stressor levels, but the West and Interior Plains ecoregions had small percentages of areas with low non-native plant stressor levels (U.S. EPA 2016).

4.3 Aquatic resource functions and services

Functions are the physical, chemical, and biological processes that occur in ecosystems (33 CFR 332.2). Wetland functions occur through interactions of their physical, chemical, and biological features (Smith et al. 1995). Wetland functions depend on a number of factors, such as the movement of water through the wetland, landscape position, surrounding land uses, vegetation density within the wetland, geology, soils, water source, and wetland size (NRC 1995). In its evaluation of wetland compensatory mitigation in the Clean Water Act Section 404 permit program, the National Research Council (2001) recognized five general categories of wetland functions:

- Hydrologic functions
- Water quality improvement
- Vegetation support
- Habitat support for animals
- Soil functions

Hydrologic functions include short- and long-term water storage and the maintenance of wetland hydrology (NRC 1995). Water quality improvement functions encompass the transformation or cycling of nutrients, the retention, transformation, or removal of pollutants, and the retention of sediments (NRC 1995). Vegetation support functions include the maintenance of plant communities, which support various species of animals as well as economically important plants. Wetland soils support diverse communities of bacteria and fungi which are critical for biogeochemical processes, including nutrient cycling and pollutant removal and transformation (NRC 2001). Wetland soils also provide rooting media for plants, as well as nutrients and water for those plants. These various functions generally interact with each other, to influence overall wetland functioning, or ecological integrity (Smith et al. 1995; Fennessy et al. 2007). As discussed earlier in this report, the Corps regulations at 33 CFR 320.4(b) list wetland functions that are important for the public interest review during evaluations of applications for DA permits, and for the issuance of general permits.

Not all wetlands perform the same functions, nor do they provide functions to the same degree (Smith et al. 1995). Therefore, it is necessary to account for individual and regional variation when evaluating wetlands and the functions and services they provide. The types and levels of functions performed by a wetland are dependent on its hydrologic regime, the plant species inhabiting the wetland, soil

type, and the surrounding landscape, including the degree of human disturbance of the landscape (Smith et al. 1995).

Streams also provide a variety of functions, which differ from wetland functions. Streams also provide hydrologic functions, nutrient cycling functions, food web support, and corridors for movement of aquatic organisms (Allan and Castillo 2007). When considering stream functions, the stream channel should not be examined in isolation. The riparian corridor next to the stream channel is an integral part of the stream ecosystem and has critical roles in stream functions (NRC 2002). Riparian areas provide many of the same general functions as wetlands (NRC 1995, 2002). Fischenich (2006) conducted a review of stream and riparian corridor functions, and through a committee, identified five broad categories of stream functions:

- Stream system dynamics
- Hydrologic balance
- Sediment processes and character
- Biological support
- Chemical processes and landscape pathways

Stream system dynamics refers to the processes that affect the development and maintenance of the stream channel and riparian area over time, as well as energy management by the stream and riparian area. Hydrologic balance includes surface water storage processes, the exchange of surface and subsurface water, and the movement of water through the stream corridor. Sediment processes and character functions relate to processes for establishing and maintaining stream substrate and structure. Biological support functions include the biological communities inhabiting streams and their riparian areas. Chemical processes and pathway functions influence water and soil quality, as well as the chemical processes and nutrient cycles that occur in streams and their riparian areas. Rivers and streams function perform functions to different degrees, depending on watershed condition, the severity of direct and indirect impacts to streams caused by human activities, and their interactions with other environmental components, such as their riparian areas (Allan 2004, Gergel et al. 2002).

Ecosystem services are the benefits that humans derive from ecosystem functions (33 CFR 332.2). The Millennium Ecosystem Assessment (2005a) describes four categories of ecosystem services: provisioning services, regulating services, cultural services, and supporting services. For wetlands and open waters, provisioning services include the production of food (e.g., fish, fruits, game), fresh water storage, food and fiber production, production of chemicals that can be used for medicine and other purposes, and supporting genetic diversity for resistance to disease. Regulating services relating to open waters and wetlands consist of climate regulation, control of hydrologic flows, water quality through the removal, retention, and recovery of nutrients and pollutants, erosion control, mitigating natural hazards such as floods, and providing habitat for pollinators. Cultural services that come from wetlands and open waters include spiritual and religious values, recreational opportunities, aesthetics, and education. Wetlands and open

waters contribute supporting services such as soil formation, sediment retention, and nutrient cycling.

Aquatic ecosystems in the current affected environment provide a wide variety of ecological functions and services to differing degrees (MEA 2005a) to human communities. Degraded ecosystems can provide ecological functions and services that continue to provide some conservation value (Weins and Hobbs 2015).

Examples of services provided by wetland functions include flood damage reduction, maintenance of populations of economically important fish and wildlife species, maintenance of water quality (NRC 1995, MEA 2005a) and the production of populations of wetland plant species that are economically important commodities, such as timber, fiber, and fuel (MEA 2005a). Wetlands can also provide important climate regulation and storm protection services (MEA 2005a).

Stream functions also result in ecosystem services that benefit society. Streams and their riparian areas store water, which can reduce downstream flooding and subsequent flood damage (NRC 2002, MEA 2005a). These ecosystems also maintain populations of economically important fish, wildlife, and plant species, including valuable fisheries (MEA 2005a, NRC 2002). The nutrient cycling and pollutant removal functions help maintain or improve water quality for surface waters (NRC 2002, MEA 2005a). Streams and riparian areas also provide important recreational opportunities. Rivers and streams also provide water for agricultural, industrial, and residential use (MEA 2005a).

Freshwater ecosystems provide services such as water for drinking, household uses, manufacturing, thermoelectric power generation, irrigation, and aquaculture; production of finfish, waterfowl, and shellfish; and non-extractive services, such as flood control, transportation, recreation (e.g., swimming and boating), pollution dilution, hydroelectric generation, wildlife habitat, soil fertilization, and enhancement of property values (Postel and Carpenter 1997).

Marine ecosystems provide a number of ecosystem services, including fish production; materials cycling (e.g., nitrogen, carbon, oxygen, phosphorous, and sulfur); transformation, detoxification, and sequestration of pollutants and wastes produced by humans; support of ocean-based recreation, tourism, and retirement industries; and coastal land development and valuation, including aesthetics related to living near the ocean (Peterson and Lubchenco 1997).

Costanza et al. (2014) estimated the value of ecosystem services, by general categories of ecosystem type. Their estimates, based on data analysis conducted in 2011 and using the 2007 value of the U.S. dollar, are provided in Table 4.5. The ecosystem categories providing the highest values of ecosystem services by acre per year were coral reefs (\$142,661 per acre per year), followed by tidal marshes and mangrove wetlands (\$78,506 per acre per year). Forested and floodplain wetlands had a value of \$10,401 per acre per year.

Table 4.5 – Estimates of the value of ecosystem services, by ecosystem category (Costanza et al. 2014)

| Ecosystem category | 2007\$ per acre per year |
|-------------------------|--------------------------|
| Marine | 554 |
| open ocean | 24 |
| coastal | 3,622 |
| • estuaries | 11,711 |
| • seagrass/algae beds | 11,711 |
| • coral reefs | 142,661 |
| • coastal shelf | 900 |
| Terrestrial | 1,985 |
| forest | 1,539 |
| • tropical | 2,180 |
| • temperate/boreal | 1,270 |
| grass/rangelands | 1,687 |
| wetlands | 56,770 |
| • tidal marsh/mangroves | 78,506 |
| • swamps/floodplains | 10,401 |
| lakes/rivers | 5,067 |
| desert | - |
| tundra | - |
| ice/rock | - |
| cropland | 2,255 |
| urban | 2,698 |

Activities authorized by this NWP will provide a wide variety of goods and services that are valued by society. For example, utility line activities for water and other substances are important components of residential, commercial, and industrial infrastructure, the operation of buildings, farms, and other facilities. These utility lines can provide potable water to residents, employees, customers, and other people, and they can carry sewage and wastewater to treatment plants and water reclamation and reuse facilities. They support commerce, education, and entertainment by supplying water and removing water-laden waste products to where they can be treated or properly disposed. They can also carry stormwater to where it can be treated and discharged back into appropriate waterbodies. When natural ecosystems are converted to human-dominated ecosystems, there are tradeoffs between the losses in ecosystem services provided by natural ecosystems and the gains in goods and services provided by land use changes, resource extraction, harvesting, and other activities (MEA 2005c). For thousands of years, human communities have altered landscapes and ecosystems to serve their needs, such as food, safety, and commerce, and made trade-offs by increasing certain ecosystem functions and services while reducing other ecosystem functions and services (Karieva et al. 2007).

4.4 Human Activities and Natural Factors that Affect the Quantity and Quality of Aquatic Ecosystems in the United States

The affected environment is the current environmental setting against which the environmental effects of the proposed action is evaluated, to determine whether the issuance of the NWP will have a significant impact on the quality of the human environment. The affected environment is also used as a basis for comparison to determine whether activities authorized by the NWP will result in no more than minimal individual and cumulative adverse environmental effects when added to the current environmental setting.

For thousands of years, humans have caused substantial impacts on ecosystems and the ecological functions and services they provide (Ellis et al. 2010, Evans and Davis 2018). Around the beginning of the 19th century, the degree of impacts of human activities on the Earth's ecosystems began to exceed the degree of impacts to ecosystems caused by natural disturbances and variability (Steffen et al. 2007). All of the Earth's ecosystems have been affected either directly or indirectly by human activities (Vitousek et al. 1997). Over 75 percent of the ice-free land on Earth has been altered by human occupation and use (Ellis and Ramankutty 2008). Approximately 33 percent of the Earth's ice-free land consists of lands heavily used by people: urban areas, villages, lands used to produce crops, and occupied rangelands (Ellis and Ramankutty 2008). For marine ecosystems, Halpern et al. (2008) determined that there are no marine waters that are unaffected by human activities, and that 41 percent of the area of ocean waters are affected by multiple anthropogenic stressors (e.g., land use activities that generate pollution that go to coastal waters, marine habitat destruction or modification, and the extraction of resources). The marine waters most highly impacted by human activities are continental shelf and slope areas, which are affected by both land-based and ocean-based human activities (Halpern et al. 2008). Human population density is a good indicator of the relative effect that people have had on local ecosystems, with lower population densities causing smaller impacts to ecosystems and higher population densities having larger impacts on ecosystems (Ellis and Ramankutty 2008). Human activities such as urbanization, agriculture, and forestry alter ecosystem structure and function by changing their interactions with other ecosystems, their biogeochemical cycles, and their species composition (Vitousek et al. 1997). Changes in land use reduce the ability of ecosystems to produce ecosystem services, such as food production, reducing infectious diseases, and regulating climate and air quality (Foley et al. 2005).

Ecosystems are not separate from human communities, and they are interdependent and comprise a single social-ecological system (Folke et al. 2011). Social-ecological systems are altered by human activities, as well as natural perturbations and changing environmental conditions, but they possess resilience and adaptive capacities that allow them to continue to provide ecological functions and services when properly managed (Chapin et al. 2010). Social-ecological systems exist at a number of scales, ranging from local to regional to global (Folke

et al. 2010). Despite the prevalence of human activities altering landscapes and seascapes and the ecosystems within those landscapes and seascapes over long periods of time, many of those ecosystems continue to provide ecological functions and services to varying degrees (Clewell and Aronson 2013). Disturbances to ecosystems, landscapes, and seascapes may result in those systems recovering to their original state through biotic and abiotic characteristics and processes that provide resilience, or those systems may be transformed to a different ecological state (i.e., an alternative stable state) (van Andel and Aronson 2012). From the perspective of social-ecological systems, resilience is defined by Folke et al. (2010) as the capacity of a social-ecological system to withstand disturbance and undergo changes, while retaining its ability to exhibit similar structure, functions, and interactions. If the ecosystem, landscape, or seascapes changes to an alternative stable state, the alternative stable state may be considered an improvement or degradation, depending on the perspective of the person evaluating the change (Backstrom et al. 2018, van Andel and Aronson 2012). This NWP will be used to authorize certain activities that require DA authorization in these social-ecological systems, and the potential environmental consequences of the reissuance of this NWP is evaluated under the current environmental setting and the potential impacts to jurisdictional waters and wetlands that may occur during the 5-year period this NWP is anticipated to be in effect. The environmental consequences of the reissuance of this NWP is also considered for the various public interest review factors in section 6.0 of this document, which include social and ecological components.

Recent changes in climate have had substantial impacts on natural ecosystems and human communities (IPCC 2014). Climate change, both natural and anthropogenic, is a major driving force for changes in ecosystem structure, function, and dynamics (Millar and Brubaker 2006). However, there are other significant drivers of change to aquatic and terrestrial ecosystems. In addition to climate change, aquatic and terrestrial ecosystems are also adversely affected by land use and land cover changes, natural resource extraction (including water withdrawals), pollution, species introductions, and removals of species (NAS and RS 2019, Staudt et al. 2013, Bodkin 2012, MEA 2005a) and changes in nutrient cycling (Julius et al. 2013). During the past century, changes to ecosystems have been driven primarily by changes in biological factors, such as land use/land cover changes and the spread of non-native species, but in the future changes in abiotic processes, such as climate change and nitrogen deposition, may become predominant drivers of ecosystem change (Radeloff et al. 2015). The current contribution of climate change to changes in ecosystems is small compared to other anthropogenic causes of change to ecosystems (Radeloff et al. 2015, Williams et al. 2019) that are identified above, especially land use and land cover changes.

The affected environment (i.e., the current environmental setting) has been shaped by a wide variety of human activities. Wetlands, streams, and other aquatic resources and the ecological functions and services they provide are directly and indirectly affected by changes in land use and land cover, alien species

introductions, overexploitation of species, pollution, eutrophication due to excess nutrients, resource extraction including water withdrawals, climate change, and various natural disturbances (MEA 2005a). A more detailed list of activities is provided below in Table 4.6. Activities regulated and authorized by the Corps under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 through NWP_s, individual permits, letters of permission, and regional general permits comprise a small subset of those activities. The impacts of human activities have altered, to some degree, all ecosystems, including the quantity and quality of wetlands, streams, and other aquatic resources in the United States, and the ecological functions and services they provide. Other federal, non-federal, and private activities also contribute to the current environmental setting by changing the quantity and quality of aquatic resources and the ecological functions and services they provide. Human activities that have affected ecosystems, landscapes, and seascapes may have legacy effects that continue under the current environmental setting and affected the quantity of those resources and the ecological functions and services they provide.

Table 4.6 – Human activities and natural factors that cause changes in aquatic ecosystems and the functions and services they perform

| Resource type(s) | Human activities and natural factors that drive ecosystem change | Reference(s) |
|---------------------------------|---|---|
| wetlands and waters (generally) | <ul style="list-style-type: none"> • land use/land cover changes • alien species introductions • species overexploitation • pollution • eutrophication • resource extraction (e.g., water withdrawals) • climate change • natural disturbances | MEA (2005a) |
| rivers and streams | <ul style="list-style-type: none"> • agriculture • urban development • industrial development • deforestation • mining • water removal • flow alteration • invasive species • point source and non-point source pollution • dams (hydroelectric, water supply) and navigational aids such as locks • dredging • erosion • filling • overfishing • road construction • drainage and channelization • sediment deposition • boating | Palmer et al. (2010) Carpenter et al. (2011) Allan (2004) NRC (1992) |

| Resource type(s) | Human activities and natural factors that drive ecosystem change | Reference(s) |
|-------------------------|--|--|
| wetlands | <ul style="list-style-type: none"> • wetland conversion through drainage, dredging, and filling • hydrologic modifications that change wetland hydrology and hydrodynamics • pollutants (point source and non-point source), including nutrients and contaminants • waterfowl and wildlife management activities • agriculture and aquaculture activities • flood control and stormwater protection (e.g., severing hydrologic connections between rivers and floodplain wetlands) • silvicultural activities • agricultural activities • urban development • mining activities • water withdrawals, aquifer depletion • river management (e.g., channelization, navigation improvements, dams, locks, weirs) • altered sediment transport • introductions of non-native species • land subsidence, erosion | Mitsch and Gosselink (2015) Mitsch and Hernandez (2013) Wright et al. (2006) Zedler and Kercher (2005) Brinson and Malvárez (2002) |
| seagrass beds | <ul style="list-style-type: none"> • dredging • coastal development activities • degradation of water quality • sediment and nutrient runoff from adjacent lands • physical disturbances • natural processes, such as herbivore grazing, physical disturbances caused by waves and tidal currents • invasive species • diseases • commercial fishing activities • aquaculture • algal blooms • low light availability • nutrient limitations • global climate change | Borum et al. (2013) Waycott et al. (2009) Orth et al. (2006) |

| | | |
|---------------|---|--|
| coral reefs | <ul style="list-style-type: none"> • overexploitation/overfishing • destructive fishing practices • nutrients, sediments, pesticides, and other pollutants (point source and non-point source) • nutrient loading • changes in storm frequency and intensity • increasing ocean surface temperatures • ocean acidification • coastal land uses, including development and agriculture • coral mining • sea level rise • invasive species • diseases • bleaching • global climate change | Sheppard (2014) MEA (2005a) Hughes et al. (2003) |
| coastal areas | <ul style="list-style-type: none"> • development activities, including the construction of residences, commercial buildings, industrial facilities, resorts, and port developments • agricultural and forestry activities • point source and non-point source pollution (nutrients, organic matter, other pollutants) • aquaculture • fishing activities • overharvesting of species • intentional and unintentional introductions of non-native species • dredging • reclamation • shore protection and other structures • habitat modifications • changes to hydrology and hydrodynamics • global climate change • shoreline erosion • pathogens and toxins • debris and litter | Robb (2014) Day et al. (2013) Lotze et al. (2006) MEA (2005b) NRC (1994) |
| oceans | <ul style="list-style-type: none"> • pollution (point and non-point source) • fishing activities • changes in sea temperatures • ultraviolet light • ocean acidification • species invasions • commercial activities • other human activities • benthic structures • offshore energy infrastructure (e.g., wind farms, pipelines) | Halpern et al. (2015) Halpern et al. (2008) |

Wetlands, streams, and other aquatic resources and the functions and services they provide are directly and indirectly affected by changes in land use and land cover, alien species introductions, overexploitation of species, pollution, eutrophication due

to excess nutrients, resource extraction including water withdrawals, climate change, and various natural disturbances (MEA 2005a). Freshwater ecosystems such as lakes, rivers, and streams are altered by changes to water flow, climate change, land use changes, additions of chemicals, resource extraction, and aquatic invasive species (Carpenter et al. 2011). Cumulative effects to wetlands, streams, and other aquatic resources that form the current environmental setting are the result of landscape-level processes (Gosselink and Lee 1989). As discussed in more detail below, cumulative or aggregate effects to aquatic resources are caused by a variety of activities (including activities that occur entirely in uplands) that take place within a landscape unit, such as the watershed for a river or stream (e.g., Allan 2004, Paul and Meyer 2001, Leopold 1968) or the contributing drainage area for a wetland (e.g., Wright et al. 2006, Brinson and Malvárez 2002, Zedler and Kercher 2005).

There is little national-level information on the current ecological state of the Nation's wetlands, streams, and other aquatic resources, or the general degree to which they perform various ecological functions, although reviews have acknowledged that most of these aquatic resources are degraded to some degree (Zedler and Kercher 2005, Allan 2004) or impaired (U.S. EPA 2015) because of various activities, disturbances, and other stressors. Therefore, the analysis in this environmental assessment is a qualitative analysis.

There is a wide variety of causes and sources of impairment of the Nation's rivers, streams, wetlands, lakes, estuarine waters, and marine waters (U.S. EPA 2015), which also contribute to cumulative effects to these aquatic resources. Many of those causes of impairment are point and non-point sources of pollutants that are not regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Two common causes of impairment for rivers and streams, habitat alterations and flow alterations, may be due in part to activities regulated by the Corps under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. Habitat and flow alterations may also be caused by activities that do not involve discharges of dredged or fill material or structures or work in navigable waters. For wetlands, impairment due to habitat alterations, flow alterations, and hydrology modifications may involve activities regulated under section 404, but these causes of impairment may also be due to unregulated activities, such as changes in upland land use that affects the movement of water through a watershed or contributing drainage area or the removal of vegetation.

The Millennium Ecosystem Assessment (MEA 2005a) broadly defines wetlands as inland wetlands (e.g., swamps, marshes, lakes, rivers, peatlands, and underground water habitats), coastal and near-shore marine wetlands (e.g., coral reefs, mangroves, seagrass beds, and estuaries), and human-made wetlands (e.g., rice fields, dams, reservoirs, and fish ponds). According to the MEA (2005a), the principal drivers of direct change to estuarine and marine wetlands include the conversion of saltwater marshes, mangroves, seagrass meadows, and coral reefs

to other land uses, diversions of freshwater flows, increased inputs of nitrogen, overharvesting various species, water temperature changes, and species introductions. These changes are indirectly driven by increases in human populations in coastal areas (MEA 2005a). Robb (2014) identified a number of threats to estuaries and estuarine habitats such as salt marshes, seagrass beds, and sand flats. Those threats include land-based activities in surrounding watersheds, such as development activities, agricultural activities, forestry activities, pollution, freshwater diversions, shoreline stabilization, waterway impairments, and inputs of debris and litter. With respect to activities occurring directly in coastal waters, Robb (2014) identified the following threats: shoreline development, the construction and operation of port facilities, dredging, marine pollution, aquaculture activities, resource extraction activities, species introductions, and recreational activities. Changing climate conditions also pose threats to estuaries through sea level rise, changing water temperatures, ocean acidification, and changing precipitation patterns (Robb 2014).

Marine and coastal waters are affected by human activities in the ocean, coastal areas, and watersheds that drain to those marine and coastal waters (Korpinen and Andersen 2016). In marine and coastal environments, human activities and other disturbances that affect resources in those waters can come from a variety of sources, including water-based activities (e.g., transportation, fishing, mariculture, power generation, and tourism) and land-based activities (e.g., urban and suburban development, agriculture, non-point source pollution, forestry activities, power generation, and mining activities) (Clark Murray et al. 2014).

Activities that affect wetland quantity and quality include: land use changes that alter local hydrology (including water withdrawal), clearing and draining wetlands, constructing levees that sever hydrologic connections between rivers and floodplain wetlands, constructing other obstructions to water flow (e.g., dams, locks), constructing water diversions, inputs of nutrients and contaminants, and fire suppression (Brinson and Malvárez 2002). Wetland loss and degradation is caused by hydrologic modifications of watersheds, drainage activities, logging, agricultural runoff, urban development, conversion to agriculture, aquifer depletion, river management, (e.g., channelization, navigation improvements, dams, weirs), oil and gas development activities, levee construction, peat mining, and wetland management activities (Mitsch and Hernandez 2013). Upland development adversely affects wetlands and reduces wetland functionality because those activities change surface water flows and alter wetland hydrology, contribute stormwater and associated sediments, nutrients, and pollutants, cause increases in invasive plant species abundance, and decrease the diversity of native plants and animals (Wright et al. 2006). Many of the remaining wetlands in the United States are degraded (Zedler and Kercher 2005). Wetland degradation and losses are caused by changes in water movement and volume within a watershed or contributing drainage area, altered sediment transport, drainage, inputs of nutrients from non-point sources, water diversions, fill activities, excavation activities, invasion by non-native species, land subsidence, and pollutants (Zedler and

Kercher 2005). According to Mitsch and Gosselink (2015), categories of activities that alter wetlands include: wetland conversion through drainage, dredging, and filling; hydrologic modifications that change wetland hydrology and hydrodynamics; highway construction and its effects on wetland hydrology; peat mining; waterfowl and wildlife management; agriculture and aquaculture activities; water quality enhancement activities; and flood control and stormwater protection.

The ecological condition of rivers and streams is dependent on the state of their watersheds (NRC 1992), because they are affected by activities that occur in those watersheds, including agriculture, urban development, deforestation, mining, water removal, flow alteration, and invasive species (Palmer et al. 2010, Allan 2004). Land use changes affect rivers and streams through increased sedimentation, larger inputs of nutrients (e.g., nitrogen, phosphorous) and pollutants (e.g., heavy metals, synthetic chemicals, toxic organics), altered stream hydrology, the alteration or removal of riparian vegetation, and the reduction or elimination of inputs of large woody debris (Allan 2004). Agriculture is the primary cause of stream impairment, followed by urbanization (Foley et al. 2005, Paul and Meyer 2001). Agricultural land use adversely affects stream water quality, habitat, and biological communities (Allan 2004). Urbanization causes changes to stream hydrology (e.g., higher flood peaks, lower base flows), sediment supply and transport, water chemistry, and aquatic organisms (Paul and Meyer 2001). Leopold (1968) found that land use changes affect the hydrology of an area by altering stream flow patterns, total runoff, water quality, and stream structure. Changes in peak flow patterns and runoff affect stream channel stability. Stream water quality is adversely affected by increased inputs of sediments, nutrients, and pollutants, many of which come from non-point sources (Paul and Meyer 2001, Allan and Castillo 2007).

The construction and operation of water-powered mills in the 17th to 19th centuries substantially altered the structure and function of streams in the eastern United States (Walter and Merritts 2008) and those effects have persisted to the present time. In urbanized and agricultural watersheds, the number of small streams has been substantially reduced, in part by activities that occurred between the 19th and mid-20th centuries (Meyer and Wallace 2001). Activities that affect the quantity and quality of small streams include residential, commercial, and industrial development, mining, agricultural activities, forestry activities, and road construction (Meyer and Wallace 2001), even if those activities are located entirely in uplands.

Waycott et al. (2009) estimated that the areal extent of seagrass beds across the world has declined by nearly 30 percent since the late 19th century. They identified two main categories of causes for that decline: direct impacts from dredging and coastal development activities, and indirect impacts from degradation of water quality. Submersed aquatic vegetation is affected by a wide variety of human activities such as dredging in seagrass meadows, anchoring vessels in seagrass beds, coastal development activities, increased sediment inputs from a variety of sources including land development activities, habitat conversions resulting from mariculture activities, increased nutrient inputs to coastal waters, and climate

change (MEA 2005a). According to Orth et al. (2006), seagrasses are threatened by numerous stressors, such as sediment and nutrient runoff from adjacent lands, physical disturbances, overgrazing, invasive species, diseases, commercial fishing activities, aquaculture, algal blooms, and global climate change. Human activities that contribute to cumulative effects to submerged aquatic vegetation include coastal development, hard shore stabilization structures, land uses changes in surrounding watersheds that increase inputs of sediments, nutrients, and pollutants to waters inhabited (or could be inhabited) by seagrasses, discharges of pollutants directly into waters, aquaculture activities, and boating activities (Orth et al. 2017, Orth et al. 2006). Orth et al. (2017, 2006) did not quantify how frequently each of these stressors pose threats to seagrasses. the relative contributions of each of the identified human activities that affect seagrasses. Submersed aquatic vegetation may be affected by natural processes, such as herbivore grazing, physical disturbances caused by waves and tidal currents, and other stressors such as low light availability, higher temperatures, or nutrient limitations (Borum et al. 2013). Boating activities (e.g., mooring, use of propellers) and fish and shellfish harvesting activities can also contribute to cumulative impacts to submersed aquatic vegetation beds (Fonseca et al. 1998). The recovery of submersed aquatic vegetation from anthropogenic and natural disturbances can vary by species, and is dependent in part on the reproductive mechanisms of those species (Borum et al. 2013, Fonseca et al. 1998). At the meadow or landscape scale, seagrass beds can fully recover after disturbance within 5 years, but recovery can take longer if there are persistent environmental changes persist or seagrass seeds or other propagules are not available to reestablish seagrasses in the affected area (O'Brien et al. 2018).

A variety of human activities have caused, and are continuing to cause declines in corals and coral reefs. Coral reefs are adversely affected by pollution, including sedimentation, excess nutrients, oil discharges, pesticides, and sewage (Sheppard 2014; MEA 2005a; Hughes et al. 2003). Shoreline development activities, development activities in watersheds draining to coastal waters, and agriculture activities in coastal watersheds also contribute to declines in corals and coral reefs (Sheppard 2014; MEA 2005a; Hughes et al. 2003). The pollution may be in runoff from nearby lands or discharged directly into waters inhabited by corals. Corals and coral reefs are also harmed by overexploitation, including overfishing, as well as destructive fishing practices (MEA 2005a) and anchors used by boats (Sheppard 2014). Climate change and associated increases in storm frequency and intensity, diseases, water temperatures, and coral bleaching also contribute to declines in corals and coral reefs (Sheppard 2014; MEA 2005a; Hughes et al. 2003). Invasive species have also affected corals and coral reefs (Sheppard 2014).

For aquatic ecosystems, climate change affects water quality, biogeochemical cycling, and water storage (Julius et al. 2013). Climate change will also affect the abundance and distribution of wetlands across the United States, as well as the functions they provide (Mitsch and Gosselink 2015). Climate change results in increases in stream temperatures, more waterbodies with anoxic conditions, degradation of water quality, and increases in flood and drought frequencies (Julius

et al. 2013). The increasing carbon dioxide concentration in the atmosphere also changes the pH of the oceans, resulting in ocean acidification (RS and NAS 2014), which adversely affects corals and some other marine organisms.

In the United States, approximately 39 percent of its population lives in counties that are next to coastal waters, the territorial seas, or the Great Lakes (NOAA 2013). Those counties comprise less than 10 percent of the land area of the United States (NOAA 2013). Humans have been altering estuarine waters and coastal areas for millennia, but those changes have rapidly accelerated over the past 150 to 300 years (Lotze et al. 2006). Coastal waters are also affected by a wide variety of activities. Day et al. (2013) identified the following general categories of human activities that impact estuaries: physical alterations (e.g., habitat modifications and changes in hydrology and hydrodynamics), increases in inputs of nutrients and organic matter (enrichment), releases of toxins, and changes in biological communities as a result of harvesting activities and intentional and unintentional introductions of new species. The major drivers of changes to coastal areas are: development activities that alter coastal forests, wetlands, and coral reef habitats for aquaculture and the construction of urban areas, industrial facilities, and resort and port developments (MEA 2005b). Dredging, reclamation, shore protection and other structures (e.g., causeways and bridges), and some types of fishing activities also cause substantial changes to coastal areas (MEA 2005b). Nitrogen pollution to coastal zones change coral reef communities (MEA 2005b). Adverse effects to coastal waters are caused by habitat modifications, point source pollution, non-point source pollution, changes to hydrology and hydrodynamics, exploitation of coastal resources, introduction of non-native species, global climate change, shoreline erosion, and pathogens and toxins (NRC 1994). Over the course of history, in estuarine waters human activities caused declines of greater than 90 percent of important species, losses of more than 65 percent of seagrasses and wetland habitat, substantially degraded water quality, and facilitated introductions of new species (Lotze et al. 2006).

Substantial alterations of coastal hydrology and hydrodynamics are caused by land use changes in watersheds draining to coastal waters, the channelization or damming of streams and rivers, water consumption, and water diversions (NRC 1994). Approximately 52 percent of the population of the United States lives in coastal watersheds (NOAA 2013). Eutrophication of coastal waters is caused by nutrients contributed by waste treatment systems, non-point sources, and the atmosphere, and may cause hypoxia or anoxia in coastal waters (NRC 1994). Changes in water movement through watersheds may also alter sediment delivery to coastal areas, which affects the sustainability of wetlands and intertidal habitats and the functions they provide (NRC 1994). Most inland waters in the United States drain to coastal areas, and therefore activities that occur in inland watersheds affect coastal waters (NRC 1994). Inland land uses, such as agriculture, urban development, and forestry, adversely affect coastal waters by diverting fresh water from estuaries and by acting as sources of nutrients and pollutants to coastal waters (MEA 2005b).

Coastal wetlands have been substantially altered by urban development and changes to the watersheds that drain to those wetlands (Mitsch and Hernandez 2013). Coastal habitat modifications are the result of dredging or filling coastal waters, inputs of sediment via non-point sources, changes in water quality, or alteration of coastal hydrodynamics (NRC 1994). Coastal development activities, including those that occur in uplands, affect marine and estuarine habitats (MEA 2005a). The introduction of non-native species may change the functions and structure of coastal wetlands and other habitats (MEA 2005a). Fishing activities may also modify coastal habitats by changing habitat structure and the biological communities that inhabit those areas (NRC 1994).

In order to effectively understand and manage ecosystems, including aquatic ecosystems, it is necessary to take into account how people and societies have reshaped aquatic and terrestrial resources over time (Ellis 2015), through the effects of human activities on those ecosystems. This includes permitting programs that regulate activities in aquatic resources and other types of natural resources. The current state of an ecosystem (e.g., a wetland or an estuary) can range from “near natural” (i.e., minimally disturbed) to semi-natural to production systems such as agricultural lands to overexploited (i.e., severely impaired) (van Andel and Aronson 2012). Degradation occurs when an ecosystem is subjected to a prolonged disturbance (Clewell and Aronson 2013), and the degree of degradation can be dependent, in part, on the severity of disturbance. Disturbances can be caused by human activities or by natural events, such as changes to ecosystems caused by ecosystem engineers (e.g., beavers) and other organisms, storms, fires, or earthquakes. Two important factors that affect how aquatic ecosystems and other ecosystems respond to disturbances are resistance and resilience.

For ecosystems, stability is the ability of an ecosystem to return its starting state after one or more disturbances cause a significant change in environmental conditions (van Andel et al. 2012). Resistance is the ability of an ecosystem to exhibit little or no change in structure or function when exposed to a disturbance (van Andel et al. 2012). Resilience is the ability of an ecosystem to regain its structural and functional characteristics in a relatively short amount of time after it has been exposed to a disturbance (van Andel et al. 2012). Human activities can change the resilience of ecosystems (Gunderson 2000). In some situations, resilience can be a positive attribute (e.g., the ability to withstand disturbances), and in other situations, resilience can be a negative attribute (e.g., when it is not possible to restore ecosystem because it has changed to the degree where it is resistant to being restored) (Walker et al. 2004). The concept of ecological resilience presumes the existence of multiple stable states, and the ability of ecosystems to tolerate some degree of disturbance before transitioning to an alternative (different) stable state (Gunderson 2000). A regime shift (i.e., a change from one stable state to an alternative stable state) can occur when human activities reduce the resilience of an ecosystem, or functional groups of species within that ecosystem, or when there are changes in the magnitude, frequency, and duration of

disturbances (Folke et al. 2004). Folke et al. (2004) and Gunderson (2000) provide examples of aquatic ecosystems that can exist in multiple stable states.

An example of a regime change in an estuary is a shift from an estuary with clear waters and benthic communities dominated by seagrasses, to an estuary with turbid waters dominated by phytoplankton that has insufficient light for seagrasses to grow and persist (Folke et al. 2004). Another example of a regime shift is where an increase in nutrients to a wetland (likely from many sources in the area draining to that wetland) causes a wetland's plant community from a diverse plant community dependent on low nutrient levels to a monotypic plant community dominated by an invasive species that can persist under the higher nutrient levels (Gunderson 2000).

Determining whether an ecosystem altered by human activities is degraded or in an alternative stable state depends on the perspective of the person making that judgment (Hobbs 2016). That judgment is dependent in part on the ecological functions and services currently being provided by the alternative stable state and the value local stakeholders place on those ecosystem functions and services. In other words, different people may have different views on the current ecological state of a particular ecosystem (Hobbs 2016, Walker et al. 2004): some people may think it is degraded and other people may think it continues to provide important ecological functions and services. It is also important to understand that degradation falls along a continuum, ranging from minimally degraded to severely degraded, since all ecosystems have been directly or indirectly altered by human activities to some degree. Degraded ecosystems can continue to provide important ecological functions and services, although they may be different from what they provided historically. In summary, the affected environment or current environmental setting consists of a variety of aquatic and terrestrial resources that have been subjected to varying degrees of disturbance by human activities, and provide different degrees of aquatic resource functions and services.

5.0 Environmental Consequences

5.1 General Evaluation Criteria

This document contains a general assessment of the reasonably foreseeable effects of the individual activities authorized by this NWP and the anticipated cumulative effects of the activities authorized by this NWP during the 5-year period it is anticipated to be in effect. In the assessment of these individual and cumulative effects, the terms and limits of the NWP, pre-construction notification requirements, and the standard NWP general conditions are considered. The NWP general conditions include mitigation measures that reduce individual and cumulative adverse environmental effects. The supplemental documentation provided by division engineers will address how regional conditions affect the individual and cumulative effects of the NWP.

The environmental effects of proposed activities are evaluated by assessing the direct and indirect effects that those activities have on the current environmental setting (Canter 1996). The current environmental setting is the product of the cumulative or aggregated effects of human activities that have persisted over time, as well as the natural processes that have influenced, and continue to influence, the structure, functions, and dynamics of ecosystems. The current environmental setting includes the present effects of past activities authorized by previously issued versions of this NWP and other NWPs. The current environmental setting can vary substantially in different areas of the country and in different waterbodies. The current environmental setting is dependent in part on the degree to which past and present human activities have altered aquatic and terrestrial resources in a particular geographic area over time. For a particular site in which an NWP may take place, the current environmental setting can range from highly developed/overexploited (e.g., urban areas, where human impacts to ecosystems are highest) to production systems (e.g., agricultural lands) to seminatural (e.g., parks) to near natural (e.g., wilderness areas, where human impacts to ecosystems are lowest) (van Andel and Aronson 2012). Human impacts on semi-natural ecosystems are lower than human impacts to production ecosystems (van Andel and Aronson 2012). Since humans have altered aquatic and terrestrial environments in numerous, substantial ways for thousands of years (e.g., Evans and Davis 2018, Ellis 2015), the current environmental setting takes into account how human activities and changing biotic and abiotic conditions have modified existing aquatic and terrestrial resources.

The terms “cumulative effects” and “cumulative impacts” have been defined in various ways. For example, the National Research Council (NRC) (1986) defined “cumulative effects” as the on-going degradation of ecological systems caused by repeated perturbations or disturbances. MacDonald (2000) defines “cumulative effects” as the result of the combined effects of multiple activities that occur in a particular area that persist over time. Cumulative effects are caused by the interaction of multiple activities in a landscape unit, such as a watershed or ecoregion (Gosselink and Lee 1989). Cumulative effects can accrue in a number of ways. Cumulative effects can occur when there are repetitive disturbances at a single site over time, and the resource is not able to fully recover between each disturbance. Cumulative effects can also occur as a result of multiple activities occurring in a geographic area over time.

Consistent with the definitions cited above, the cumulative impacts of this NWP are the product of how many times this NWP is used to authorize structures and work in navigable waters of the United States and discharges of dredged or fill material into waters of the United States across the country during the 5-year period this NWP is anticipated to be in effect. In section 8.2.2 of this document, the Corps estimates the number of times this NWP will be used during the 5-year period it is expected to be in effect, as well as estimates of the acreage of permanent and temporary impacts, and the acreage of compensatory mitigation required by district engineers to offset

losses of jurisdictional waters and wetlands. The individual and cumulative impacts of activities authorized by this NWP are evaluated against the current environmental setting. This approach is consistent with the Council on Environmental Quality's definition of "effects or impacts" at 40 CFR 1508.1(g): "Effects or impacts means changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives." The estimated use of this NWP, as well as the estimated authorized impacts and required compensatory mitigation, over the next 5 years are reasonably foreseeable and have a reasonably close causal relationship to the issuance of this NWP.

The following evaluation comprises the NEPA analysis, the public interest review specified in 33 CFR 320.4(a)(1) and (2), and the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230).

The issuance of an NWP is based on a general assessment of the effects on public interest and environmental factors that are likely to occur as a result of using this NWP to authorize activities in waters of the United States. As such, this assessment must be speculative or predictive in general terms. Since NWPs authorize activities across the nation, projects eligible for NWP authorization may be constructed in a wide variety of environmental settings, and affect waters and wetlands of varying quality, from severely degraded to performing one or more functions to a high degree. Nationwide permit activities may result in permanent or temporary losses of aquatic resources, or partial or complete losses of aquatic resources. Therefore, it is difficult to predict all of the direct and indirect impacts that may be associated with each activity authorized by an NWP. For example, the NWP that authorizes 25 cubic yard discharges of dredged or fill material into various types of waters of the United States may be used to fulfill a variety of project purposes, and the direct and indirect effects may vary depending on the specific activity and the environmental characteristics of the site in which the activity takes place. Therefore, certain NWPs require pre-construction notification for certain activities to provide district engineers the opportunity to review proposed activities on a case-by-case basis and determine whether they will result in no more than minimal individual and cumulative adverse environmental effects.

Indication that a factor is not relevant to a particular NWP does not necessarily mean that the NWP would never have an effect on that factor, but that it is a factor not readily identified with the authorized activity. Factors may be relevant, but the adverse effects on the aquatic environment are negligible, such as the impacts of a boat ramp on water level fluctuations or flood hazards. Consistent with 40 CFR 1501.8(g), only the reasonably foreseeable effects or impacts that have a reasonably close causal relationship to the activities authorized as a result of the issuance of this NWP are evaluated in detail in the environmental assessment for this NWP. Division and district engineers will impose, as necessary, additional conditions on the NWP authorization or exercise discretionary authority to address regionally or locally important factors or to ensure that the authorized activity results

in no more than minimal individual and cumulative adverse environmental effects. In any case, adverse effects will be controlled by the terms, conditions, and additional provisions of the NWP. For example, Section 7 Endangered Species Act consultation will be required for all activities that may affect endangered or threatened species or critical habitat (see 33 CFR 330.4(f) and NWP general condition 18).

In a specific watershed, division or district engineers may determine that the cumulative adverse environmental effects of activities authorized by this NWP are more than minimal. Division and district engineers will conduct more detailed assessments for geographic areas that are determined to be potentially subject to more than minimal cumulative adverse environmental effects. Division and district engineers have the authority to require individual permits in watersheds or other geographic areas where the cumulative adverse environmental effects are determined to be more than minimal, or add conditions to the NWP either on a case-by-case or regional basis to require mitigation measures to ensure that the cumulative adverse environmental effects of these activities are no more than minimal. When a division or district engineer determines, using local or regional information, that a watershed or other geographic area is subject to more than minimal cumulative adverse environmental effects due to the use of this NWP, he or she will use the revocation and modification procedure at 33 CFR 330.5. In reaching the final decision, the division or district engineer will compile information on the cumulative adverse effects and supplement the information in this document.

The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design their projects within the scope of the NWP rather than request individual permits for projects which could result in greater adverse impacts to the aquatic environment. The minimization encouraged by the issuance of this NWP, as well as compensatory mitigation that may be required for specific activities authorized by this NWP, is likely to help reduce cumulative effects to the Nation's wetlands, streams, and other aquatic resources.

5.2 Impact Analysis

This NWP authorizes activities (i.e., structures or work in navigable waters of the United States and/or discharges of dredged or fill material into waters of the United States) for the construction, maintenance, repair, or removal of utility line activities for water and other substances, as well as associated facilities. The acreage limit for this NWP is 1/2 acre.

Pre-construction notification is required if: (1) a section 10 permit is required; or (5) discharges result in the loss of greater than 1/10-acre of waters of the United States. The pre-construction notification requirement allows district engineers to review proposed activities on a case-by-case basis to ensure that the individual and cumulative adverse environmental effects of those activities are no more than

minimal. If the district engineer determines that the adverse environmental effects of a particular project are more than minimal after considering mitigation, then discretionary authority will be asserted and the project proponent will be notified that another form of DA authorization, such as a regional general permit or individual permit, is required (see 33 CFR 330.4(e) and 330.5).

The potential impacts of activities authorized by this NWP on the Corps' public interest review factors listed in 33 CFR 320.4(a)(1) are discussed in more detail in section 6.0 of this document. The potential impacts on the aquatic environment that could be caused by discharges of dredged or fill material into waters of the United States authorized by this NWP are discussed, in general terms, in section 8.0 of this document in the Clean Water Act Section 404(b)(1) Guidelines analysis.

The terms of this NWP, including any acreage limits or any other quantitative limits in the text of the NWP, the protections provided by many of the NWP general conditions, plus any regional conditions imposed by division engineers and activity-specific conditions imposed by district engineers will help ensure that the activities authorized by this NWP result in no more than minimal individual and cumulative adverse environmental effects. An additional safeguard is the ability of district engineers to exercise discretionary authority and require project proponents to obtain individual permits for proposed activities whenever a district engineer determines that a proposed activity will result in more than minimal individual or cumulative adverse environmental effects after considering any mitigation proposed by the applicant (see 33 CFR 330.1(e)(3)).

The Council on Environmental Quality's NEPA regulations at 40 CFR 1508.1(g) defines "effects or impacts" as "changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives, including those effects that occur at the same time and place as the proposed action or alternatives and may include effects that are later in time or farther removed in distance from the proposed action or alternatives." Furthermore, 40 CFR 1508.1(g)(2) states that:

- [a] "but for" causal relationship is insufficient to make an agency responsible for a particular effect under NEPA. Effects should generally not be considered if they are remote in time, geographically remote, or the product of a lengthy causal chain. Effects do not include those effects that the agency has no ability to prevent due to its limited statutory authority or would occur regardless of the proposed action.

Therefore, the impact analysis in this environmental assessment focuses on the impacts or effects that are reasonably foreseeable and have a reasonably close causal relationship to the activities authorized by this NWP under the Corps' permitting authorities (i.e., work in navigable waters regulated under Section 10 of

the Rivers and Harbors Act of 1899 and/or discharges of dredged or fill material into waters of the United States regulated under Section 404 of the Clean Water Act).

This NWP authorizes discharges of dredged or fill material into waters of the United States. The Corps' regulations define "dredged material" as "material that is excavated or dredged from waters of the United States." [33 CFR 323.2(c)] The term "discharge of dredged material" means "any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States." [33 CFR 323.2(d)(1)] The term "discharge of dredged material" includes, but is not limited to, (1) the addition of dredged material to a specified discharge site located in waters of the United States; (2) the runoff or overflow from a contained land or water disposal area; and (3) any addition, including redeposit other than incidental fallback, of dredged material, including excavated material, into waters of the United States which is incidental to any activity, including mechanized land clearing, ditching, channelization, or other excavation. [33 CFR 323.2(d)(1)]

Under 33 CFR 323.2(d)(2), the term "discharge of dredged material" does not include any of the following:

- (1) discharges of pollutants into waters of the United States resulting from the onshore subsequent processing of dredged material that is extracted for any commercial use (other than fill). These discharges are subject to section 402 of the Clean Water Act even though the extraction and deposit of such material may require a permit from the Corps or applicable State section 404 program.
- (2) Activities that involve only the cutting or removing of vegetation above the ground (e.g., mowing, rotary cutting, and chainsawing) where the activity neither substantially disturbs the root system nor involves mechanized pushing, dragging, or other similar activities that redeposit excavated soil material.
- (3) Incidental fallback.

The term "fill material" is defined at 33 CFR 323.2(e)(1) as meaning "material placed in waters of the United States where the material has the effect of: (1) replacing any portion of a water of the United States with dry land; or (2) changing the bottom elevation of any portion of a water of the United States. Examples of fill material include: "rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States." [33 CFR 323.2(e)(2)] "Fill material" does not include trash or garbage (see 33 CFR 323.2(e)(3)). Discharges of trash or garbage may be regulated under Section 402 of the Clean Water Act or other federal, state, or local laws and regulations.

The Corps' regulations define the term "discharge of fill material" as meaning "the addition of fill material into waters of the United States." [33 CFR 323.2(f)] Examples of discharges of fill material provided in section 323.2(f) include, but are not limited to, the following activities: (1) the placement of fill that is necessary for the construction of any structure or infrastructure in a water of the United States; (2) the building of any structure, infrastructure, or impoundment requiring rock, sand, dirt, or other material for its construction; (3) site-development fills for recreational, industrial, commercial, residential, or other uses; (4) causeways or road fills; (5) dams and dikes; (6) artificial islands; (7) property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; (8) beach nourishment; (9) levees; (10) fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and subaqueous utility lines; (11) placement of fill material for construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills; (12) placement of overburden, slurry, or tailings or similar mining-related materials; and (13) artificial reefs. Under 33 CFR 323.2(f), the term "discharge of fill material" does not include plowing, cultivating, seeding and harvesting for the production of food, fiber, and forest products.

Discharges of dredged or fill material into a jurisdictional water or wetland authorized under Section 404 of the Clean Water Act may result in the complete or partial loss of stream bed, wetland area, or area of another type of aquatic resource. That complete or partial loss of aquatic ecosystem area may result in a complete or partial loss of aquatic resource functions and services. The direct effects to jurisdictional waters and wetlands caused by activities authorized by this NWP may change those waters and wetlands to components of the built environment or uplands, convert an aquatic resource type to another aquatic resource type, or alter the functions and services provided by those waters and wetlands. The direct effects to jurisdictional waters and wetlands caused by activities authorized by this NWP may be permanent or temporary. The indirect effects to jurisdictional waters and wetlands caused by activities authorized by this NWP may also convert an aquatic resource type to another aquatic resource type. The indirect effects to jurisdictional waters and wetlands caused by activities authorized by this NWP may be permanent or temporary. The contribution of activities authorized by this NWP to cumulative or aggregate effects to ocean waters, estuarine waters, lakes, wetlands, streams, and other aquatic resources is also dependent on the degree or magnitude to which the potentially affected aquatic resources perform ecological functions and services. Nearly all ocean waters, estuaries, lakes, wetlands, streams, and other aquatic resources have been directly and indirectly affected by human activities over time (e.g., Halpern et al. 2008 for oceans, Lotze et al. 2006 for estuaries, Zedler and Kercher (2005) for wetlands, Allan 2004 for streams), including land uses in areas that drain to these aquatic resources.

This NWP also authorizes structures or work in navigable waters of the United States. Structures or work in navigable waters of the United States may alter the ecological functions and services performed by those navigable waters. The Corps'

regulations for Section 10 of the Rivers and Harbors Act of 1899 in 33 CFR part 322 define the term “structure” as including, “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 obstacle or obstruction.” [33 CFR 322.2(b)] The Corps’ section 10 regulations define the term “work” as including, “without limitation, any dredging or disposal of dredged material, excavation, filling, or other modification of a navigable water of the United States.” [33 CFR 322.2(c)] Under this NWP, the section 10 authorization applies to discharges of dredged or fill material into waters of the United States that are also navigable waters under Section 10 of the Rivers and Harbors Act of 1899.

Structures or work in navigable waters of the United States does not typically result in losses of navigable waters, but they may change the ecological functions and services performed by those waters. Examples of exceptions would include fills in navigable waters to create fast land along the shoreline, or artificial islands.

Structures and work in navigable waters may alter the physical, chemical, and biological characteristics of those waters, but they generally do not result in a loss in the quantity of navigable waters. Structures and work in navigable waters may alter the ecological functions and services provided by those waters. Those alterations will vary, depending on the specific characteristics of the specific activity authorized by this NWP and the environmental setting in which the NWP activity may occur.

The environmental setting will vary from site to site, and from region to region across the country.

The individual environmental impacts are the environmental impacts caused by an activity authorized by this NWP, including the direct and indirect impacts caused by the specific NWP activity at the project site. In the context of the Corps’ public interest review (33 CFR 320.4(a)(1) and Section 404(e) of the Clean Water Act, the cumulative environmental impacts are the environmental impacts caused by the activities authorized by this NWP during the 5-year period the NWP is anticipated to be in effect. Both the individual and cumulative environmental impacts are evaluated against the current environmental setting, which is described at a national scale in section 4.0 of this document. The current environmental setting varies substantially throughout the United States. In some areas of the country, the current environmental setting is the result of substantial alteration of waterbodies and other ecosystems by various human activities, but in other areas of the country, the current environmental setting has been less affected by various human activities, and those alterations are more subtle and more difficult to discern (Clewel and Aronson 2013). The categories of human activities that have altered aquatic ecosystems are discussed in section 4.4 of this document, and are summarized in Table 4.6. The types of ecological functions and services provided by aquatic ecosystems also vary considerably by region and by specific ecosystems, with some ecosystems performing ecological functions and services to a high degree, and other ecosystems performing ecological functions and services to a lesser degree.

The analysis of environmental consequences in this environmental assessment is a qualitative analysis because of the lack of quantitative data at a national scale on the various human activities and natural factors that may concurrently alter the current environmental setting during the 5-year period this NWP is expected to be in effect. As discussed in section 4.4, the activities authorized by this NWP are just one category among many categories of human activities and natural factors that affect ocean waters, estuarine waters, lakes, wetlands, streams, and other aquatic resources, and the ecological functions and services they provide.

As discussed in section 4.0 of this document and the Millennium Ecosystem Assessment (2005c), all ecosystems have been affected by human activities to some degree. According to Clewell and Aronson (2013), anthropogenic and natural disturbances to ecosystems can be placed in three categories: (1) stress with maintenance of ecosystem integrity; (2) moderate disturbance where the ecosystem can recover in time through natural processes; and (3) impairment, which may result in a more severe disturbance that may require human intervention (e.g., restoration) to prevent the ecosystem from changing into an alternative, perhaps less functional ecological state. Ecosystems can often tolerate gradual changes and continue to provide ecological functions and services before those changes reach a threshold, that when crossed, causes the ecosystem to change abruptly into an alternative stable state (Scheffer et al. 2001). For some ecosystems, multiple impacts or disturbances can cause an ecosystem to pass a threshold can result in substantial changes to that ecosystem, but for other ecosystems the changes may be more subtle (Folke et al. 2004). It is difficult to predict where these thresholds are, and ecosystems may exhibit little change before that threshold is reached (Scheffer et al. 2009).

The severity of potential impacts to aquatic resources caused by NWP activities is dependent, in part, on ecosystem resilience and resistance, whether the permitted impacts are temporary or permanent, and how the affected resources respond to the permitted impacts. Impacts to aquatic resources caused by NWP activities may result in a partial, total, or no loss of aquatic resource functions and services, depending on the specific characteristics of the NWP activity and the environmental setting in which those impacts occur. In addition, the duration of the adverse effects (temporary or permanent) caused by NWP activities, can be influenced by the resilience and resistance of the aquatic resource to disturbances caused by those NWP activities. Since there is considerable variation across the country in terms of the types of aquatic resources, the ecological functions and services they provide, and their resilience and resistances to disturbances caused by NWP activities, other human activities, and natural disturbances, the environmental consequences of the issuance of this NWP will vary by site and by region. Given the geographic scope in which this NWP can be used to authorize activities that require DA authorization and the wide variability in aquatic resource structure, functions, and dynamics from site to site and from region to region, the analysis of environmental consequences is a qualitative analysis.

The environmental effects or impacts that are likely to be caused by individual activities authorized by this NWP are evaluated against the current environmental setting (i.e., the affected environment, which is described at a national scale in section 4.0 of this document). The current environmental setting is the result of human activities altering ecosystems over thousands of years (Perring and Ellis 2013), as well as natural changes in environmental conditions that have occurred over time. Since historical baselines (i.e., the state of ecosystems in the absence of modifications caused by human activities) no longer exist in most areas, ecosystem management decisions should be made by using contemporary baselines that acknowledge how humans have dominated and changed ecosystems over long periods of time (Kopf et al. 2015). Permit decisions are an example of management decisions for ecosystems such as oceans, estuaries, lakes, rivers, streams, and wetlands, where the proposed impacts that require a permit are evaluated against the current environmental setting to decide whether the permit (e.g., an NWP authorization) should be issued by the regulatory authority.

The impacts of activities authorized by this NWP during the 5-year period it is anticipated to be in effect are evaluated against the current affected environment, to determine the potential severity of those anticipated impacts in light of the human alterations and natural changes to aquatic ecosystems that have occurred over time and space. This evaluation takes into account how the activities authorized by this NWP might affect aquatic ecosystems, the resilience of aquatic ecosystems, and the ability of aquatic ecosystems to continue to provide ecological functions and services after the authorized activities have occurred. When evaluating pre-construction notifications, district engineers should be taking into account the current environmental setting, as well as how the jurisdictional waters and wetlands might respond as a result of conducting the NWP activity, including how resilient those waters and wetlands are to disturbances caused by discharges of dredged or fill material and/or structures or work in navigable waters.

Compensatory mitigation required by district engineers for specific activities authorized by this NWP may help reduce the contribution of those activities to the cumulative effects caused by NWPs on the Nation's wetlands, streams, and other aquatic resources, by providing ecological functions to partially or fully replace some or all of the aquatic resource functions lost as a result of those activities. Mitigation requirements, including compensatory mitigation requirements for the NWPs, are described in general condition 23. Compensatory mitigation projects must also comply with the applicable provisions of 33 CFR part 332. District engineers will establish compensatory mitigation requirements on a case-by-case basis, after evaluating pre-construction notifications. Compensatory mitigation requirements for individual NWP activities will be specified through permit conditions added to NWP authorizations. When compensatory mitigation is required, the permittee is required to submit a mitigation plan prepared in accordance with the requirements of 33 CFR

332.4(c). Credits from approved mitigation banks or in-lieu fee programs may also be used to satisfy compensatory mitigation requirements for NWP authorizations. Monitoring is required to demonstrate whether the permittee-responsible mitigation project, mitigation bank, or in-lieu fee project is meeting its objectives and providing the intended aquatic resource structure and functions. If the compensatory mitigation project is not meeting its objectives, adaptive management will be required by the district engineer. Adaptive management may involve taking actions, such as site modifications, remediation, or design changes, to ensure the compensatory mitigation project meets its objectives (see 33 CFR 332.7(c)).

The estimated use of this NWP during the 5-year period the NWP is expected to be in effect and the estimated impacts to wetlands, streams, and other aquatic resources in the United States, plus the estimated acreage of compensatory mitigation, is provided in section 8.2.2 of this document. Division and district engineers will monitor the use of this NWP on a regional and case-specific basis, and under their authorities in 33 CFR 330.5(c) and (d), modify, suspend, or revoke NWP authorizations in situations when the use of the NWP will result in more than minimal cumulative adverse environmental effects. Because the activities authorized by this NWP constitute only a small proportion of the categories of human activities that directly and indirectly affect ocean waters, estuarine waters, lakes, wetlands, streams, and other aquatic resources, the activities authorized by this NWP over the next 5 years are likely to result in only a minor incremental change to the current environmental setting for ocean waters, estuarine waters, lakes, wetlands, streams, and other aquatic resources and the ecological functions and services they provide.

Under 33 CFR 330.4(f)(2), for an NWP activity proposed by a non-federal permittee, the district engineer will review the pre-construction notification and if she or he determines the proposed NWP activity may affect listed species or designated critical habitat, section 7 consultation will be conducted with the U.S. Fish and Wildlife Service (U.S. FWS) or National Marine Fisheries Service (NMFS) depending on which species the district engineer determined may be affected by the proposed NWP activity. During the ESA section 7 consultation process the U.S. FWS or NMFS will evaluate the effects caused by a proposed NWP activity, the environmental baseline, the status of the species and critical habitat, and the effects of any future state or private activities that are reasonably certain to occur within the action area. For formal ESA section 7 consultations, the U.S. FWS or NMFS will formulate their opinion as to whether the proposed NWP activity is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat (see 50 CFR 402.14(g)). The ESA section 7 consultation requirements may also be fulfilled through informal consultation, when the U.S. FWS or NMFS provide their written concurrence that the proposed activity is not likely to adversely affect endangered or threatened species or their designated critical habitat (see 50 CFR 402.13(c)).

When determining whether a proposed NWP activity will cause no more than

minimal individual and cumulative adverse environmental effects, 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 the 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. These criteria are listed in the NWPs in Section D, “District Engineer’s Decision.” The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

Additional conditions can be placed on proposed activities on a regional or case-by-case basis by division or district engineers to ensure that the activities have no more than minimal individual and cumulative adverse environmental effects. Regional conditions added to this NWP will be used to account for differences in aquatic resource functions, services, and values across the country, ensure that the NWP authorizes only those activities with no more than minimal individual and cumulative adverse environmental effects, and allow each Corps district to prioritize its workload based on where its efforts will best serve to protect the aquatic environment. Regional conditions can prohibit the use of an NWP in certain waters (e.g., high value waters or specific types of wetlands or waters. Specific NWPs can also be revoked on a geographic or watershed basis where the individual and cumulative adverse environmental effects resulting from the use of those NWPs are more than minimal.

In high value waters, division and district engineers can: 1) prohibit the use of the NWP in those waters and require an individual permit or regional general permit; 2) decrease the acreage limit for the NWP; 3) lower the pre-construction notification threshold of the NWP to require pre-construction notification for NWP activities with smaller impacts in those waters; 4) require pre-construction notification for some or all NWP activities in those waters; 5) add regional conditions to the NWP to ensure that the individual and cumulative adverse environmental effects are no more than minimal; or 6) for those NWP activities that require pre-construction notification, add special conditions to NWP authorizations, such as compensatory mitigation requirements, to ensure that the adverse environmental effects are no more than minimal. NWPs can authorize activities in high value waters as long as the individual and cumulative adverse environmental effects are no more than minimal.

The construction and use of fills for temporary access for construction may be authorized by NWP 33 or regional general permits. The related activity must meet the terms and conditions of the specified permit(s). If the activity is dependent on portions of a larger project that require an individual permit, this NWP will not apply. [See 33 CFR 330.6(c) and (d)]

5.3 Impact Analysis for Alternatives to the Proposed Action

5.3.1 No Action Alternative (Do Not Issue the Nationwide Permit)

The no action alternative would not achieve one of the goals of the Corps' Nationwide Permit Program, which is to regulate with little, if any, delay or paperwork certain activities having minimal impacts (33 CFR 330.1(b)). The no action alternative would also reduce the Corps' ability to pursue the current level of review for other activities that have greater adverse effects on the aquatic environment, including activities that require individual permits as a result of division or district engineers exercising their discretionary authority under the NWP program. The no action alternative would also reduce the Corps' ability to conduct compliance actions.

If this NWP is not available, substantial additional resources would be required for the Corps to evaluate these minor activities through the individual permit process, and for the public and federal, tribal, and state resource agencies to review and comment on the large number of public notices for these activities. In a considerable majority of cases, when the Corps publishes public notices for proposed activities that result in no more than minimal adverse environmental effects, the Corps typically does not receive responses to these public notices from either the public or federal, tribal, and state resource agencies. Therefore, processing individual permits for these minimal impact activities is not likely to result in substantive changes to those activities. Another important benefit of the NWP program that would not be achieved through the no action alternative is the incentive for project proponents to design their projects so that those activities meet the terms and conditions of an NWP. The Corps believes the NWPs have significantly reduced adverse effects to the aquatic environment because most applicants modify their activities that require DA authorization to comply with the NWPs and avoid the longer permit application review times and larger costs typically associated with the individual permit process.

Under the no action alternative, district engineers may issue regional general permits or programmatic general permits to authorize similar categories of activities that would have no more than minimal adverse environmental effects that could have been authorized by this NWP. However, those regional general permits or programmatic general permits may have different quantitative limits, different restrictions, and other permit conditions, and those quantitative limits, restrictions,

and permit conditions may result in the authorization of activities that have greater, similar, or lesser adverse environmental effects than the activities that would have been authorized by this NWP. Under the no action alternative, there may be differences in consistency in implementation of the Corps Regulatory Program among Corps districts. District engineers can tailor their regional general permits and programmatic general permits to effectively address the specific categories of aquatic resources found in their geographic areas of responsibility, the specific categories of activities that occur in those geographic areas, and the ecological functions and services those categories of aquatic resources provide. The environmental consequences of this aspect of the no action alternative are more difficult to predict because of the potential variability of regional general permits and programmatic general permits among Corps districts across the country, when such general permits are available to authorize a similar category of activities as this NWP authorizes.

If this NWP is not issued, districts would have to draft, propose, and issue regional general permits or programmatic general permits through the public notice and comment process and prepare applicable environmental documentation to support their decisions on whether to issue those regional general permits or programmatic general permits. It would take a substantial amount of time to issue those regional general permits and programmatic general permits, and in the interim proposed activities would have to be authorized through the individual permit process.

5.3.2 Issue the Nationwide Permit With Modifications

This NWP was developed to authorize discharges of dredged or fill material into waters of the United States and structures and work in navigable waters of the United States for utility line activities for water and other substances that have no more than minimal individual and cumulative adverse environmental effects. The Corps has considered changes to the terms and conditions of this NWP suggested by comments received in response to the proposed rule, as well as modifying or adding NWP general conditions, as discussed in section 1.4 of this document and the preamble of the [Federal Register](#) notice announcing the issuance of this NWP.

The environmental consequences of changing the terms and conditions of the proposed NWP compared to the 2017 NWP 12 may vary, depending on whether modifications for the issued NWP are more restrictive, less restrictive, or is similarly restrictive compared to previously issued versions of NWP 12. The environmental consequences of changing the terms and conditions of this NWP are also dependent on the application of existing tools used to ensure that activities authorized by this NWP will only have no more than minimal adverse environmental effects. Those tools include the quantitative limits of the NWP, the pre-construction notification process, and the ability of division and district engineers to modify, suspend, or revoke this NWP on a regional or case-by-case basis.

Changing the national terms and conditions of this NWP may change the incentives

for project proponents to reduce their proposed impacts to jurisdictional waters and wetlands to qualify for NWP authorization, and receive the required DA authorization for regulated activities in less time than it would take to receive individual permits for those activities. Under the individual permit process, the project proponent may request authorization for activities that have greater impacts on jurisdictional waters and wetlands, and may result in larger losses of aquatic resource functions and services. The NWP program has been effective in reducing losses of jurisdictional waters and wetlands, with a substantial majority of losses of waters of the United States authorized by NWP being 1/10-acre or less (see figure 5.1 of the regulatory impact analysis for this rule).

The environmental consequences of division engineers exercising their discretionary authority to modify, suspend, or revoke this NWP on a regional basis may be a reduction in the number of activities that could be authorized by this NWP in a region or more NWP activities requiring pre-construction notification through regional changes in the PCN requirements for this NWP. The environmental consequences are likely to include reduced losses of waters of the United States because regional conditions can only further condition or restrict the applicability of an NWP (see 33 CFR 330.1(d)). The modification, suspension, or revocation of this NWP on a regional basis by division engineers may also reduce the number of activities authorized by this NWP, which may increase the number of activities that require standard individual permits. If more activities require standard individual permits, permitted losses of jurisdictional waters and wetlands may increase because standard individual permits have no quantitative limits.

An environmental consequence of regional conditions added to the NWPs by division engineers is the enhanced ability to address differences in aquatic resource functions, services, and values among different regions across the nation. Corps divisions may add regional conditions to the NWPs to enhance protection of the aquatic environment in a region (e.g., a Corps district, state, or watershed) and address regional concerns regarding jurisdictional waters and wetlands and other resources (e.g., listed species or cultural resources) that may be affected or impacted by the activities authorized by this NWP. Division engineers can also revoke an NWP in a region if the use of that NWP results in more than minimal adverse environmental effects, especially in high value or rare waters or wetlands. When an NWP is issued or reissued by the Corps, division engineers issue supplemental documents that evaluate potential impacts of the NWP at a regional level, and assess cumulative impacts caused by this NWP on a regional basis during the period this NWP is in effect. [33 CFR 330.5(c)]

An environmental consequence of district engineers modifying, suspending, or revoking this NWP on a case-by-case basis is the ability of district engineers to address site-specific conditions, including the degree to which aquatic resources on the project site provide ecological functions and services. Activity-specific modifications may also address site-specific resources (e.g., listed species or cultural resources) that may be affected by NWP activities. The environmental

consequences of modification of this NWP on an activity-specific basis by district engineers may be further reductions in losses of waters of the United States for specific activities authorized by NWP because of mitigation required by district engineers during their reviews of PCNs to ensure that those activities result in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). Examples of mitigation that may be required by district engineers include permit conditions requiring compensatory mitigation to offset losses of waters of the United States or conditions added to the NWP authorization to prohibit the permittee from conducting the activity during specific times of the year to protect spawning fish and shellfish. If a proposed NWP activity will result in more than minimal adverse environmental effects, then the district engineer will exercise discretionary authority and require an individual permit. The individual permit review process requires a project-specific alternatives analysis, including the consideration of off-site alternatives, and a public interest review.

5.3.3 Issue the Nationwide Permit Without Modifications

Issuing the NWP as proposed would likely result in little or no changes in the number of activities authorized for utility line activities for water and other substances that were authorized by previous versions of NWP 12, and the environmental impacts of authorized activities. Project proponents would likely continue to design their project to qualify for NWP authorization. Retaining the current national terms and conditions of this NWP would likely continue to provide incentives for project proponents to reduce their proposed impacts to jurisdictional waters and wetlands to qualify for NWP authorization, and receive the required DA authorization for regulated activities in less time than it would take to receive individual permits for those activities. Under this alternative, for those activities that require individual permits project proponents may request authorization for activities that have greater impacts on jurisdictional waters and wetlands, and may result in larger losses of aquatic resource functions and services. The NWP program has been effective in reducing losses of jurisdictional waters and wetlands, with a substantial majority of losses of waters of the United States authorized by NWP being 1/10-acre or less (see figure 5.1 of the regulatory impact analysis for this rule).

Under this alternative, the environmental consequences of division engineers exercising their discretionary authority to modify, suspend, or revoke this NWP on a regional basis would be similar to the environmental consequences discussed in section 5.3.2. Corps divisions may add regional conditions to the NWPs to enhance protection of the aquatic environment in a region (e.g., a Corps district, state, or watershed) and address regional concerns regarding jurisdictional waters and wetlands and other resources (e.g., listed species or cultural resources) that may be affected or impacted by the activities authorized by this NWP. Division engineers can also revoke an NWP in a region if the use of that NWP results in more than minimal adverse environmental effects, especially in high value or rare waters or wetlands. When an NWP is issued or reissued by the Corps, division engineers

issue supplemental documents that evaluate potential impacts of the NWP at a regional level, and assess cumulative impacts caused by this NWP on a regional basis during the period this NWP is in effect. [33 CFR 330.5(c)]

Under this alternative, the ability of district engineers to modify, suspended, or revoke this NWP on a case-by-case to address site-specific conditions, including the degree to which aquatic resources on the project site provide ecological functions and services, is likely to have environmental consequences similar to the environmental consequences of the alternative identified in section 3.2. Activity-specific modifications under this alternative may also address site-specific resources (e.g., listed species or cultural resources) that may be affected by NWP activities. Activity-specific modifications may also include mitigation requirements similar to the potential mitigation requirements discussed in section 5.3.2.

The issuance of this NWP adopts the alternative identified in section 3.2 of this document. The Corps has considered the comments received in response to the proposed rule, and made changes to the NWPs, general conditions, and definitions to address those comments. Division engineer may add regional conditions to this NWP to help ensure that the use of the NWPs in a particular geographic area will result in no more than minimal individual and cumulative adverse environmental effects. District engineers may also add regional conditions to this NWP to help ensure compliance with other applicable laws, such as Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, and the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act. Division engineers may also add regional conditions to this NWP to fulfill its tribal trust responsibilities.

Corps divisions and districts also monitor the use of this NWP and the authorized impacts identified in NWP verification letters. At a later time, if warranted, a division engineer may add regional conditions to further restrict or prohibit the use of this NWP to ensure that it does not authorize activities that result in more than minimal adverse environmental effects in a particular geographic region (e.g., a watershed, landscape unit, or seascapes unit). To the extent practicable, division and district engineers will use regulatory automated information systems and institutional knowledge about the typical adverse effects of activities authorized by this NWP, as well as substantive public comments, to assess the individual and cumulative adverse environmental effects resulting from regulated activities authorized by this NWP.

6.0 Public Interest Review

6.1 Public Interest Review Factors (33 CFR 320.4(a)(1))

For each of the 20 public interest review factors, the extent of the Corps

consideration of expected impacts resulting from the use of this NWP is discussed, as well as the reasonably foreseeable cumulative adverse effects that are expected to occur. The Corps decision-making process involves consideration of the benefits and detriments that may result from the activities authorized by this NWP.

- (a) Conservation: The activities authorized by this NWP may modify the natural resource characteristics of the project area. Compensatory mitigation, if required for activities authorized by this NWP, should result in the restoration, enhancement, establishment, or preservation of aquatic habitats that will offset losses to conservation values. The adverse effects of activities authorized by this NWP on conservation are likely to be minor because of the requirements imposed by the terms and conditions of this NWP, including any conditions added by division and district engineers.
- (b) Economics: Utility line activities for water and other substances are likely to have positive impacts on the local economy. During construction, these activities are likely to generate jobs and revenue for local contractors as well as revenue to building supply companies that sell construction materials. Utility lines for water and other substances may transport potable water to residences and schools, as well as factories, offices, stores, and other places of business, to support the operation of those facilities. These utility lines may also transport sewage and wastewater from buildings and other structures to water treatment facilities.
- (c) Aesthetics: Utility line activities for water and other substances may alter the visual character of some waters of the United States. Above-ground utility lines for water and other substances may alter the visual characteristics of the area. The extent and perception of these changes may vary, depending on the size and configuration of the activity, the perspectives of local residents and visitors, the nature of the surrounding area, and the public uses of the area. Utility line activities for water and other substances authorized by this NWP may also modify other aesthetic characteristics, such as air quality and the amount of noise. The increased human use of the project area and surrounding land may also alter local aesthetic values. The transport of sewage and wastewater from buildings and other facilities to water treatment plants may help improve aesthetics of the project area and nearby areas.
- (d) General environmental concerns: Activities authorized by this NWP may affect general environmental concerns, such as water, air, noise, and land pollution. The authorized activities may also affect the physical, chemical, and biological characteristics of the environment. Adverse effects to the chemical composition of the aquatic environment will be controlled by general condition 6, which states that the material used for construction must be free from toxic pollutants in toxic amounts. General condition 23 requires mitigation to minimize adverse effects to the aquatic environment through avoidance and minimization at the project site. Compensatory mitigation may be required by district engineers to ensure that the net adverse environmental effects are no more than minimal. Specific

environmental concerns are addressed in other sections of this document.

If utility lines for water and other substances are installed by using horizontal directional drilling, there may be environmental impacts from inadvertent returns of drilling fluids that may occur during those horizontal directional drilling activities. These drilling fluids may be released into aquatic and terrestrial environments and may contribute to adverse environmental effects. Inadvertent returns of drilling fluids are not regulated under Section 404 of the Clean Water Act because they are not discharges of dredged or fill material. They may be regulated under Section 402 of the Clean Water Act or under state laws and regulations. This NWP authorizes discharges of dredged or fill material into waters of the United States and work in navigable waters of the United States to respond to inadvertent returns of drilling fluids to minimize their impacts on the environment.

(e) Wetlands: The construction, maintenance, repair, or removal of utility lines for water and other substances and associated facilities may result in the loss or alteration of wetlands. For the construction or maintenance of utility lines for water and other substances, impacts to wetlands are often temporary, unless the site contains forested wetlands. Small wetland losses may result from above-ground utility lines. The construction of rights-of-way for utility lines for water and other substances through forested wetlands may result in the conversion of forested wetlands to scrub-shrub or emergent wetlands. Those conversions may be permanent to maintain the utility line in good, operational order. The conversion of wetlands to other types of wetlands may result in the loss of certain wetland functions, or the reduction in the level of wetland functions being performed by the converted wetland. District engineers have the authority to require mitigation to offset losses of wetland functions caused by regulated activities (see paragraph (i) of general condition 23, mitigation). The construction of utility line substations (e.g., pumping stations) and access roads may result in the permanent loss of wetlands. Wetlands may also be converted to other uses and habitat types. Forested wetlands may not be allowed to grow back in the utility line right-of-way so that the utility line will not be damaged and can be easily maintained. Only shrubs and herbaceous plants may be allowed to grow in the right-of-way. Some wetlands may be temporarily impacted if those wetlands are located in temporary staging areas. These wetlands will normally be restored, unless the district engineer authorizes another use for the area, but the plant community may be different, especially if the site was originally forested.

Wetlands provide habitat, including foraging, nesting, spawning, rearing, and resting sites for aquatic and terrestrial species. The loss or alteration of wetlands may alter natural drainage patterns. Wetlands can reduce erosion by stabilizing the substrate. Wetlands can also act as storage areas for stormwater and flood waters. Wetlands may act as groundwater discharge or recharge areas. The loss of wetland vegetation may adversely affect water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds. Wetland vegetation can also provide habitat for microorganisms that remove nutrients and pollutants

from water. Wetlands, through the accumulation of organic matter, can act as sinks for some nutrients and other chemical compounds, reducing the amounts of these substances in the water.

General condition 23 requires avoidance and minimization of impacts to waters of the United States, including wetlands, at the project site. Compensatory mitigation may be required to offset losses of waters of the United States so that the net adverse environmental effects are no more than minimal. Division engineers can add regional conditions to this NWP to restrict or prohibit its use in high value wetlands. District engineers can also exercise discretionary authority to require an individual permit if high value wetlands will be affected by the activity and the activity will result in more than minimal adverse environmental effects. District engineers may also add case-specific special conditions to the NWP authorization to reduce impacts to wetlands or require compensatory mitigation to offset losses of wetlands.

(f) Historic properties: General condition 20 states that in cases where the district engineer determines that the proposed NWP activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized until the requirements of Section 106 of the National Historic Preservation Act have been satisfied.

(g) Fish and wildlife values: This NWP authorizes certain utility line activities for water and other substances in all waters of the United States. Discharges of dredged or fill material into waters of the United States for the construction of utility line substations and access roads is limited to non-tidal waters, excluding non-tidal waters adjacent to tidal waters. Waters of the United States often provide habitat to many species of fish and wildlife. Activities authorized by this NWP may alter the habitat characteristics of streams, wetlands, and other waters of the United States, which may decrease the quantity and quality of fish and wildlife habitat. The construction of utility line rights-of-way may fragment existing habitat and increase the amount of edge habitat in the area, causing changes in local species composition. Habitat loss and habitat fragmentation can have dissimilar effects, and the effects of habitat fragmentation are often positive as long as there is no associated loss of habitat (Fahrig 2017). Wetland, riparian, and estuarine vegetation often provides food and habitat for many species, including foraging areas, resting areas, corridors for wildlife movement, and nesting and breeding grounds. Open waters may provide habitat for fish and other aquatic organisms. Fish and other motile animals may avoid the project site during construction and maintenance. Woody riparian vegetation usually shades streams, which can reduce water temperature fluctuations and provide habitat for fish and other aquatic animals. Riparian and estuarine vegetation can provide organic matter that is consumed by fish and aquatic invertebrates. Woody riparian vegetation can create habitat diversity in streams when trees and large shrubs fall into the channel, forming snags that provide habitat and shade for fish. The morphology of a stream channel may be altered by activities authorized by this NWP, and subsequently affect fish

populations. However, pre-construction notification is required for certain activities authorized by this NWP, which will provide district engineers with opportunities to review those activities, assess potential impacts on fish and wildlife values, and ensure that the authorized activities result in no more than minimal adverse environmental effects. Compensatory mitigation may be required by district engineers to restore, enhance, establish, and/or preserve wetlands to offset losses of waters of the United States. Stream rehabilitation, enhancement, and preservation activities may be required as compensatory mitigation for impacts to streams. The establishment and maintenance of riparian areas next to open and flowing waters may also be required as compensatory mitigation. These methods of compensatory mitigation are expected to provide fish and wildlife habitat values.

General condition 2 will reduce adverse effects to fish and other aquatic species by prohibiting activities that substantially disrupt the necessary life cycle movements of indigenous aquatic species, unless the primary purpose of the activity is to impound water. Compliance with general conditions 3 and 5 will ensure that the authorized activity has only minimal adverse effects on spawning areas and shellfish beds, respectively. The authorized activity cannot have more than minimal adverse effects on breeding areas for migratory birds, due to the requirements of general condition 4.

For an NWP activity, compliance with the Bald and Golden Eagle Protection Act (16 U.S.C. 668(a)-(d)), the Migratory Bird Treaty Act (16 U.S.C. 703; 16 U.S.C. 712), and the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.) is the responsibility of the project proponent. General condition 19 states that the permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts 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.

Consultation pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act will occur as necessary for proposed NWP activities that may adversely affect essential fish habitat. Consultation may occur on a case-by-case or regional programmatic basis. Division and district engineers can impose regional and special conditions to ensure that activities authorized by this NWP will result in only minimal adverse effects on essential fish habitat.

(h) Flood hazards: The activities authorized by this NWP may affect the flood-holding capacity of the 100-year floodplain, including surface water flow velocities. Changes in the flood-holding capacity of the 100-year floodplain may impact human health, safety, and welfare. Compliance with general condition 9 will help reduce flood hazards. This general condition requires the permittee to maintain, to the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters, except under certain circumstances. General condition 10

requires the activity to comply with applicable FEMA-approved state or local floodplain management requirements. Much of the land area within 100-year floodplains is upland, and outside of the Corps' control and responsibility.

(i) Floodplain values: Activities authorized by this NWP may adversely affect the flood-holding capacity of the floodplain, as well as other floodplain values. The fish and wildlife habitat values of floodplains may be adversely affected by activities authorized by this NWP, by modifying or eliminating areas used for nesting, foraging, resting, and reproduction. The water quality functions of floodplains may also be adversely affected by these activities. Modification of the floodplain may also adversely affect other hydrological processes, such as groundwater recharge.

Compensatory mitigation may be required for activities authorized by this NWP, which will offset losses of waters of the United States and provide water quality functions and wildlife habitat. General condition 23 requires avoidance and minimization of impacts to waters of the United States to the maximum extent practicable at the project site, which will help reduce losses of floodplain values. The requirements of general condition 23 will reduce adverse effects to floodplain values, such as flood storage capacity, wildlife habitat, fish spawning areas, and nutrient cycling for aquatic ecosystems. Compliance with general condition 10 will help ensure that authorized activities in 100-year floodplains will not cause more than no more than minimal adverse effects on flood storage and conveyance.

(j) Land use: Activities authorized by this NWP may change the land use from natural to developed. Activities authorized by this NWP may occur on lands that have already been substantially modified by human activities. The installation of utility lines for water and other substances may induce more development in the vicinity of the project. Since the primary responsibility for land use decisions is held by state, local, and Tribal governments, the Corps' control and responsibility with respect to land use is limited to significant issues of overriding national importance, such as navigation and water quality (see 33 CFR 320.4(j)(2)).

(k) Navigation: Activities authorized by this NWP must comply with general condition 1, which states that no activity may cause more than minimal adverse effects on navigation. This NWP requires pre-construction notification for all activities in section 10 waters, which will allow the district engineer to review the pre-construction notification and determine if the proposed activity will adversely affect navigation.

(l) Shore erosion and accretion: The activities authorized by this NWP are likely to have minor direct effects on shore erosion and accretion processes, since the NWP does not authorize the construction of utility line substations or access roads in tidal waters. The construction of utility lines for water and other substances, including foundations for above-ground utility lines, are likely to have only minimal adverse effects on shore erosion and accretion since they would normally be constructed a safe distance from an eroding shoreline to prevent collapse of the utility line into

those waters and potentially discharging pollutants, such as sewage or wastewater, into the waterbody. Nationwide permit 13, regional general permits, or individual permits may be used to authorize bank stabilization projects associated with utility line activities for water and other substances, which may affect shore erosion and accretion.

(m) Recreation: Activities authorized by this NWP may change the recreational uses of the area. Certain recreational activities, such as bird watching, hunting, and fishing may no longer be available in the area. Some utility line activities for water and other substances may eliminate certain recreational uses of the area because people may be excluded from utility line rights-of-way.

(n) Water supply and conservation: Activities authorized by this NWP may adversely affect both surface water and groundwater supplies, and they may augment water supplies and support water conservation effort. The utility lines authorized by this NWP may transport potable water to residences, educational buildings, commercial developments, industries, agricultural activities, and other users. Activities authorized by this NWP may also transport sewage, wastewater, and stormwater to water treatment facilities before that water is released to waterbodies or used for other purposes. The maintenance activities authorized by this NWP repair leaks or replace degraded pipes to reduce pollution to groundwater and various waterbodies.

Activities authorized by this NWP may also affect the quality of water supplies by adding pollutants to surface waters and groundwater, but many causes of water pollution, such as discharges regulated under Section 402 of the Clean Water Act, are outside the Corps' control and responsibility. Some water pollution concerns may be addressed through the water quality management measures that may be required for activities authorized by this NWP. Division and district engineers can prohibit the use of this NWP in watersheds for public water supplies, if it is in the public interest to do so. General condition 7 prohibits discharges in the vicinity of public water supply intakes. Compensatory mitigation may be required for activities authorized by this NWP, which may help improve the quality of surface waters.

(o) Water quality: Utility line activities for water and other substances in wetlands and open waters may have adverse effects on water quality, especially during construction and maintenance activities. These activities may result in increases in sediments and pollutants in the water. The loss of wetland and riparian vegetation may adversely affect water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds. Wetland and riparian vegetation can also provide habitat for microorganisms that remove nutrients and pollutants from water. Wetlands, through the accumulation of organic matter, may act as sinks for some nutrients and other chemical compounds, reducing the amounts of these substances in the water column. Wetlands and riparian areas may also decrease the velocity of flood waters, removing suspended sediments from the water column and reducing turbidity. Riparian vegetation can also serve an important role in the

water quality of streams by shading the water from the intense heat of the sun. Compensatory mitigation may be required for activities authorized by this NWP, to ensure that the activity does not have more than minimal adverse environmental effects, including water quality. Wetlands and riparian areas restored, established, enhanced, or preserved as compensatory mitigation may provide local water quality benefits.

During the construction, maintenance, and repair of utility lines for water and other substances, and related activities such as the construction or expansion of substations and pumping stations, small amounts of oil and grease from construction equipment may be discharged into the waterway. Fluids may also leak from equipment installed as part of a utility line substation for water, sewage, wastewater or other substances. Because most of the construction is likely to occur during a relatively short period of time, the frequency and concentration of these discharges are not expected to have more than minimal adverse effects on overall water quality.

If utility lines for water and other substances are installed by using horizontal directional drilling, there may be environmental impacts from inadvertent returns of drilling fluids that may occur during those horizontal directional drilling activities. These drilling fluids may be released into aquatic and terrestrial environments and may result in adverse environmental effects. Inadvertent returns of drilling fluids are not regulated under Section 404 of the Clean Water Act because they are not discharges of dredged or fill material. They may be regulated under Section 402 of the Clean Water Act or under state laws and regulations. This NWP authorizes discharges of dredged or fill material into waters of the United States and work in navigable waters of the United States to respond to inadvertent returns of drilling fluids to minimize their impacts on the environment.

Activities authorized by this NWP may require Section 401 water quality certification, since the NWP authorizes discharges of dredged or fill material into waters of the United States. Most water quality concerns are addressed by the section 401 certifying authority (i.e., the state, authorized tribe, or EPA region). In accordance with general condition 25, the permittee may be required to implement water quality management measures to minimize the degradation of water quality. Water quality management measures may involve the installation of stormwater management facilities to trap pollutants and the establishment and maintenance of riparian areas next to waters of the United States. Riparian areas may help protect downstream water quality and enhance aquatic habitat.

(p) Energy needs: The utility line activities for water and other substances authorized by this NWP may induce higher rates of energy consumption in the area for the operation of substations, such as pumping stations. The construction and maintenance activities authorized by this NWP may also increase energy consumption in the local area. Additional power plants may be needed to meet increases in energy demand, but these issues are beyond the Corps' control and

responsibility. This NWP may be used to authorize the expansion of existing infrastructure to provide utility lines for water and other substances to new developments.

(q) Safety: The utility line activities for water and other substances authorized by this NWP will be subject to Federal, state, and local safety laws and regulations. Therefore, the activities authorized by this NWP are not likely to adversely affect the safety of the project area.

(r) Food and fiber production: Activities authorized by this NWP may adversely affect food and fiber production, especially when utility line activities for water and other substances are constructed on agricultural land. Water lines, sewer lines, and other types of utility lines that involve activities authorized by this NWP may require easements, which may take some agricultural land out of production. Such activities may reduce the amount of available farmland in the nation, unless that land is replaced by converting other land, such as forest, to agricultural land. The loss of farmland is more appropriately addressed through the land use planning and zoning authorities held by state and local governments. Food production may be increased by activities authorized by this NWP, through the construction and maintenance of water lines use for irrigation of crops. Food production may also benefit from the utility line activities authorized by this NWP when those utility lines are constructed to move water from areas of agricultural production. The potable water that may be transported by certain types of utility lines may help support food production, including kitchens for restaurants and commercial and institutional developments, and for producers of processed foods.

(s) Mineral needs: Activities authorized by this NWP may increase demand for aggregates and stone, which may be used to construct utility lines for water and other substances, substations (such as pumping stations), and access roads. Utility line activities for water and other substances authorized by this NWP may increase the demand for pipes, wires, and other building materials, which may be made from steel, aluminum, or copper, which are made from mineral ores.

(t) Considerations of property ownership: The NWP complies with 33 CFR 320.4(g), which states that an inherent aspect of property ownership is a right to reasonable private use. The NWP provides expedited DA authorization for utility line activities for water and other substances, provided those activities comply with the terms and conditions of the NWP and result in no more than minimal adverse environmental effects.

6.2 Additional Public Interest Review Factors (33 CFR 320.4(a)(2))

6.2.1 Relative extent of the public and private need for the proposed structure or work

This NWP authorizes the construction, maintenance, repair, and removal of utility lines for water and other substances, as well as associated facilities such as substations and access roads, provided those activities have no more than minimal individual and cumulative adverse environmental effects. These activities typically satisfy public and private needs for the conveyance of water and other substances, such as potable water, wastewater, sewage, and stormwater. The need for this NWP is based upon the number of these activities that occur annually with only minimal individual and cumulative environmental adverse effects.

6.2.2 Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work

Most situations in which there are unresolved conflicts concerning resource use arise when environmentally sensitive areas are involved (e.g., special aquatic sites, including wetlands) or where there are competing uses of a resource. The nature and scope of the activity, when planned and constructed in accordance with the terms and conditions of this NWP, reduce the likelihood of such conflict. In the event that there is a conflict, the NWP contains provisions that are capable of resolving the matter (see section 1.2 of this document).

General condition 23 requires permittees to avoid and minimize adverse effects to waters of the United States to the maximum extent practicable on the project site. Consideration of off-site alternative locations is not required for activities that are authorized by general permits. General permits authorize activities that have only minimal individual and cumulative adverse effects on the environment and the overall public interest. The district engineer will exercise discretionary authority and require an individual permit if the proposed activity will result in more than minimal adverse environmental effects on the project site. The consideration of off-site alternatives can be required during the individual permit process.

6.2.3 The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited

The nature and scope of the activities authorized by the NWP will most likely restrict the extent of the beneficial and detrimental effects to the area immediately surrounding the utility line activity for water and other substances. Activities authorized by this NWP will result in no more than minimal individual and cumulative adverse environmental effects because of the terms and conditions in this NWP, the pre-construction notification review process, and regional and activity-specific conditions imposed by division and district engineers.

The terms, conditions, and provisions of the NWP were developed to help ensure that individual and cumulative adverse environmental effects are no more than minimal. Specifically, NWPs do not obviate the need for the permittee to obtain

other Federal, state, or local authorizations required by law. The NWPs do not grant any property rights or exclusive privileges (see 33 CFR 330.4(b) for further information). Additional conditions, limitations, restrictions, and provisions for discretionary authority, as well as the ability to add activity-specific or regional conditions to this NWP, will provide further safeguards to the aquatic environment and the overall public interest. There are also provisions to allow suspension, modification, or revocation of the NWP.

7.0 Endangered Species Act

No activity is authorized by any NWP if that activity is likely to jeopardize the continued existence of a threatened or endangered species as listed or proposed for listing under the Federal Endangered Species Act (ESA), or to destroy or adversely modify the critical habitat of such species (33 CFR 330.4(f)). If the district engineer determines a proposed NWP activity may affect listed species or designated critical habitat, he or she will conduct ESA section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Service (NMFS) as appropriate. The proposed NWP activity is not authorized until the ESA section 7 consultation process is completed or the district engineer determines the proposed NWP activity will have no effect on listed species or designated critical habitat. Current local procedures in Corps districts are effective in ensuring compliance with ESA. Those local procedures include regional programmatic consultations and the development of Standard Local Operating Procedures for Endangered Species (SLOPES). The issuance or reissuance of an NWP, as governed by NWP general condition 18 (which applies to every NWP and which relates to endangered and threatened species and critical habitat) and 33 CFR 330.4(f), results in “no effect” to listed species or critical habitat, because no activity that “may affect” listed species or critical habitat is authorized by NWP unless ESA Section 7 consultation with the USFWS and/or NMFS has been completed. If the non-federal project proponent does not comply with 33 CFR 330.4(f)(2) and general condition 18, and does not submit the required PCN, then the activity is not authorized by NWP. In such situations, it is an unauthorized activity and the Corps district will determine an appropriate course of action under its regulations at 33 CFR part 326 to respond to the unauthorized activity. Unauthorized activities may also be subject to the prohibitions of Section 9 of the ESA.

Each activity authorized by an NWP is subject to general condition 18, which states that “[n]o 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.” In addition, general condition 18 explicitly states that the NWP does not authorize “take” of threatened or endangered species, which will ensure that permittees do

not mistake the NWP authorization as a Federal authorization to take threatened or endangered species. General condition 18 also requires a non-federal permittee to submit a pre-construction notification to the district engineer if any listed species or designated critical habitat (or proposed species or proposed critical habitat) might be affected or is in the vicinity of the project, or if the project is located in designated or proposed critical habitat. The Corps established the “might affect” threshold in 33 CFR 330.4(f)(2) and paragraph (c) of general condition 18 because it is more stringent than the “may affect” threshold for section 7 consultation in the USFWS’s and NMFS’s ESA section 7 consultation regulations at 50 CFR part 402. The word “might” is defined as having “less probability or possibility” than the word “may” (Merriam-Webster’s Collegiate Dictionary, 10th edition). Since “might” has a lower probability of occurring, it is below the threshold (i.e., “may affect”) that triggers the requirement for ESA section 7 consultation for a proposed Federal action. This general condition also states that, in such cases, non-federal permittees 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.

Under the current Corps regulations (33 CFR 325.2(b)(5)), the district engineer must review all permit applications for potential impacts on threatened and endangered species or critical habitat. For the NWP program, this review occurs when the district engineer evaluates the pre-construction notification or request for verification. Nationwide permit general condition 18 requires a non-federal applicant to submit a pre-construction notification to the Corps 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 project, or if the project is located in designated critical habitat (or critical habitat proposed for such designation). Based on the evaluation of all available information, the district engineer will initiate consultation with the USFWS or NMFS, as appropriate, if he or she determines that the proposed activity may affect any threatened and endangered species or designated critical habitat. Consultation may occur during the NWP authorization process or the district engineer may exercise discretionary authority to require an individual permit for the proposed activity and initiate section 7 consultation during the individual permit process. If the district engineer determines a proposed NWP activity is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat, he or she will initiate a conference with the USFWS or NMFS. If ESA Section 7 consultation or conference is conducted during the NWP authorization process, then the applicant will be notified that he or she cannot proceed with the proposed NWP activity until section 7 consultation is completed.

If the district engineer determines that the proposed NWP activity will have no effect on any threatened or endangered species or critical habitat, then the district engineer will notify the applicant that he or she may proceed under the NWP authorization as long as the activity complies with all other applicable terms and conditions of the NWP, including applicable regional conditions. When the Corps makes a “no effect” determination, that determination is documented in the record

for the NWP verification.

In cases where the Corps makes a “may affect” determination, formal or informal Section 7 consultation is conducted before the activity is authorized by NWP. A non-federal permit applicant cannot begin work until notified by the Corps that the proposed NWP activity will have “no effect” on listed species or critical habitat, or until ESA Section 7 consultation has been completed (see also 33 CFR 330.4(f)). Federal permittees are responsible for complying with ESA section 7(a)(2) and should follow their own procedures for complying with those requirements (see 33 CFR 330.4(f)(1)). Therefore, permittees cannot rely on complying with the terms of an NWP without considering ESA-listed species and critical habitat, and they must comply with the NWP conditions to ensure that they do not violate the ESA. General condition 18 also states that district engineers may add activity-specific conditions to the NWPs to address ESA issues as a result of formal or informal consultation with the USFWS or NMFS.

Each year, the Corps conducts thousands of ESA section 7 consultations with the USFWS and NMFS for activities authorized by NWPs. These section 7 consultations are tracked in ORM. During the period of March 19, 2017, to October 20, 2020, Corps districts conducted 1,294 formal consultations and 8,233 informal consultations under NWP PCNs where the Corps verified that the proposed activities were authorized by NWP. During that time period, the Corps also used regional programmatic consultations for 21,677 NWP verifications to comply with ESA section 7. Therefore, each year an average of 8,700 formal, informal, and programmatic ESA section 7 consultations are conducted with the USFWS and/or NMFS in response to NWP PCNs, including those activities that required PCNs under paragraph (c) of general condition 18. In a study on ESA section 7 consultations tracked by the USFWS, Malcom and Li (2015) found that during the period of 2008 to 2015, the Corps conducted the most formal and informal section 7 consultations, far exceeding the numbers of section 7 consultations conducted by other federal agencies. For a linear project authorized by NWPs 12, 14, 57, or 58, where the district engineer determines that one or more crossings of waters of the United States that require Corps authorization “may affect” listed species or designated critical habitat, the district engineer usually initiates a single section 7 consultation with the FWS and/or NMFS for all of those crossings that he or she determines “may affect” listed species or designate critical habitat. The number of section 7 consultations provided above represents the number of NWP PCNs that required some form of ESA section 7 consultation, not the number of single and complete projects authorized by NWP that may be included in a single PCN. A single NWP PCN may include more than one single and complete project, especially if it is for a linear project such as an oil or natural gas pipeline, electric line, water or sewer line, or road with multiple separate and distant crossings of jurisdictional waters and wetlands from its point of origin to its terminal point.

Section 7 consultations are often conducted on a case-by-case basis for activities proposed to be authorized by NWP that may affect listed species or critical habitat,

in accordance with the USFWS's and NMFS's interagency regulations at 50 CFR part 402. Instead of activity-specific section 7 consultations, compliance with ESA may also be achieved through formal or informal regional programmatic consultations. Compliance with ESA Section 7 may also be facilitated through the adoption of NWP regional conditions. In some Corps districts SLOPES have been developed through consultation with the appropriate regional offices of the USFWS and NMFS to make the process of complying with section 7 more efficient.

Corps districts have, in most cases, established informal or formal procedures with local offices of the USFWS and NMFS, through which the agencies share information regarding threatened and endangered species and their critical habitat. This information helps district engineers determine if a proposed NWP activity may affect listed species or their critical habitat and, when a "may effect" determination is made, initiate ESA section 7 consultation. Corps districts may utilize maps or databases that identify locations of populations of threatened and endangered species and their critical habitat. Where necessary, regional conditions are added to one or more NWPs to require pre-construction notification for NWP activities that occur in known locations of threatened and endangered species or critical habitat. Any information provided by local maps and databases and any comments received during the pre-construction notification review process will be used by the district engineer to make a "no effect" or "may affect" determination for the pre-construction notification.

Based on the safeguards discussed in this section, especially general condition 18 and the NWP regulations at 33 CFR 330.4(f), the Corps believes that the activities authorized by this NWP comply with the ESA. Although the Corps continues to believe that these procedures ensure compliance with the ESA, the Corps has taken some steps to provide further assurance. Corps district offices meet with local representatives of the USFWS and NMFS to establish or modify existing procedures such as regional conditions, where necessary, to ensure that the Corps has the latest information regarding the existence and location of any threatened or endangered species or their critical habitat. Corps districts can also establish, through local procedures or other means, additional safeguards that ensure compliance with the ESA. Through ESA Section 7 formal or informal consultations, or through other coordination with the USFWS and NMFS, the Corps establishes procedures to ensure that the NWP is not likely to jeopardize any threatened and endangered species or result in the destruction or adverse modification of designated critical habitat. Such procedures may result in the development of regional conditions added to the NWP by the division engineer, or in conditions to be added to a specific NWP authorization by the district engineer.

If informal section 7 consultation is conducted, and the USFWS and/or NMFS issues a written concurrence that the proposed activity may affect, but is not likely to adversely affect, listed species or designated critical habitat based on conservation measures incorporated in the project to avoid or minimize potential effects to ESA resources, the district engineer will add conditions (e.g., conservation measures) to

the NWP authorization. If the USFWS and/or NMFS does not issue a written concurrence that the proposed NWP activity “may affect, but is not likely to adversely affect” listed species or critical habitat, the Corps will initiate formal section 7 consultation if it changes its determination to “may affect, likely to adversely affect.”

If formal section 7 consultation is conducted and a biological opinion is issued, the district engineer will add conditions to the NWP authorization to incorporate appropriate elements of the incidental take statement of the biological opinion into the NWP authorization, if the biological opinion concludes that the proposed NWP activity is not likely to jeopardize the continued existence of listed species or adversely modify or destroy critical habitat. If the biological opinion concludes that the proposed NWP activity is likely to jeopardize the continued existence of listed species or adversely modify or destroy critical habitat, the proposed activity cannot be authorized by NWP and the district engineer will instruct the applicant to apply for an individual permit. The incidental take statement includes reasonable and prudent measures and terms and conditions such as mitigation, monitoring, and reporting requirements that minimize incidental take. To fulfill its obligations under Section 7(a)(2) of the ESA, the Corps will determine which elements of an incidental take statement are appropriate to be added as permit conditions to the NWP authorization (see 33 CFR 325.4(a)). The appropriate elements of the incidental take statement are those reasonable and prudent measures and terms and conditions that: (1) apply to the activities over which the Corps has control and responsibility (i.e., structures or work in navigable waters and/or the discharges of dredged or fill material into waters of the United States), and (2) the Corps has the authority to enforce under its permitting authorities. Incorporation of the appropriate elements of the incidental take statement into the NWP authorization through binding, enforceable permit conditions may provide the project proponent an exemption from the “take” prohibitions in ESA Section 9 (see Section 7(o)(2) of the ESA).

The Corps can modify this NWP at any time that it is deemed necessary to protect listed species or their critical habitat, either through: 1) national general conditions or national-level modifications, suspensions, or revocations of the NWPs; 2) regional conditions or regional modifications, suspensions, or revocations of NWPs; or 3) activity-specific permit conditions (modifications) or activity-specific suspensions or revocations of NWP authorizations. Therefore, although the Corps has issued the NWPs, the Corps can address any ESA issue, if one should arise. The NWP regulations also allow the Corps to suspend the use of some or all of the NWPs immediately, if necessary, while considering the need for permit conditions, modifications, or revocations. These procedures are provided at 33 CFR 330.5.

8.0 Clean Water Act Section 404(b)(1) Guidelines Analysis

The 404(b)(1) Guidelines compliance criteria for general permits are provided at 40

CFR 230.7. This 404(b)(1) Guidelines compliance analysis includes analyses of the direct, secondary, and cumulative effects on the aquatic environment caused by discharges of dredged or fill material authorized by this NWP.

For activities authorized by general permits, the analysis and documentation required by the 404(b)(1) Guidelines are to be performed at the time of issuance of a general permit, such as an NWP. The analysis and documentation will not be repeated when activities are conducted under the NWP. The 404(b)(1) Guidelines do not require reporting or formal written communication at the time individual activities are conducted under an NWP, but a particular NWP may require appropriate reporting. [40 CFR 230.6(d) and 230.7(b)]

8.1 Evaluation Process (40 CFR 230.7(b))

8.1.1 Alternatives (40 CFR 230.10(a))

General condition 23 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. The consideration of off-site alternatives is not directly applicable to general permits (see 40 CFR 230.7(b)(1)).

8.1.2 Prohibitions (40 CFR 230.10(b))

This NWP authorizes discharges of dredged or fill material into waters of the United States, which may require water quality certification. Water quality certification requirements will be met in accordance with the procedures at 33 CFR 330.4(c).

No toxic discharges are authorized by this NWP. General condition 6 states that the material must be free from toxic pollutants in toxic amounts.

This NWP does not authorize discharges of dredged or fill material into waters of the United States that are likely to jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of critical habitat. Reviews of pre-construction notifications, regional conditions, and local operating procedures for endangered species will ensure compliance with the Endangered Species Act. Refer to general condition 18 and to 33 CFR 330.4(f) for information and procedures.

This NWP will not authorize discharges of dredged or fill material into waters of the United States that violate any requirement to protect any marine sanctuary. Refer to section 8.2.3(j)(1) of this document for further information.

8.1.3 Findings of Significant Degradation (40 CFR 230.10(c))

Potential impact analysis (Subparts C through F): The potential impact analysis

specified in Subparts C through F is discussed in section 8.2.3 of this document. Mitigation required by the district engineer will help ensure that the adverse effects on the aquatic environment are no more than minimal.

Evaluation and testing (Subpart G): Because the terms and conditions of the NWP specify the types of discharges that are authorized, as well as those that are prohibited, individual evaluation and testing for the presence of contaminants will normally not be required. If a particular situation warrants, provisions of the NWP allow division or district engineers to further specify authorized or prohibited discharges and/or require testing. General condition 6 requires that materials used for construction be free from toxic pollutants in toxic amounts.

Based upon Subparts B and G, after consideration of Subparts C through F, and because NWPs can authorize only those activities that result in no more than minimal individual and cumulative adverse environmental effects, the discharges authorized by this NWP will not cause or contribute to significant degradation of waters of the United States.

8.1.4 Factual determinations (40 CFR 230.11)

The factual determinations required in 40 CFR 230.11 are discussed in section 8.2.3 of this document.

8.1.5 Appropriate and practicable steps to minimize potential adverse impacts (40 CFR 230.10(d))

As demonstrated by the information in this document, as well as the terms, conditions, and provisions of this NWP, actions to minimize adverse effects (Subpart H) have been thoroughly considered and incorporated into the NWP. General condition 23 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. Compensatory mitigation may be required by the district engineer to ensure that the net adverse effects on the aquatic environment caused by the discharge of dredged or fill material into waters of the United States are no more than minimal.

8.2 Evaluation Process (40 CFR 230.7(b))

8.2.1 Description of permitted activities (40 CFR 230.7(b)(2))

As indicated by the text of this NWP in section 1.0 of this document, and the discussion of potential impacts in section 5.0, the activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization under a single general permit. Specifically, the purpose of the NWP is to authorize discharges of dredged or fill material into waters of the United States for the

construction, maintenance, repair, or removal of utility lines for water and other substances, and for associated facilities. The nature and scope of the impacts are controlled by the terms and conditions of the NWP.

The activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization by a general permit. The terms of the NWP authorize a specific category of activity (i.e., discharges of dredged or fill material for the construction, maintenance, repair, or removal of utility line activities for water and other substances and for associated facilities) into a specific category of waters (i.e., waters of the United States). The terms of the NWP do not authorize the construction of utility line substations or access roads in tidal waters or in non-tidal wetlands adjacent to tidal waters. The restrictions imposed by the terms and conditions of this NWP will result in the authorization of discharges of dredged or fill material into waters of the United States that have similar impacts on the aquatic environment, namely the replacement of aquatic habitats, such as certain categories of non-tidal wetlands, with utility lines for water and other substances and associated facilities such as substations and access roads. Many of the impacts relating to the construction, maintenance, repair, or removal of utility line activities for water and other substances will be temporary.

If a situation arises in which the discharges of dredged or fill material into waters of the United States require further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

8.2.2 Cumulative effects (40 CFR 230.7(b)(3))

The 404(b)(1) Guidelines at 40 CFR 230.11(a) define cumulative effects as "...the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material." For the issuance of general permits, such as this NWP, the 404(b)(1) Guidelines require the permitting authority to "set forth in writing an evaluation of the potential individual and cumulative impacts of the categories of activities to be regulated under the general permit." [40 CFR 230.7(b)] More specifically, the 404(b)(1) Guidelines cumulative effects assessment for the issuance or reissuance of a general permit is to include an evaluation of "the number of individual discharge activities likely to be regulated under a general permit until its expiration, including repetitions of individual discharge activities at a single location." [40 CFR 230.7(b)(3)] If a situation arises in which cumulative effects are likely to be more than minimal and the proposed discharges of dredged or fill material into waters of the United States require further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

Based on reported use of the 2017 NWP 12 to authorize utility lines for water and other substances during the period of March 19, 2017, to March 18, 2019, the Corps estimates that this NWP will be used approximately 1,400 times per year on

a national basis, resulting in impacts to approximately 690 acres of waters of the United States, including jurisdictional wetlands. The reported use includes pre-construction notifications submitted to Corps districts, as required by the terms and conditions of the NWP as well as regional conditions imposed by division engineers. The reported use also includes voluntary notifications to submitted to Corps districts where the applicants request written verification in cases when pre-construction notification is not required. The reported use does not include activities that do not require pre-construction notification and were not voluntarily reported to Corps districts. The Corps estimates that 330 NWP activities will occur each year that do not require pre-construction notification, and that these activities will impact 20 acres of jurisdictional waters each year.

Based on reported use of this NWP during that time period, the Corps estimates that 5 percent of the NWP 58 verifications issued by district engineers will require compensatory mitigation to offset the authorized impacts to waters of the United States and ensure that the authorized activities result in only minimal adverse effects on the aquatic environment. The verified activities that do not require compensatory mitigation will have been determined by Corps district engineers to result in no more than minimal individual and cumulative adverse effects on the aquatic environment without compensatory mitigation. During the period of 2021-2026, the Corps expects little change to the percentage of NWP 58 verifications requiring compensatory mitigation, because there have been no substantial changes in the mitigation general condition or the NWP regulations for determining when compensatory mitigation is to be required for NWP activities. The Corps estimates that approximately 100 acres of compensatory mitigation will be required each year to offset authorized impacts. The demand for these types of activities could increase or decrease over the five-year duration of this NWP.

Based on these annual estimates, the Corps estimates that approximately 8,650 activities could be authorized over a five-year period until this NWP expires, resulting in impacts to approximately 3,550 acres of waters of the United States, including jurisdictional wetlands. Approximately 500 acres of compensatory mitigation would be required to offset those impacts. The authorized impacts are expected to result in only minor changes to the affected environment (i.e., the current environmental setting), which is described in section 4.0 of this document.

Compensatory mitigation is 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 (33 CFR 332.2). For discharges of dredged or fill material into waters of the United States authorized by NWPs, compensatory mitigation and other forms of mitigation may be used to ensure that the adverse environmental effects are no more than minimal, individually and cumulatively (33 CFR 330.1(e)(3); NWP general condition 23). Restoration is usually the first compensatory mitigation option considered because the likelihood of ecological

success is greater (33 CFR 332.3(a)(2)). As discussed below, restoration of wetlands and streams can increase the ecological functions and services provided by those aquatic resources. However, restoration typically cannot return a degraded wetland or stream to a prior historic condition because of changes in environmental conditions at various scales over time (e.g., Higgs et al. 2014, Jackson and Hobbs 2009, Zedler and Kercher 2005; Palmer et al. 2014), and many of those environmental changes are beyond the control of the mitigation provider. Therefore, it is important to establish realistic goals and objectives for wetland and stream restoration projects (e.g., Hobbs 2007, Ehrenfeld 2000).

Rey Banayas et al. (2009) concluded that restoration activities can increase biodiversity and the level of ecosystem services provided. However, such increases do not approach the amounts of biodiversity and ecosystem services performed by undisturbed reference sites. The ability to restore ecosystems to provide levels of ecological functions and services similar to historic conditions or reference standard conditions is affected by human impacts (e.g., urbanization, agriculture) to watersheds or other landscape units and to the processes that sustain those ecosystems (Zedler et al. 2012, Hobbs et al. 2014). Those changes need to be taken into account when establishing goals and objectives for restoration projects (Zedler et al. 2012), including compensatory mitigation projects. The ability to reverse ecosystem degradation to restore ecological functions and services is dependent on the degree of degradation of that ecosystem and the surrounding landscape, and whether that degradation is reversible (Hobbs et al. 2014). Most studies of the ecological performance of compensatory mitigation projects have focused solely on the ecological attributes of the compensatory mitigation projects, and few studies have also evaluated the aquatic resources impacted by permitted activities (Kettlewell et al. 2008), so it is difficult to assess whether compensatory mitigation projects have fully or partially offset the lost functions provided by the aquatic resources that are impacted by permitted activities.

Wetland restoration, enhancement, and establishment projects can provide wetland functions, as long as the wetland compensatory mitigation project is placed in an appropriate landscape position, has appropriate hydrology for the desired wetland type, and the watershed condition will support the desired wetland type (NRC 2001). Site selection is critical to find a site with appropriate hydrologic conditions and soils to support a replacement wetland that will provide the desired wetland functions and services (Mitsch and Gosselink 2015). In a meta-analysis of 70 wetland restoration studies, Meli et al. (2014) concluded that wetland restoration activities increase biodiversity and ecosystem service provision in degraded wetlands, but the degree of recovery is context dependent. They identified the following factors as influencing wetland restoration outcomes: wetland type, the main cause of degradation, the type of restoration action conducted, and the assessment protocol used to evaluate restoration outcomes. Moreno-Mateos et al. (2015) reviewed the recovery trajectories of 628 wetland restoration and creation projects and concluded that restoring or establishing wetland hydrology is of primary importance, and is more likely to be ecologically successful if wetland hydrology can

be achieved by re-establishing water flows instead of extensive earthwork. In addition, they determined that, with respect to the plant community, natural revegetation is sufficient for recovery and development of most wetland types after wetland hydrology is restored or established.

The ecological performance of wetland restoration, enhancement, and establishment is dependent on practitioner's understanding of wetland functions, allowing sufficient time for wetland functions to develop, and allowing natural processes of ecosystem development (self-design or self-organization) to take place, instead of over-designing and over-engineering the replacement wetland (Mitsch and Gosselink 2015). The likelihood of ecological success in wetland restoration varies by wetland type, with the higher rates of success for coastal, estuarine, and freshwater marshes, and lower rates of success for forested wetlands and seagrass beds (Lewis et al. 1995). In its review, the NRC (2001) concluded that some wetland types can be restored or established (e.g., non-tidal emergent wetlands, some forested and scrub-shrub wetlands, seagrasses, and coastal marshes), while other wetland types (e.g., vernal pools, bogs, and fens) are difficult to restore and should be avoided where possible. Restored riverine and tidal wetlands achieved wetland structure and function more rapidly than depressional wetlands (Moreno-Mateos et al. 2012). Because of its greater potential to provide wetland functions, restoration is the preferred compensatory mitigation mechanism (33 CFR 332.3(a)(2)). Bogs, fens, and springs are considered to be difficult-to-replace resources and compensatory mitigation should be provided through in-kind rehabilitation, enhancement, or preservation of these wetlands types (33 CFR 332.3(e)(3)).

In its review of outcomes of wetland compensatory mitigation activities, the NRC (2001) stated that wetland functions can be replaced by wetland restoration and establishment activities. They discussed five categories of wetland functions: hydrology, water quality, maintenance of plant communities, maintenance of animal communities, and soil functions. It is difficult to restore or establish natural wetland hydrology, and water quality functions are likely to be different than the functions provided at wetland impact sites (NRC 2001). Reestablishing or establishing the desired plant community may be difficult because of invasive species colonizing the mitigation project site (NRC 2001). The committee also found that establishing and maintaining animal communities depends on the surrounding landscape. Soil functions can take a substantial amount of time to develop, because they are dependent on soil organic matter and other soil properties (NRC 2001). The NRC (2001) concluded that the ecological performance in replacing wetland functions depends on the particular function of interest, the restoration or establishment techniques used, and the extent of degradation of the compensatory mitigation project site and its watershed.

The ecological performance of wetland restoration and enhancement activities is affected by the amount of changes to hydrology and inputs of pollutants, nutrients, and sediments within the watershed or contributing drainage area (Wright et al.

2006). Wetland restoration is becoming more effective at replacing or improving wetland functions, especially in cases where monitoring and adaptive management are used to correct deficiencies in these efforts (Zedler and Kercher 2005). Wetland functions take time to develop after the restoration or enhancement activity takes place (Mitsch and Gosselink 2015, Gebo and Brooks 2012), and different functions develop at different rates (Moreno-Mateos 2012, NRC 2001). Irreversible changes to landscapes, especially those that affect hydrology within contributing drainage areas or watersheds, cause wetland degradation and impede the ecological performance of wetland restoration efforts (Zedler and Kercher 2005). Gebo and Brooks (2012) evaluated wetland compensatory mitigation projects in Pennsylvania and compared them to reference standards (i.e., the highest functioning wetlands in the study area) and natural reference wetlands that showed the range of variation due to human disturbances. They concluded that most of the wetland mitigation sites were functioning at levels within with the range of functionality of the reference wetlands in the region, and therefore were functioning at levels similar to some naturally occurring wetlands. The ecological performance of mitigation wetlands is affected by on the landscape context (e.g., urbanization) of the replacement wetland and varies with wetland type (e.g., riverine or depressional) (Gebo and Brooks 2012). Moreno-Mateos et al. (2012) conducted a meta-analysis of wetland restoration studies and concluded that while wetland structure and function can be restored to a large degree, the ecological performance of wetland restoration projects is dependent on wetland size and local environmental setting. They found that wetland restoration projects that are larger in size and in less disturbed landscape settings achieve structure and function more quickly.

Under the Corps' regulations, streams considered to be difficult-to-replace resources and compensatory mitigation should be provided through stream rehabilitation, enhancement, and preservation since those techniques are most likely to be ecologically successful (see 33 CFR 332.3(e)(3)). For the purposes of this section, the term "stream restoration" is used to cover river and stream rehabilitation and enhancement activities. Restoration can be done on large rivers and small streams, and sometimes entire stream networks (Wohl et al. 2015), in a variety of watershed land use settings, including urban and agricultural areas.

River and stream restoration activities can improve the functions performed by these aquatic ecosystems, and the ecosystem services they provide (Wohl et al. 2015, Beechie et al. 2010). Because of changes in land use and other changes in the watershed that have occurred over time, stream restoration can improve stream functions but cannot return a stream to a historic state (Wohl et al. 2015, Roni et al. 2008). Improvements in ecological performance of stream restoration projects is dependent on the restoration method and how outcomes are assessed (Palmer et al. 2014). The ability to restore the ecological functions of streams is dependent on the condition of the watershed draining to the stream being restored because human land uses and other activities in the watershed affect how that stream functions (Palmer et al. 2014). Ecologically successful stream restoration activities depend on addressing the factors that most strongly affect stream functions, such

as water quality, water flow, and riparian area quality, rather than focusing solely on restoring the physical habitat of streams (Palmer et al. 2010, Roni et al. 2008), especially the stream channel.

To be effective, stream restoration activities need to address the causes of stream degradation, which are often within the watershed and outside of the stream channel (Palmer et al. 2014). Actions that focus on restoring processes and connectivity are more likely to be successful than channel reconfiguration efforts (Hawley 2018). Stream rehabilitation and enhancement projects, including the restoration and preservation of riparian areas, provide riverine functions (e.g., Allan and Castillo (2007) for rivers and streams, NRC (2002) for riparian areas). Ecologically effective stream restoration can be conducted by enhancing riparian areas, removing dams, reforestation, and implementing watershed best management practices that reduce storm water and agricultural runoff to streams (Palmer et al. 2014). Process-based stream restoration is intended to address the causes of stream degradation, and should be conducted at the appropriate scale for the cause of stream degradation, such as the watershed or stream reach (Beechie et al. 2010). Process-based stream restoration has substantial potential to re-establish the physical, chemical, and biological processes that sustain riverine ecosystems, including their floodplains (Beechie et al. 2010). Process-based stream restoration can also reduce long-term restoration costs (Beechie et al. 2013, Hawley 2018).

Restoration of incised streams can be accomplished allowing beavers to construct dams in these streams, or by placing structures in the stream channel that mimic the effects that beaver dams have on these streams (DeVries et al. 2012). Examples of stream restoration and enhancement techniques include: dam removal and modification, culvert replacement or modification, fish passage structures when connectivity cannot be restored or improved by dam removal or culvert replacement, levee removal or setbacks, reconnecting floodplains and other riparian habitats, road removal, road modifications, reducing sediment and pollution inputs to streams, replacing impervious surfaces with pervious surfaces, restoring adequate in-stream or base flows, restoring riparian areas, fencing streams and their riparian areas to exclude livestock, improving in-stream habitat, recreating meanders, and replacing hard bank stabilization structures with bioengineering bank stabilization measures (Roni et al. 2013). Miller and Kochel (2010) recommend that stream restoration projects allow the stream channel to self-adjust in response to changing hydrologic and sediment regimes in the watershed, and include other restoration actions such as re-establishing riparian areas next to the stream channel and excluding livestock from the riparian area and stream channel. Large and medium sized rivers can be restored through various approaches, including levee setbacks, levee removal, or creating openings in levees, to restore or improve connectivity between the river and the floodplain, as well as other ecological and geomorphic processes (Wohl et al. 2015). Dam removal, as well as changes in dam operations that provide environmentally-beneficial flows of water and sediment, can also restore functions of rivers and larger streams (Wohl et al.

2015).

Hydrologic restoration can be more effective than in-stream habitat restoration projects (Hawley 2018) because they can help address alterations in watershed hydrology through land use and other watershed changes. Examples of hydrologic restoration approaches include reforestation, floodplain restoration, bankfull wetlands, detention basins, beaver reintroduction, and placement of large woody debris into the stream channel. Restoration actions outside of the stream channel, such as constructed wetlands, storm water management ponds, and revegetating riparian areas, can result in significant improvements in the biodiversity, community structure, and nutrient cycling processes of downstream waters (Smucker and Detenbeck 2014). Non-structural and structural techniques can be used to rehabilitate and enhance streams, and restore riparian areas (NRC 1992). Examples of non-structural stream restoration practices include removing disturbances to allow recovery of stream and riparian area structure and function, restoring natural stream flows by reducing or eliminating activities that have altered stream flows, preserving or restoring floodplains, and restoring and protecting riparian areas, including fencing to exclude livestock and people that can degrade riparian areas (NRC 1992).

Form based restoration efforts, such as channel reconfiguration, can cause substantial adverse impacts to riverine systems through earthmoving activities (which can cause substantial increases in sediment loads) and the removal of riparian trees and other vegetation, with little demonstrable improvements in stream functions (Palmer et al. 2014). In-stream habitat enhancement activities, such as channel reconfiguration and adding in-stream structures, have resulted in limited effectiveness in improving biodiversity in streams (Palmer et al. 2010). In an evaluation of 644 stream restoration projects, Palmer et al. (2014) concluded that stream channel reconfiguration does not promote ecological recovery of degraded streams, but actions taken within the watershed and in riparian areas to restore hydrological processes and reduce pollutant inputs to streams can improve stream functions and ecological integrity. Stream restoration activities should also include consideration of social factors, especially the people that live in the floodplain or near the river or stream (Wohl et al. 2015). These social factors may also impose constraints on what restoration actions can be taken.

Seagrass beds are dynamic ecosystems that can persist for long periods of time or change from season to season (Fonseca et al. 1998). Seagrass beds can be restored, but these restoration activities generally have lower rates of ecological success than the restoration of other wetland types, such as estuarine and freshwater marshes (Lewis et al. 1995). The restoration and natural recovery of seagrasses requires consideration of addressing impediments that occur at various scales, including larger scale problems such as water quality and land use practices (Orth et al. 2006). The ecological success of seagrass restoration can be influenced by the dynamics of coastal environments and various stressors (e.g., reduced water quality/eutrophication, construction activities, dredging, other direct impact, natural

disturbances) that affect seagrasses (van Katwijk et al. 2016). Realistic expectations should be established for seagrass restoration activities because of our limited understanding of seagrasses and the challenges of controlling conditions in open coastal waters (Fonseca 2011).

Site selection is critical for successful restoration of seagrasses (Fonseca 2011, Fonseca et al. 1998). Ecologically successful seagrass restoration is dependent on finding sites where seagrass beds recently existed (Fonseca et al. 1998). The ecological outcomes of seagrass restoration activities is also affected by the size of the restoration project, with larger restoration efforts more likely to be ecologically successful and sustainable because larger projects can produce positive feedbacks that facilitate the establishment and persistence of seagrasses (van Katwijk et al. 2016). At some proposed seagrass restoration sites, it may be infeasible to change the site from a stable unvegetated state to a stable vegetated state through seagrass planting efforts (Fonseca 2011). Small scale restoration activities may be overwhelmed by natural processes that prevent seagrasses from becoming reestablished (Fonseca 2011). Another impediment to ecologically successful seagrass restoration is bioturbation, which can impede natural seagrass recruitment (Fonseca 2011) or disturb plantings. Bioturbation can be caused by animals such as shrimp, crabs, ducks, fish, and urchins, and result in stable, unvegetated benthic habitats (Fonseca 2011).

Fonseca (2011) recommends locating seagrass restoration activities in areas with water depths similar to nearby natural seagrass beds, at a sufficient size to achieve restoration goals, with characteristics that are similar to those at other ecologically successful seagrass restoration projects, and where anthropogenic disturbances can be reduced or removed. Restoration of submersed aquatic vegetation beds requires taking actions to reduce inputs of sediment, nutrients, and organic matter into estuarine waters and avoiding physical damage from boating activities and fishing gear (Waycott et al. 2009). Controlling these stressors has been more effective at restoring seagrass beds than seagrass transplantation efforts (Waycott et al. 2009). Potential restoration sites need to have sufficient light, moderate nutrient loads, suitable salinity and water temperatures, available seeds and other propagules, and an absence of mechanical disturbances that will destroy or degrade plants (Fonseca et al. 1998). Seagrass recovery is affected by numerous factors, such as the characteristics of the target seagrass species, disturbance intensity, disturbance characteristic(s), environmental conditions, disturbance history, the condition of existing seagrass beds, population structure, reproductive capacity, timing, and feedbacks between biotic and abiotic components at the site (O'Brien et al. 2018).

As discussed in section 4.0, the status of waters and wetlands in the United States as reported under the provisions of Sections 303(d) and 305(b) of the Clean Water Act exhibits considerable variation, ranging from “good” to “threatened” to “impaired.” One of the criteria that district engineers consider when they evaluate proposed NWP activities is the “degree or magnitude to which the aquatic resources

perform these functions" (see paragraph 2 of Section D, "District Engineer's Decision." The quality of the affected waters is considered by district engineers when making decisions on whether to require compensatory mitigation for proposed NWP activities to ensure no more than minimal adverse environmental effects (see 33 CFR 330.1(e)(3)), and amount of compensatory mitigation required (see 33 CFR 332.3(f)). The quality of the affected waters also factors into the determination of whether the required compensatory mitigation offsets the losses of aquatic functions caused by the NWP activity.

The compensatory mitigation required by district engineers in accordance with general condition 23 and through activity-specific conditions added to the NWP authorization is expected to provide aquatic resource functions and services to offset some or all of the losses of aquatic resource functions caused by the activities authorized by this NWP, and reduce the incremental contribution of those activities to the cumulative effects on the Nation's wetlands, streams, and other aquatic resources. The required compensatory mitigation must be conducted in accordance with the applicable provisions of 33 CFR part 332, which requires development and implementation of approved mitigation plans, as well as monitoring to assess ecological success in accordance with ecological performance standards established for the compensatory mitigation project. The district engineer will evaluate monitoring reports to determine if the compensatory mitigation project has fulfilled its objectives, is ecological successful, and offsets the permitted impacts. If the monitoring efforts indicate that the compensatory mitigation project is failing to meet its objectives, the district engineer may require additional measures, such as adaptive management or alternative compensatory mitigation, to address the compensatory mitigation project's deficiencies. [33 CFR 332.7(c)]

According to Dahl (2011), during the period of 2004 to 2009 approximately 489,620 acres of former upland were converted to wetlands as a result of wetland reestablishment and establishment activities. Efforts to reestablish or establish wetlands have increased wetland acreage in the United States.

The individual and cumulative adverse effects on the aquatic environment resulting from the activities authorized by this NWP, including compliance with all applicable NWP general conditions as well as regional conditions imposed by division engineers and activity-specific conditions imposed by district engineers, are expected to be no more than minimal. The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design their projects within the scope of the NWP, including its limits, rather than request individual permits for projects that could result in greater adverse impacts to the aquatic environment. Division and district engineers will restrict or prohibit this NWP on a regional or case-specific basis if they determine that these activities will result in more than minimal individual and cumulative adverse effects on the aquatic environment.

8.2.3 Section 404(b)(1) Guidelines Impact Analysis, Subparts C through F

(a) Substrate: Discharges of dredged or fill material into waters of the United States may alter the substrate of those waters, and may replace the aquatic area with dry land and change the physical, chemical, and biological characteristics of the substrate. The original substrate may be removed or covered by other material, such as concrete, asphalt, soil, gravel, etc. Temporary fills may be placed upon the substrate, but must be removed upon completion of the activity (see general condition 13). Higher rates of erosion may result during construction, but general condition 12 requires the use of appropriate measures to control soil erosion and sediment.

(b) Suspended particulates/turbidity: Depending on the method of construction, soil erosion and sediment control measures, equipment, composition of the bottom substrate, and wind and current conditions during construction, fill material placed in open waters may temporarily increase water turbidity. Pre-construction notification is required for certain discharges of dredged or fill material into waters of the United States authorized by this NWP, which allows the district engineer to review those activities and ensure that the individual and cumulative adverse effects on the aquatic environment are no more than minimal. Particulates may be resuspended in the water column during removal of temporary fills. The turbidity plume may be limited to the immediate vicinity of the disturbance and should dissipate shortly after each phase of the construction activity. General condition 12 requires the permittee to stabilize exposed soils and other fills, which will reduce turbidity. In many localities, sediment and erosion control plans are required to minimize the entry of soil into the aquatic environment. Nationwide permit activities cannot create turbidity plumes that smother important spawning areas downstream (see general condition 3).

(c) Water: Utility line activities for water and other substances may affect some characteristics of water, such as water clarity, chemical content, dissolved gas concentrations, pH, and temperature. The construction of utility lines for water and other substances, substations including pumping stations, foundations for above-ground utility lines, and access roads may change the chemical and physical characteristics of the waterbody by introducing suspended or dissolved chemical compounds or sediments into the water. Changes in water quality have potential to affect the species and quantities of organisms inhabiting the aquatic area. Water quality certification is required for discharges of dredged or fill material into waters of the United States authorized by this NWP, which will help ensure that the discharges do not violate applicable water quality requirements. Permittees may be required to implement water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. Stormwater management facilities may be required to prevent or reduce the input of harmful chemical compounds into the waterbody. The district engineer may require the establishment and maintenance of riparian areas next to open waters, such as streams. Riparian areas can help improve or maintain water quality, by removing nutrients, moderating water temperature changes, and trapping

sediments.

(d) Current patterns and water circulation: Discharges of dredged or fill material into waters of the United States authorized by this NWP may adversely affect the movement of water in the aquatic environment. Certain utility line activities authorized by this NWP require pre-construction notification to the district engineer, who will review the proposed activity to ensure that adverse effects to current patterns and water circulation are no more than minimal. General condition 9 requires the authorized activity to be designed to withstand expected high flows and to maintain the course, condition, capacity, and location of open waters to the maximum extent practicable. General condition 10 requires activities to comply with applicable FEMA-approved state or local floodplain management requirements, which will reduce adverse effects to surface water flows.

(e) Normal water level fluctuations: The discharges of dredged or fill material into waters of the United States authorized by this NWP may have adverse effects on normal patterns of water level fluctuations due to tides and flooding. Most utility line activities for water and other substances are likely to have little effect on normal water level fluctuations because they occupy a small proportion of the land surface or are installed under the ground surface. The NWP requires the removal of temporary fills after completion of the authorized work, and restoration of affected areas to pre-construction elevations. General condition 9 requires the permittee to maintain the pre-construction course, condition, capacity, and location of open waters, to the maximum extent practicable. To ensure that the NWP does not authorize activities that adversely affect normal flooding patterns, general condition 10 requires NWP activities to comply with applicable FEMA-approved state or local floodplain management requirements.

(f) Salinity gradients: The discharges of dredged or fill material into waters of the United States authorized by this NWP may adversely affect salinity gradients, if the utility lines for water or other substances are located in estuarine or marine waters. There may be an outfall structure associated with a utility line that could release freshwater into marine or estuarine waters, thereby reducing the salinity of those waters in the vicinity of the outfall structure.

(g) Threatened and endangered species: No activity is authorized by any NWP if that activity is likely to jeopardize the continued existence of a threatened or endangered species as listed or proposed for listing under the Endangered Species Act of 1973, as amended, or to destroy or adversely modify the critical habitat of such species. See 33 CFR 330.4(f) and paragraph (a) of general condition 18. For NWP activities, compliance with the Endangered Species Act is discussed in more detail in section 7.0 of this document.

(h) Fish, crustaceans, molluscs, and other aquatic organisms in the food web. Certain discharges of dredged or fill material into waters of the United States authorized by this NWP require pre-construction notification to the district engineer,

which will provide an opportunity for the district engineer to review those activities on a case-by-case basis and add permit conditions, such as mitigation measures, to ensure that adverse effects to fish and other aquatic organisms in the food web are no more than minimal. Fish and other motile animals are likely to avoid the project site during construction, repair, or removal activities. Sessile or slow-moving animals in the path of discharges, equipment, and building materials may be destroyed. Some aquatic animals may be smothered by the placement of dredged or fill material. Motile animals are likely to return to those areas that are temporarily impacted by the NWP activity and restored or allowed to revert back to pre-construction conditions. Aquatic animals might not return to sites of permanent fills. Benthic and sessile animals are likely to recolonize sites temporarily impacted by the activity, after those areas are restored. Discharges of dredged or fill material into waters of the United States that alter the riparian zone, especially floodplains, may adversely affect populations of fish and other aquatic animals, by altering stream flow, flooding patterns, and surface and groundwater hydrology.

Division and district engineers can place conditions on this NWP to prohibit discharges during important stages of the life cycles of certain aquatic organisms. Such time of year restrictions can prevent adverse effects to these aquatic organisms during reproduction and development periods. General conditions 3 and 5 address protection of spawning areas and shellfish beds, respectively. General condition 3 states that activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. In addition, general condition 3 also prohibits activities that result in the physical destruction of important spawning areas. General condition 5 prohibits activities in areas of concentrated shellfish populations. General condition 9 requires the maintenance of pre-construction course, condition, capacity, and location of open waters to the maximum extent practicable, which will help minimize adverse impacts to fish, shellfish, and other aquatic organisms in the food web.

(i) Other wildlife: Discharges of dredged or fill material into waters of the United States authorized by this NWP may result in adverse effects to other wildlife associated with aquatic ecosystems, such as resident and transient mammals, birds, reptiles, and amphibians, through the destruction of aquatic habitat, including breeding and nesting areas, escape cover, travel corridors, and preferred food sources. This NWP does not authorize discharges of dredged or fill material into waters of the United States that are likely to jeopardize the continued existence of federally-listed endangered and threatened species or result in the destruction or adverse modification of critical habitat. Compensatory mitigation, including the establishment and maintenance of riparian areas next to open waters, may be required for activities authorized by this NWP, which will help offset losses of aquatic habitat for wildlife. General condition 4 requires that activities in breeding areas for migratory birds must be avoided to the maximum extent practicable.

(j) Special aquatic sites: The potential impacts to specific special aquatic sites are discussed below:

(1) Sanctuaries and refuges: The construction, maintenance, or removal of utility lines, substations, and access roads may involve discharges of dredged or fill material into waters of the United States that may adversely affect sanctuaries and refuges. General condition 23 requires adverse effects to waters of the United States to be minimized to the maximum extent practicable on the project site. The district engineer will exercise discretionary authority and require an individual permit for specific discharges of dredged or fill material into waters of the United States in waters of the United States in sanctuaries and refuges if he or she determines that those discharges will result in more than minimal adverse effects on the aquatic environment.

(2) Wetlands: The construction, maintenance, or removal of utility lines for water and other substances, substations, and access roads and may involve discharges of dredged or fill material into waters of the United States that may adversely affect wetlands. General condition 23 requires adverse effects to waters of the United States to be minimized to the maximum extent practicable on the project site. District engineers will review pre-construction notifications for certain discharges of dredged or fill material into waters of the United States authorized by this NWP to ensure that the adverse effects on the aquatic environment are no more than minimal. Some activities authorized by this NWP (e.g., discharges of dredged or fill material into jurisdictional wetlands to construct substations, permanent access roads, or foundations to support above-ground utility lines, may result in permanent wetland losses. Some discharges of dredged or fill material into waters of the United States authorized by this NWP may result in temporary impacts to wetlands, and those wetlands will be restored to pre-construction elevations after temporary fills are removed, and revegetated as appropriate. Some discharges of dredged or fill material into waters of the United States authorized by this NWP may convert wetlands to different types (e.g., a forested wetland to an herbaceous or scrub-shrub wetland), which may occur in a utility line right-of-way. For some discharges of dredged or fill material into waters of the United States authorized by this NWP, there will be losses of wetlands in cases where the authorized discharge involves permanent fills in jurisdictional wetlands to convert those areas to dry land. Division engineers can add regional conditions to this NWP to restrict or prohibit its use in certain high value wetlands. Compensatory mitigation may be required by district engineers to offset wetland losses authorized by this NWP (see general condition 23). See paragraph (e) of section 6.1 for a more detailed discussion of impacts to wetlands.

(3) Mud flats: The construction, maintenance, or removal of utility lines for water and other substances, substations, and access roads may involve discharges of dredged or fill material into waters of the United States that may adversely affect mud flats. General condition 23 requires adverse effects to waters of the United States to be minimized to the maximum extent practicable on the project site. Discharges of dredged or fill material into waters of the United States authorized by this NWP may result in temporary or permanent impacts to mud flats, if the utility

line activity occurs in coastal waters. Small portions of mud flats may be destroyed by the construction or repair of utility lines. Some impacts to mudflats authorized by this NWP may convert portions of a mudflat to another habitat type. Pre-construction notification is required for certain discharges of dredged or fill material into waters of the United States authorized by this NWP and the pre-construction notification must include a delineation of special aquatic sites, including mud flats. The district engineer will review the pre-construction notification and determine whether the proposed discharge of dredged or fill material into waters of the United States will result in no more than minimal individual and cumulative adverse effects on the aquatic environment.

(4) Vegetated shallows: The construction, maintenance, or removal of utility lines for water and other substances, substations, and access roads may involve discharges of dredged or fill material into waters of the United States that may adversely affect vegetated shallows. General condition 23 requires adverse effects to waters of the United States to be minimized to the maximum extent practicable on the project site. Discharges of dredged or fill material into waters of the United States authorized by this NWP may result in temporary or permanent adverse effects to vegetated shallows. District engineers will receive pre-construction notifications for all utility line activities in section 10 waters to determine if those activities will result in only minimal adverse effects on the aquatic environment, including vegetated shallows. Division engineers can add regional conditions to this NWP to restrict or prohibit its use in vegetated shallows. For those discharges of dredged or fill material into waters of the United States that require pre-construction notification, the district engineer will review the proposed discharge and will exercise discretionary authority to require the project proponent to obtain an individual permit if he or she determines, after considering mitigation proposed by the applicant, that the proposed discharge will result in more than minimal adverse effects on the aquatic environment.

(5) Coral reefs: The construction, maintenance, or removal of utility lines for water and other substances, substations, and access roads may involve discharges of dredged or fill material into waters of the United States that may adversely affect coral reefs. Maintenance activities involving discharges of dredged or fill material into waters of the United States authorized by this NWP may benefit coral reefs by reducing inputs of pollutants into waters inhabited by coral reefs. General condition 23 requires adverse effects to waters of the United States to be minimized to the maximum extent practicable on the project site. Discharges of dredged or fill material into waters of the United States authorized by this NWP may result in permanent or temporary impacts to coral reefs. Pre-construction notification is required for all section 10 activities authorized by this NWP, so that the district engineer can review each proposed activity and ensure that it results in no more minimal adverse environmental effects on the aquatic environment, including coral reefs. If the proposed discharge of dredged or fill material into waters of the United States will result in more than minimal adverse effects on the aquatic environment, the district engineer will exercise discretionary authority to require the project

proponent to obtain an individual permit. Division engineers may also add regional conditions to this NWP to restrict or prohibit its use in coral reefs.

(6) Riffle and pool complexes: The construction, maintenance, or removal of utility lines for water and other substances, substations, and access roads may involve discharges of dredged or fill material into waters of the United States that may adversely affect riffle and pool complexes. Some discharges of dredged or fill material into waters of the United States authorized by this NWP, such as stream crossings for utility lines, may result in permanent or temporary impacts to riffle and pool complexes. This NWP requires the removal of temporary fills and structures after the authorized work has been completed, and restoration of the affected area to pre-construction elevations. Division engineers can add regional conditions to this NWP to restrict or prohibit its use in riffle and pool complexes. Pre-construction notification is required for certain utility line activities authorized by this NWP, which will allow district engineers to review those proposed discharges of dredged or fill material into waters of the United States. If the district engineer determines the adverse environmental effects caused by the proposed discharge of dredged or fill material into waters of the United States are more than minimal, he or she will exercise discretionary authority to require the project proponent to obtain an individual permit.

(k) Municipal and private water supplies: See paragraph (n) of section 6.1 for a discussion of potential impacts to water supplies.

(l) Recreational and commercial fisheries, including essential fish habitat: The discharges of dredged or fill material into waters of the United States authorized by this NWP may adversely affect waters of the United States that act as habitat for populations of economically important fish and shellfish species. Division and district engineers can add conditions to this NWP to prohibit discharges during important life cycle stages, such as spawning or development periods, of economically valuable fish and shellfish. All utility line activities for water and other substances requiring section 10 authorization require submission of pre-construction notifications to the district engineer, which will allow review of each discharge of dredged or fill material into navigable waters to ensure that adverse effects to economically important fish and shellfish are no more than minimal. Compliance with general conditions 3 and 5 will ensure that the authorized discharge of dredged or fill material into waters of the United States does not adversely affect important spawning areas or concentrated shellfish populations. As discussed in paragraph (g) of section 6.1, there are procedures to help ensure that individual and cumulative impacts to essential fish habitat are no more than minimal. For example, division and district engineers can impose regional and activity-specific conditions to ensure that discharges of dredged or fill material into waters of the United States authorized by this NWP will result in only minimal adverse effects on essential fish habitat.

(m) Water-related recreation: See paragraph (m) of section 6.1 above.

- (n) Aesthetics: See paragraph (c) of section 6.1 above.
- (o) Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar areas: This NWP can be used to authorize activities in parks, national and historical monuments, national seashores, wilderness areas, and research sites if the manager or caretaker wants to conduct discharges of dredged or fill material into waters of the United States and those activities result in no more than minimal adverse effects on the aquatic environment. Division engineers can add regional conditions to the NWP to prohibit its use in designated areas, such as national wildlife refuges or wilderness areas.

9.0 Determinations

9.1 Finding of No Significant Impact

Based on the information in this document, the Corps has determined that the discharges of dredged or fill material into waters of the United States and structures and work in navigable waters of the United States authorized by the issuance of this NWP will not have a significant impact on the quality of the human environment. During the five-year period this NWP will be in effect, the activities authorized by this NWP will result in only minor changes to the affected environment described in section 4.0 of this environmental assessment. Therefore, the preparation of an environmental impact statement is not required for the issuance of this NWP.

9.2 Public Interest Determination

In accordance with the requirements of 33 CFR 320.4, the Corps has determined, based on the information in this document, that the issuance of this NWP to authorize discharges of dredged or fill material into waters of the United States and structures and work in navigable waters of the United States for utility line activities for water and other substances is not contrary to the public interest.

9.3 Section 404(b)(1) Guidelines Compliance

This NWP has been evaluated for compliance with the 404(b)(1) Guidelines, including Subparts C through G. Based on the information in this document, the Corps has determined that the discharges authorized by this NWP comply with the 404(b)(1) Guidelines, with the inclusion of appropriate and practicable conditions, including mitigation measures required by the NWP general conditions, that minimize adverse effects on affected aquatic ecosystems. The discharges of

dredged or fill material into waters of the United States authorized by this NWP will result in only minor changes to the current environmental setting described in section 4.0 of this document, and will have no more than minimal individual and cumulative adverse effects on the aquatic environment during the 5-year period this NWP is in effect.

9.4 Section 176(c) of the Clean Air Act General Conformity Rule Review

This issuance of this NWP has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities authorized by this permit will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR 93.153. Any later indirect emissions are generally not within the Corps continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this NWP.

FOR THE COMMANDER

Dated: 4 January 2021



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ATTACHMENT B -

USFWS

COORDINATION

2024-0031857 ES

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Volkert, Inc.
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March 25, 2024

Mr. Bill Pearson
U.S. Fish and Wildlife Service
Daphne Field Office
1208-B Main Street
Daphne, Alabama 36526

**RE: Threatened and Endangered Species Coordination
Project Code: 2024-0031857
RESTORE Act – Norton Creek Sewer Rehabilitation
Saraland Water and Sewer Service
Saraland, Mobile County, Alabama**

Dear Mr. Pearson,

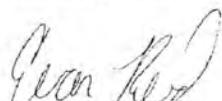
The Saraland Water and Sewer Service is proposing a project to improve the existing sewer system in Saraland, Mobile County, Alabama utilizing RESTORE Act grant funding. The project is located within Section 4, of Township-3-South, Range-1-West on the Chickasaw, AL U.S. Geological Survey quadrangle map. More specifically, the project central coordinate are N30.815164° W88.075398°. The project consists of three parts. 1) 5,500 linear feet of cure in place pipe lining of existing gravity sewer main and manhole rehabilitation. 2) Relocation of 260 linear feet of HDPE and PVC sewer main and three associated manholes utilizing directional drilling and open cut methods. 3) Relocating an existing lift station to the end of Commerce Street, within city right-of-way. Approximately 0.69-acre of temporary wetland impacts are anticipated in the form of vegetative clearing for access to the various components of the project. No permanent impacts to wetlands or streams are anticipated. A Nationwide Permit 58 has been acquired for the proposed temporary wetland impacts, SAM-2008-01303.

We are preparing an RESTORE Act Environmental Compliance form for the project and respectfully request coordination from the U.S. Fish and Wildlife Service office. Please find the attached Biological Assessment for the project for your review.

Please contact me at 251-968-7551 or by email at evan.reid@volkert.com if you have any questions or comments regarding this submittal.

Sincerely,

Volkert, Inc.



Evan Reid, CPESC
Environmental Project Manager

TRANSPORTATION



U.S. Fish and Wildlife Service
1208-B Main Street – Daphne, Alabama 36526
Phone: 251-441-5181 Fax: 251-441-6222

No federally listed species/critical habitat are known to occur in the project area. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT NEW PLANS FOR REVIEW. SITE MAY CONTAIN WETLANDS. Contact U.S. Army Corps of Engineers for a jurisdictional wetlands determination. We recommend the use of best management practices specific to your project (See <https://www.fws.gov/project/best-management-practices-alabama>).



APR 11 2024

William J. Pearson, Field Supervisor
Field Supervisor
Alabama Ecological Services Field Office

Date

#4

BIOLOGICAL ASSESSMENT

Norton Creek Sewer Rehabilitation Project

Saraland Water and Sewer Service
Saraland, Mobile County, Alabama

Prepared for:

Saraland Water and Sewer Service
307 Shelton Beach Road
Saraland, Alabama 36571

Prepared by:

VOLKERT

1680 West Second Street, Suite B
Gulf Shores, Alabama 36542
January 2024

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Appendix A: USFWS Official Species List

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1.0 INTRODUCTION

Volkert, Inc. (Volkert) conducted this Biological Assessment to identify the potential for presence of protected species, including threatened and endangered species and migratory birds, for the Saraland Water and Sewer Service's Norton Creek Rehabilitation project. The proposed project is located in Saraland, Mobile County, Alabama. The project study area consists of approximately 12 acres and 8,000 linear feet and is illustrated on **Figure 1**.

The proposed project includes three parts. Part A consists of cured in place pipe lining of 5,500 linear feet of gravity sewer main and rehabilitation of associated manholes. Part B consists of relocation and replacement of 260 linear feet of 12 to 30-inch high density polyethylene (HDPE) and PVC sewer main and three (3) 60-inch manholes utilizing both horizontal directional drilling and open cut methods. Parts A and B will occur along an existing utility easement that generally follows Norton Creek. Part C consists of relocating the Police Club lift station to the eastern end of Commerce Street. The lift station will be constructed within existing city owned right-of-way.

This Biological Assessment presents Volkert's review and assessment of federally listed threatened and endangered species that potentially occur within the project study area. Information from the U.S. Fish and Wildlife Service (USFWS) official species lists for the project area were reviewed and can be found in **Appendix A**.

Volkert's background research also included a review of environmental datasets including aerial photography, topographic imagery, Federal Emergency Management Agency (FEMA) floodplain maps, USFWS National Wetland Inventory maps, and Natural Resources Conservation Services (NRCS) soils maps of the project area. These maps can be found in **Appendix B**. Site investigations were conducted in July of 2023 by Volkert's qualified biologists to identify potential habitats within the study area and to survey for the potential presence of protected species.

2.0 OVERVIEW OF ESA COMPLIANCE

The purpose of the Endangered Species Act (ESA) is to conserve threatened and endangered species and the ecosystems upon which they depend. When Congress passed the ESA in 1973, they recognized that the natural heritage of the U.S. was of "esthetic, ecological, educational, recreational, and scientific value to our Nation and its people." Congress understood that, without protection, many of our Nation's living resources would become extinct. Species at risk of extinction are considered endangered, whereas species that are likely to become endangered in the foreseeable future are considered threatened. The USFWS known as "the Service" has the responsibility for implementing the ESA.

Under Section 7 of the ESA Federal agencies must review their actions to determine if the Proposed Action may affect endangered or threatened species or their habitat(s). If one or more listed species may be present in the Proposed Action area or if it is to occur within critical habitat for a listed species, the federal agencies must evaluate the potential effects of their action and determine if consultation with the USFWS is required.



Figure 1
Vicinity Map
Saraland, Mobile County, AL

N
W E
S
1 inch = 3,000 feet

Legend

 Project Area

Figure 1: Project Study Area

3.0 SITE DESCRIPTION

The project study area is located within a mixed residential and commercial areas of Saraland, Mobile County, Alabama. The project study area consists of an unimproved forested utility easement through residential areas adjacent to Norton Creek, and an unimproved lift station site adjacent to commercial development.

The proposed project study area ranges from 6 to 22 feet above Mean Sea Level (MSL). The project study area consists of a west to east gradient. Rainfall within the project study area drains through natural topography into Norton Creek before flowing offsite to the east. According to the Geological Survey of Alabama, the project study area is in the Quaternary system and is subdivided into the Pleistocene and Pliocene. These geologic formations are then specified by the Citronelle Formation.

Vegetation is dominated by mixed pine and hardwoods in the tree and sapling stratum. Species include various oak species (*Quercus* sp.), loblolly pine (*Pinus taeda*), red maple (*Acer rubrum*), American sycamore (*Platanus occidentalis*) and southern magnolia (*Magnolia grandiflora*). Herbaceous and shrub layers were dominated by gallberry (*Ilex glabra*), youpon holly (*Ilex vomitoria*), sparkleberry (*Vaccinium arboreum*), sumac (*Rhus*, spp.), golden rod (*Solidago altissima*), and hilograss (*Paspalum conjugatum*). Wetland areas consist of Chinese tallow (*Triadica sebifera*), slash pine (*Pinus elliottii*), water oak (*Quercus nigra*), wax myrtle (*Morella cerifera*), maidencane (*Arundinaria gigantean*), netted chain fern (*Woodwardia areolata*), cinnamon fern (*Osmundastrum cinnamomeum*) and sedge species (*Carex* sp.). The non-forested upland areas consist of pines, oaks, youpon holly, and various turf grasses such as bahia grass (*Paspalum notatum*), centipede grass (*Eremochloa ophiuroides*), and crabgrass (*Digitaria bicornis*), and dog fennel (*Eupatorium capillifolium*). Photographs of the project area habitats are found in **Appendix C**.

A review of the Web Soil Survey for the project area revealed seven soil types exist within the project area. The soils found in the project area are mapped as Alga fine sand (A1B), Benndale-Urban Land Complex (BuC), Daleville and Smithton soils (DSA), Escambia – Urban Land Complex (EuA), Johnston, Bibb and Smithton soils (JOA), Malbis-Urban Land Complex (MbC), and Urban Land (UbA). The DSA and JOA soils are classified as hydric soils by the United States Department of Agriculture's NRCS Web Soil Survey. In Mobile County, the average winter temperature is 53 degrees Fahrenheit (F) and, in the summer, the average temperature is 79 degrees F. Precipitation in this area averages approximately 67 inches per year. Most of the precipitation within this area occurs in the spring and summer months.

4.0 THREATENED AND ENDANGERED SPECIES

Federally listed species and their habitats are protected under the ESA of 1973 (16 U.S.C§ 1531-1544, 87 Stat. 884), as amended. Section 7 of the ESA requires coordination with the USFWS for Proposed Actions that have a federal nexus. The project area was evaluated for the potential occurrence of federally listed threatened and endangered species.

In July of 2023, a project specific USFWS species list was reviewed through the Information for Planning and Consultation (IPaC) system in order to determine species of potential occurrence

and if critical habitats existed within the project area prior to site investigations. On January 3, 2024, a project specific USFWS species list was generated to review any potential species updates. Eight (8) species with federal-listing status of endangered, threatened, proposed endangered, proposed threatened, and candidate were identified on the USFWS official species list obtained for the project area. Based on the official species list, no critical habitats were identified within the project area. **Table 1** contains a list of these species along with their listing status, preferred habitat, whether appropriate habitat for the species was found within the project area, and an effect determination for each species.

Table 1: U.S. Fish and Wildlife Official Species List

| Species | Federal Status | Habitat Description | Preferred Habitat Present in Project Area? | Species Effect/Impact | Pertinent Project Information |
|--|---------------------|--|--|---|---|
| Mammals | | | | | |
| Tri-colored Bat (<i>Perimyotis subfalcatus</i>) | Proposed Endangered | During the winter, tricolored bats are found in caves and mines, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in road-associated culverts. During the spring, summer and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves. | Yes | May Effect but Not Likely to Adversely Effect | Pine trees, Spanish moss, and leaf clusters of deciduous hardwood trees were identified within the project boundary. No individuals of this species were observed during the site visit. Therefore, the proposed project <i>May Effect but Not Likely to Adversely Effect</i> this species if tree clearing occur from February 16 to May 15 and July 16 to December 15 |
| West Indian Manatee (<i>Trichechus manatus</i>) | Threatened | Manatees range freely between marine and freshwater habitats. Specific habitats include foraging and drinking sites, resting areas, travel corridors and others. Historically manatees have sought out natural, warm-water sites, including springs, deep water areas, and areas thermally influenced by the Gulf Stream. The manatee forages on submerged, floating, and emergent vegetation. | No | No Effect | There is no suitable habitat or waterways within the project area for the manatee. The proposed project is anticipated to have <i>No Effect</i> on this species. |
| Reptiles | | | | | |
| Alabama red-bellied turtle (<i>Pseudemys alabamensis</i>) | Endangered | The turtle's range within Alabama is mostly confined to the Mobile-Tensaw Delta in Mobile and Baldwin Counties. The red-bellied turtle prefers soft sandy bottoms in shallow areas of slow-moving freshwater streams and rivers but can also be found in the more brackish waters of bays and bayous in or adjacent to Mobile Bay. These areas are also abundant in the aquatic plants that form the basis of the turtle's diet. | No | No Effect | There is no suitable habitat or waterways within the project area for the Alabama red-bellied turtle. The proposed project is anticipated to have <i>No Effect</i> on this species. |

Table 1: U.S. Fish and Wildlife Official Species List

| Species | Federal Status | Habitat Description | Preferred Habitat Present in Project Area? | Species Effect/Impact | Pertinent Project Information |
|--|---------------------|--|--|-----------------------|---|
| Reptiles | | | | | |
| Alligator Snapping Turtle <i>(Macrochelys temminckii)</i> | Proposed Threatened | The alligator snapping turtle is almost exclusively aquatic and tends to stay submerged and motionless for so long that algae begins to grow on their shells. Except for egg-laying females, these turtles almost never come on land. River systems, lakes, and wetlands comprise their preferred habitats. | No | No Effect | Wetlands were identified within the project area and are vegetated, with little to no surface water present. No individuals of this species were observed during the site visit. Within the project area Norton Creek is a flowing perennial stream. No stagnant pools or ponded areas were identified. The proposed project is anticipated to have <i>No Effect</i> on this species. |
| Black Pinesnake <i>(Pituophis melanoleucus lodingi)</i> | Threatened | The pine snake inhabits pine flatwoods, sandy pine-oak woodlands, prairies, cultivated field, open brushland, rocky desert and chaparral. The pine snake requires well-drained, sandy soils with little vegetation for use as nesting and hibernation sites. The pine snake preys on rats, mice, moles and other small mammals and eggs. It often enters rodent burrows in search of a meal. In these cases, multiple kills are frequent, with the snake pressing the mice against the walls of the burrow. | No | No Effect | There is no preferred habitat within the project area for the black pine snake. No individuals of this species were observed during the site visit. Therefore, the proposed project is anticipated to have <i>No Effect</i> on this species. |
| Eastern indigo snake <i>(Drymarchon corais couperi)</i> | Threatened | The indigo snake feeds largely on fish, frogs, toads, snakes (venomous as well as nonvenomous), lizards, turtles, turtle eggs, small alligators, birds and small mammals. The eastern indigo snake is highly dependent on burrows excavated by other animals, particularly the gopher tortoise (<i>Gopherus polyphemus</i>). These burrows are used as a refuge and for overwintering. The indigo snake inhabits mature pine forests in central and northern Florida, and flatwoods, dry glades, tropical hammocks, and muckland fields in southern Florida. It is often found along canal banks, using crab holes for dens. | No | No Effect | There is no preferred habitat within the project area for the eastern indigo snake. No individuals of this species were observed during the site visit. Therefore, the proposed project is anticipated to have <i>No Effect</i> on this species. |

Table 1: U.S. Fish and Wildlife Official Species List

| Species | Federal Status | Habitat Description | Preferred Habitat Present in Project Area? | Species Effect/Impact | Pertinent Project Information |
|---|----------------|--|--|-----------------------|---|
| Reptiles | | | | | |
| Gopher Tortoise <i>(Gopherus polyphemus)</i> | Threatened | Gopher tortoises grow to be up to 15 inches long and weigh from eight to 15 pounds. With their strong elephant-like back legs and front feet specialized for digging, they are well-adapted to burrowing. The burrows provide gopher tortoises with protection from predators and from the elements by maintaining a consistent environment inside. They are most active in the warmer months but spend most of their lives in their burrows. Each tortoise will dig and use many burrows throughout the active season. The burrows can vary from three to 52 feet long and nine to 23 feet deep. Primarily herbivorous creatures, gopher tortoises eat grasses, mushrooms, saw palmetto berries, and prickly pear cactus pads, fruits, and flowers, as well as blackberries, blueberries, gopher apples and other low-growing fruits. Gopher tortoises need large parcels of undeveloped land not fragmented by roads, buildings, parking lots, and other structures. | No | No Effect | There is no preferred habitat within the project area for the gopher tortoise. No individuals of this species were observed during the site visit. Therefore, the proposed project is anticipated to have <i>No Effect</i> on this species. |
| Insects | | | | | |
| Monarch butterfly <i>(Danaus plexippus)</i> | Candidate | Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites. The monarch requires undisturbed fields to reproduce. | No | No Effect | Although the monarch butterfly can inhabit several ecosystems, no individuals were identified, and no desirable milkweed plants were identified on site. Therefore, the proposed project is anticipated to have <i>No Effect</i> on this species. |

5.0 SUMMARY OF THREATENED AND ENDANGERED SPECIES FINDINGS

5.1 U.S. Fish and Wildlife Listed Species

The proposed project activities are anticipated to have a designation of No Effect on the west Indian manatee, Alabama red-bellied turtle, alligator snapping turtle, black pine snake, eastern indigo snake, gopher tortoise and monarch butterfly. These species are not anticipated to be exposed to the proposed project's activities or environmental consequences and thus are not anticipated to experience adverse or beneficial effects.

The proposed project May Effect but Not Likely to Adversely Effect the proposed endangered tri-colored bat. It is recommended that tree clearing should occur from February 16th to May 15th and July 16th to December 15th. This species is not anticipated to be exposed to the proposed project's activities or environmental consequences if tree clearing recommendations are followed, and thus is not anticipated to experience adverse effects.

During the field investigations, no USFWS listed species were observed in the project area. Additionally, no designated critical habitat for threatened and endangered species occurs within the project area.

5.2 The Bald Eagle and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940 prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, (any bald eagle or golden eagle), alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

The Act defines "disturb" as: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." The Act also provides protection for impacts that resulted from human-induced alterations initiated around a previously used nest site during a time when eagles were not present.

No habitat for eagles, eagle nests, or other raptor nests were observed during the field survey. Furthermore, no bald eagles or golden eagles were observed in the project area.

6.0 MIGRATORY BIRDS

For projects that may affect migratory birds, the Migratory Bird Treaty Act (MBTA) implements various treaties and conventions for the protection of these species. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. Migratory birds may nest in trees, brushy areas, or other areas of suitable habitat. The USFWS recommends activities requiring vegetation removal or disturbances to avoid the peak nesting period of March 15 through September 15 to avoid destruction of individuals, nests, or eggs. If project activities, including vegetation clearing, must be conducted during this time, it is recommended that a qualified biologist conduct a survey for nests prior to conducting work. If nesting birds are found, USFWS recommends a buffer of vegetation remain around the nest until the young have fledged or the nest is abandoned.

No nesting migratory birds were observed within the project area during the field survey. The project area is surrounded by development and urbanization. Migratory birds are possible within the area but are considered unlikely. The proposed project may affect but is not likely to adversely affect migratory birds.

7.0 CONCLUSION

Volkert completed a Biological Assessment for Saraland Water and Sewer Service's Norton Creek Rehabilitation project in Saraland, Mobile County, Alabama. This assessment included a background review of environmental datasets including aerial photography, topographic imagery, FEMA floodplain maps, USFWS National Wetland Inventory maps, NRCS soils maps, and USFWS list of federally listed species of potential occurrence in the project area. Volkert biologists conducted field surveys in July of 2023 within the project study area.

No federally threatened or endangered species were observed in the project study area during the field investigations. In addition, no designated critical habitat for any listed species occurs in the project area; therefore, the proposed project is anticipated to have *No Effect* on the west Indian manatee, Alabama red-bellied turtle, alligator snapping turtle, black pine snake, eastern indigo snake, gopher tortoise, and monarch butterfly. It is anticipated the proposed project *May Effect, but Not Likely to Adversely Effect* the tri-colored bat. It is recommended that tree clearing should occur from February 16th to May 15th and July 16th to December 15th. This species is not anticipated to be exposed to the proposed project's activities or environmental consequences if tree clearing recommendations are followed, and thus is not anticipated to experience adverse effects.

No bald eagles, golden eagles, or raptor nests, nor any nesting migratory birds were observed within the project area during the field surveys. The project area is surrounded by development and urbanization. Therefore, the proposed project is not anticipated to adversely affect eagles but may affect but is not likely to adversely affect migratory birds. No additional biological surveys are recommended at this time.

LITERATURE CITED

Blakeney Gillet, Dorothy E. Raymond, James D. Moore, Berry H. Tew "Hydrogeology and Vulnerability to contamination of Major Aquifers in Alabama: Area 13 "Geological Survey of Alabama, 2020.

NRCS U.S. Department of Agriculture, Natural Resources Conservation Service. 2024. Lists of Hydric Soils. <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>

[NRCS] SSURGO: Soil Survey Geographic Database, Source: Department of Agriculture, Natural Resources Conservation Services (NRCS).

US Department of Commerce, N. O. A. A. (2023, September 13). Climate. Retrieved September 13, 2023, from <https://www.weather.gov/wrh/climate>

[USFWS] U.S. Fish and Wildlife Service. 2024. "Information for Planning and Conservation (IPaC)" Endangered Species Program Environmental Conservation Online System (ECOS). Accessed January 3, 2024. <https://ecos.fws.gov/ipac/>

Appendix A – USFWS Official Species List



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Alabama Ecological Services Field Office
1208 B Main Street
Daphne, AL 36526-4419
Phone: (251) 441-5181 Fax: (251) 441-6222
Email Address: alabama@fws.gov

In Reply Refer To:

January 03, 2024

Project Code: 2024-0031857

Project Name: Norton Creek Sewer Rehabilitation Project

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.*).

Project consultation requests may be submitted by mail or email (Alabama@fws.gov). **Ensure that the Project Code in the header of this letter is clearly referenced in any request for consultation or correspondence submitted to our office.**

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the 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.

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

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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

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

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Ensure that the Project Code in the header of this letter is clearly referenced with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List
- Marine Mammals

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:

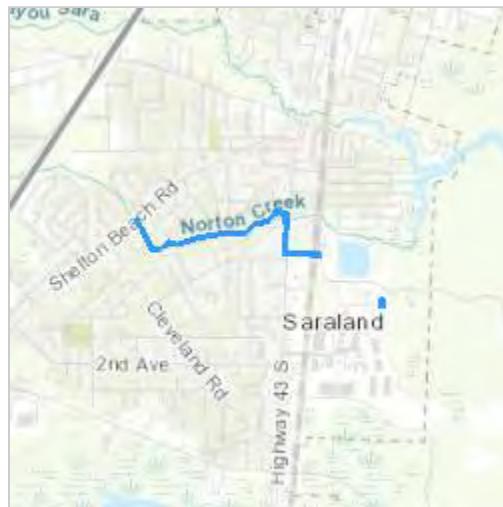
Alabama Ecological Services Field Office
1208 B Main Street
Daphne, AL 36526-4419
(251) 441-5181

PROJECT SUMMARY

Project Code: 2024-0031857
Project Name: Norton Creek Sewer Rehabilitation Project
Project Type: Utility Infrastructure Maintenance
Project Description: The Saraland Water & Sewer Service (SWSS) Norton Creek Sewer Rehabilitation Project purpose is to improve the existing sewer system in Saraland, Mobile County, Alabama. Part A of this project consists of cured in place pipe (CIPP) lining of 5,500 linear feet of gravity sewer main and rehabilitation of associated manholes. Part B of this project consists of relocation and replacement of 260 linear feet of high density polyethylene (HDPE) and PVC sewer main and three (3) 60" manholes utilizing both horizontal directional drill/drilling (HDD) and open cut methods. Part C of this project consists of the relocation of the Police Club Lift Station to the end Commerce Street.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@30.81511069999998,-88.07661737023389,14z>



Counties: Mobile County, Alabama

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

| NAME | STATUS |
|---|------------------------|
| Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |
| West Indian Manatee <i>Trichechus manatus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements. Species profile: https://ecos.fws.gov/ecp/species/4469 | Threatened |

REPTILES

| NAME | STATUS |
|--|------------------------|
| Alabama Red-bellied Turtle <i>Pseudemys alabamensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1494 | Endangered |
| Alligator Snapping Turtle <i>Macrochelys temminckii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658 | Proposed Threatened |
| Black Pinesnake <i>Pituophis melanoleucus lodingi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/452 | Threatened |
| Eastern Indigo Snake <i>Drymarchon couperi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646 | Threatened |
| Gopher Tortoise <i>Gopherus polyphemus</i> Population: Western DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6994 | Threatened |

INSECTS

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

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.

MARINE MAMMALS

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

-
1. The [Endangered Species Act](#) (ESA) of 1973.
 2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
 3. [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.

NAME

West Indian Manatee *Trichechus manatus*

Species profile: <https://ecos.fws.gov/ecp/species/4469>

IPAC USER CONTACT INFORMATION

Agency: Saraland city
Name: Evan Reid
Address: 1680 West 2nd Street
Address Line 2: Suite B
City: Gulf Shores
State: AL
Zip: 36542
Email: evan.reid@volkert.com
Phone: 2519687551

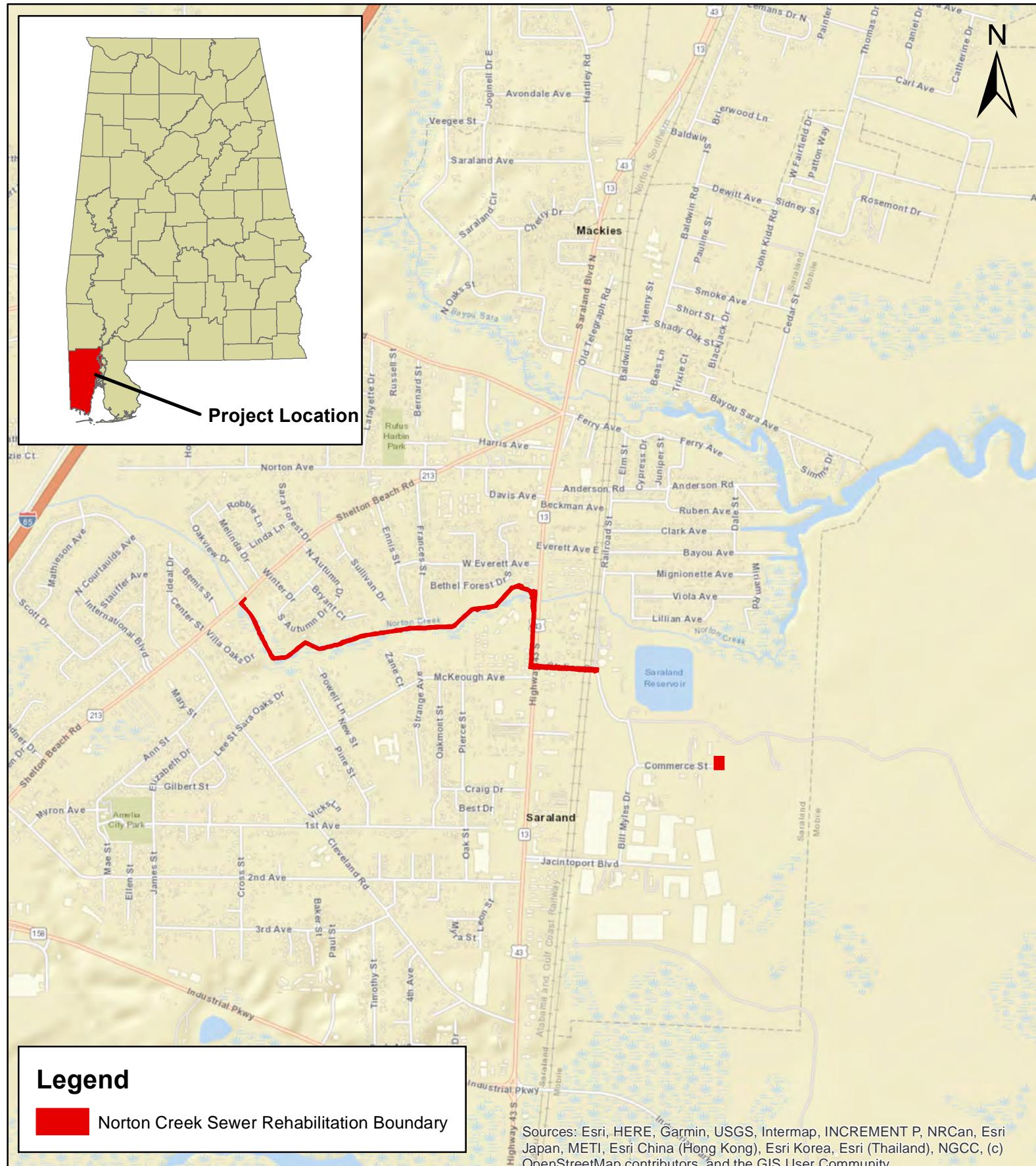
LEAD AGENCY CONTACT INFORMATION

Lead Agency: Gulf Coast Ecosystem Restoration Council

Appendix B – Figures



Project Location

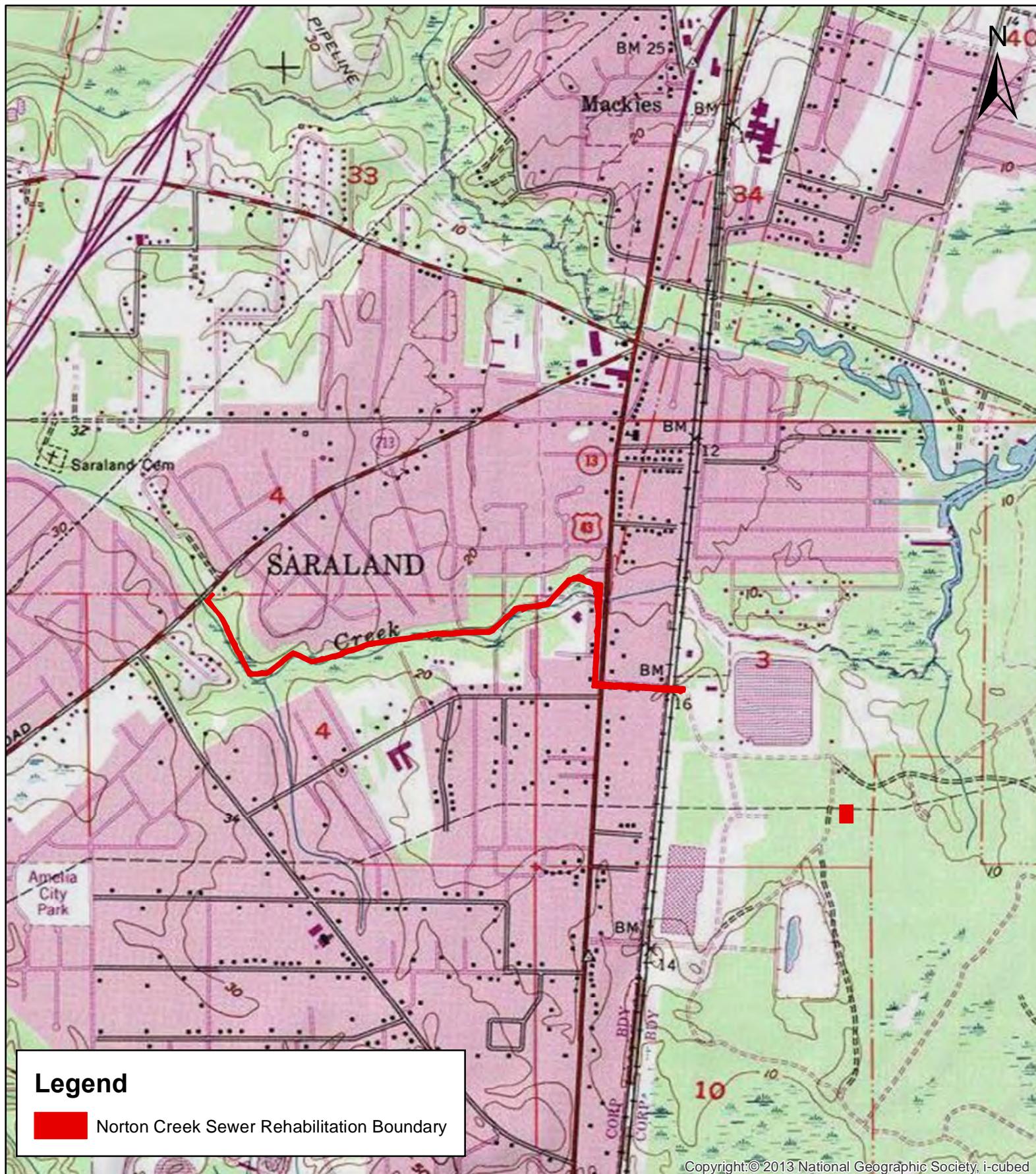


0 2,000 4,000
Feet
1" = 2,000'

Note: This map is not intended
for construction.

**Figure 1: General Location
Biological Assessment
Norton Creek Sewer Rehabilitation
Saraland, Mobile County, AL
Proj No.: 1074316**

VOLKERT

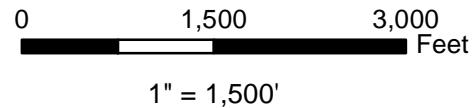


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Feet
1" = 1,500'

Note: This map is not intended
for construction.

**Figure 2: USGS Quadrangle Map
Biological Assessment
Norton Creek Sewer Rehabilitation
Saraland, Mobile County, AL
Proj No.: 1074316**

VOLKERT



Note: This map is not intended
for construction.

**Figure 3: Aerial Imagery
Biological Assessment
Norton Creek Sewer Rehabilitation
Saraland, Mobile County, AL
Proj No.: 1074316**

VOLKERT

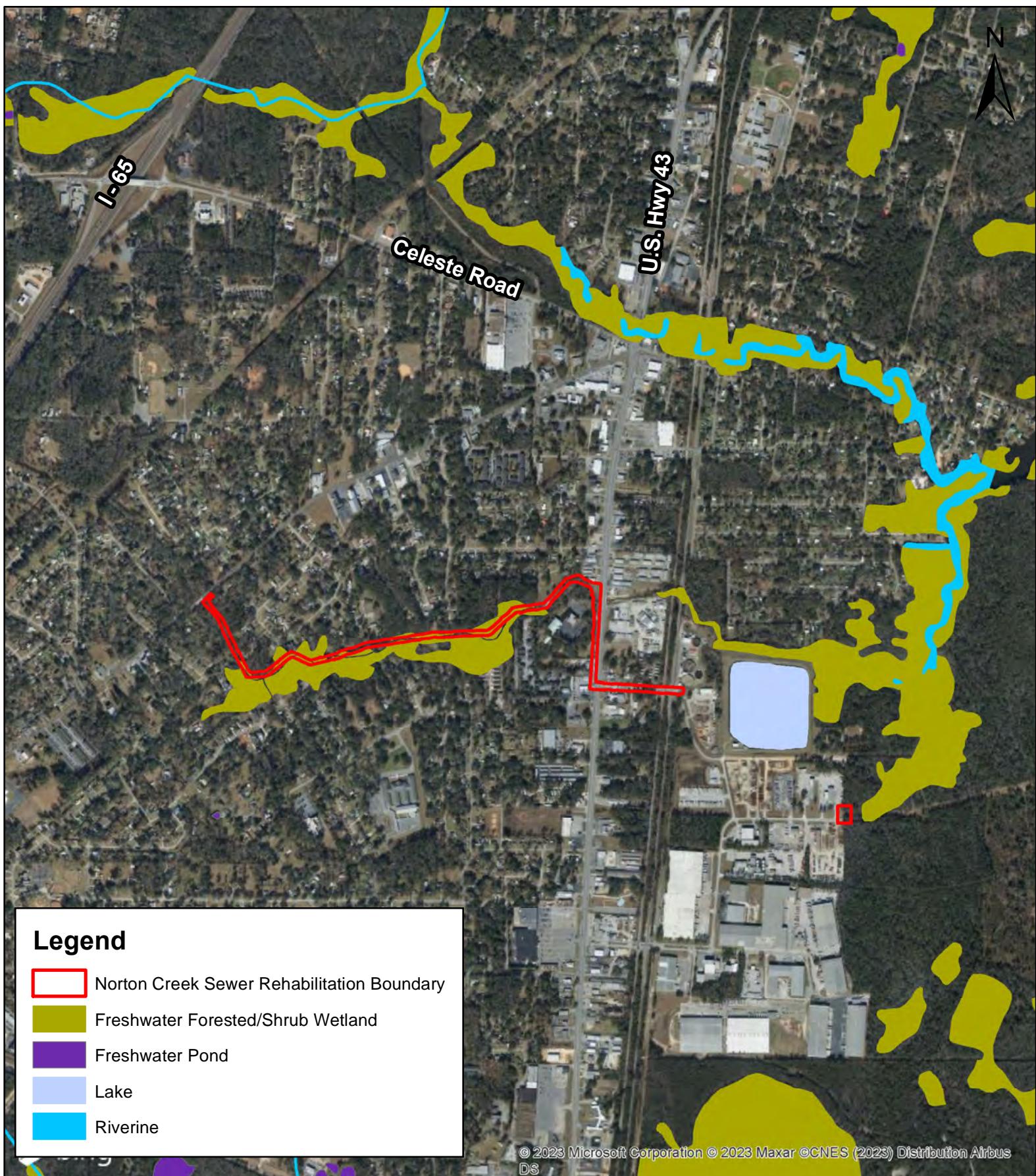


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Feet
1" = 1,500'

Note: This map is not intended
for construction.

**Figure 4: NRCS Soil Survey
Biological Assessment
Norton Creek Sewer Rehabilitation
Saraland, Mobile County, AL
Proj No.: 1074316**

VOLKERT



VOLKERT

Note: This map is not intended
for construction.

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Feet
1" = 1,500'

**Figure 5: NWI Wetland Map
Biological Assessment
Norton Creek Sewer Rehabilitation
Saraland, Mobile County, AL
Proj No.: 1074316**

Appendix C – Site Photos



Picture #1: Norton Creek looking upstream toward Highway 43.



Picture #2: Norton Creek looking downstream near Highway 43.



Picture #3: Norton Creek showing silt, sedimentation, and anthropogenic disturbance.



Picture #4: Low quality wetlands within the study area and adjacent to residential areas.



Picture #5: Forested areas have an abundance of non-native invasive species.



Picture #6: There are anthropogenic disturbances (trash) within wooded areas.



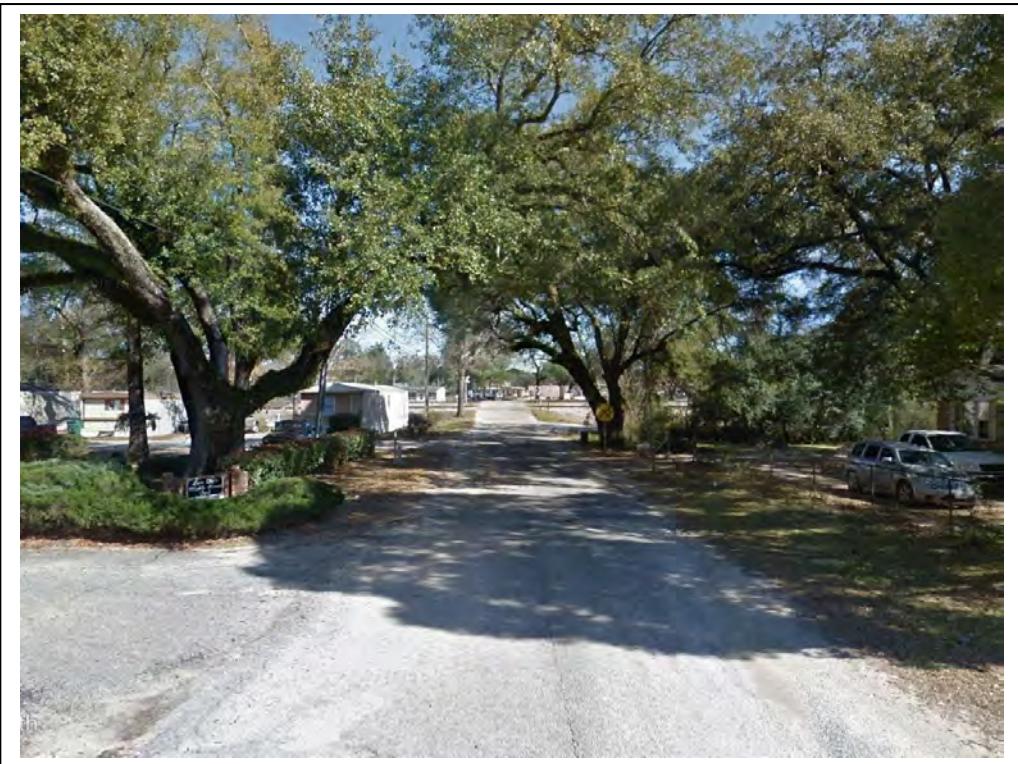
Picture #7: Forested wetlands within the study area.



Picture #8: Forested uplands within the study area.



Picture #9: Forested uplands within the study area.



Picture #10: Station Street looking east from the center of the study area.



Picture #11: Station Street looking west toward Highway 43.



Picture #12: Typical Highway 43 right-of-way looking north within the study area.

ATTACHMENT C –

AL SHPO

COORDINATION



ALABAMA HISTORICAL COMMISSION

468 South Perry Street
Montgomery, Alabama 36130-0900

Lisa D. Jones
Executive Director
State Historic Preservation Officer

Tel: 334-242-3184
Fax: 334-242-1083

April 5, 2024

Evan Reid
Volkert, Inc.
680 West 2nd Street
Suite B
Gulf Shores, AL 36542

Re: AHC 24-0687
CRA
Norton Creek Sewer Rehabilitation
Mobile County

Dear Mr. Reid:

Upon review of the cultural resource assessment conducted for the above referenced project, we concur with the author's finding that project activities will have no effect on cultural resources eligible for or listed on the National Register of Historic Places. Therefore, we concur with the determination of No Effect to Historic Properties.

Consultation with the State Historic Preservation Office does not constitute consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public. If archaeological materials are encountered during construction, the procedures codified at 36 CFR 800.13(b) will apply. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal, and glass objects. The federal agency or the applicant receiving federal assistance should contact our office immediately. If human remains are encountered, the provisions of the Alabama Burial Act (*Code of Alabama 1975, §13A-7-23.1*, as amended; Alabama Historical Commission Administrative Code Chapter 460-X-10 Burials) should be followed. This stipulation shall be placed on the construction plans to ensure contractors are aware of it.

We appreciate your commitment to helping us preserve Alabama's historic archaeological and architectural resources. Should you have any questions, please contact Amanda McBride at 334.230.2692 or Amanda.McBride@ahc.alabama.gov. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

A handwritten signature in blue ink that reads "Lee Anne Hewett".

Lee Anne Hewett
Deputy State Historic Preservation Officer

LAH/amh



ALABAMA HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
SECTION 106 PROJECT REVIEW CONSULTATION FORM

Federal laws exist to ensure that federal agencies or their designated applicants carefully consider historic preservation in federally funded, licensed, or permitted projects. Section 106 of the National Historic Preservation Act of 1966, as amended directs this review. <http://www.achp.gov/106summary.html>. At a minimum, submission of this completed form and attachments constitutes a request for review by the Alabama Historical Commission, which is the Alabama State Historic Preservation Office (SHPO). **The responsibility for preparing documentation, including the identification of archaeological and architectural properties and the assessment of potential effects resulting from the project, rests with the federal or state agency, or its designated applicant.** The role of the Alabama SHPO is to review, comment, and consult with federal/state agencies or their designees. The Alabama SHPO's ability to complete a timely project review largely depends on the quality of the material submitted. Some applicants may find it advantageous to hire a professional consultant with expertise in archaeology, history and/or architectural history.

PROJECT NAME

FEDERAL AGENCY PROVIDING FUNDS, LICENSE, OR PERMIT

FEDERAL PROJECT NUMBER

FEDERAL AGENCY CONTACT NAME AND E-MAIL/PHONE NUMBER

STATE AGENCY PROVIDING FUNDS, LICENSE, OR PERMIT (IF APPLICABLE)

STATE AGENCY CONTACT NAME AND E-MAIL ADDRESS, PHONE NUMBER, MAILING ADDRESS

AHC NUMBER (If project has been previously submitted)

APPLICANT NAME:

APPLICANT MAILING ADDRESS:

APPLICANT TELEPHONE:

APPLICANT EMAIL:

CONTACT NAME (if different than applicant):

CONTACT MAILING ADDRESS:

CONTACT TELEPHONE:

CONTACT EMAIL (Person to whom AHC should email response letter):

CONTRACTOR TYPE: ARCHAEOLOGIST; ARCHITECTURAL HISTORIAN; NONE; OTHER:

CONTRACTOR NAME:

CONTRACTOR MAILING ADDRESS:

CONTRACTOR TELEPHONE:

CONTRACTOR EMAIL:

| PROJECT LOCATION | |
|---|----------|
| STREET ADDRESS | CITY |
| COUNTY | ZIP CODE |
| LATITUDE / LONGITUDE: USE DECIMAL DEGREES EXAMPLE: 32.3722N, -86.3083W | |
| PROJECT DESCRIPTION | |
| <p>Will the project involve any of the following? Check all that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> exterior rehabilitation work; <input type="checkbox"/> interior rehabilitation work; <input type="checkbox"/> cellular equipment located on buildings; <input type="checkbox"/> streetscapes/sidewalks/lighting; <input type="checkbox"/> new construction; and/or <input type="checkbox"/> demolition <p>Describe the overall project in DETAIL. Be sure to describe any items checked above. Use additional pages if necessary.</p> | |

AREA OF POTENTIAL EFFECT (APE)

The APE varies with project types and can be direct or indirect (physical, visual, auditory, etc.). The APE is defined as “the geographic area or areas within which an undertaking may cause changes in the character of use of historic properties, if any such properties exist.” Factors to consider when determining the APE include; topography, vegetation, existing development, orientation of an existing resource to the project, physical siting of a resource, and existing and planned future development. For example:

- 1) Rehabilitation, renovation, and/or demolition of a historic building or structure, or new construction: the APE might include the building itself and the adjacent setting.
- 2) Streetscapes: the APE might include the viewshed from the street.
- 3) Pedestrian/bicycle facilities: the APE might extend the length of the corridor and for some distance on both sides of the corridor.
- 4) Underground utilities: the APE would usually be limited to the area of ground disturbance.

Attach a map indicating the precise location of the project and the boundaries of the APE, preferably a clear color copy of a USGS topographic quadrangle map (7.5 minute). For projects in urban areas, also include a city map that shows more detail. USGS topographic maps can be printed from this website: <https://ngmdb.usgs.gov/topoview/viewer/>. City maps can be printed using www.google.com/maps.

Provide current, high resolution color photographs that illustrate the project area and the entire APE as defined above.

ARCHAEOLOGY (Ground Disturbing Activities)

Has the ground in the project area been disturbed other than by agriculture (i.e. grading, grubbing, clear cutting, filling, etc.)?

Yes No Don't know N/A

If yes, describe in detail. Use additional pages as necessary. Photographs are helpful.

Describe the present use and condition of the property. Use additional pages as necessary.

To your knowledge, has a Cultural Resource Assessment (CRA) been conducted in the proposed project area?

Yes No Don't know N/A

If yes, attach a copy of the cultural resources assessment report.

ARCHITECTURAL INFORMATION

Above-ground properties within the Area of Potential Effect (APE) should be evaluated for the eligibility for the National Register of Historic Places. It is the federal agency's (or their designee) responsibility to identify properties in the APE, apply the National Register (NR) criteria, and determine whether a property is eligible or not. Those determinations are sent to our office for review and comment. All properties evaluated should be accompanied by current photographs, and these locations should be keyed to a good quality USGS topographic map. Some applicants may find it advantageous to hire a historic preservation professional with expertise in history and/or architectural history to complete the identification and evaluation of historic properties. The Alabama Historical Commission publishes a GIS map of properties that have been documented by or through our office. The map includes properties listed in the National Register of Historic Places, Alabama Register of Landmarks & Heritage, Alabama Cemetery Register, county architectural surveys, and other files. The GIS map can be accessed here: <https://ahc.alabama.gov/historicpreservationmap.aspx> The GIS map should function as a research tool, not an up-to-the-minute inventory about every historic and/or architecturally significant property in the state. This tool allows researchers to investigate and review potentially significant properties according to the best data that is available in the Alabama Historical Commission's files. The absence of a property from the map does not imply that an unidentified property lacks historic or architectural importance.

- I) Within the APE, are there properties listed in or eligible for the National Register of Historic Places?

YES If yes, identify the properties by name, address, and photo number.

NO If no, identify the properties by name, address, and photo number. Provide an explanation as to why properties identified are not eligible for the National Register. A discussion of the National Register seven aspects of integrity and the applicable National Register criteria must be included. Refer to the National Park Service's website: https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf Use additional pages as necessary.

EFFECTS DETERMINATION

An effect occurs when an action alters the characteristics of a property that may qualify it for the National Register of Historic Places. How will this project affect any of the properties identified in the previous section? Will the project take away or change anything within the boundaries of a historic property? Will the project change the view from or the view to any historic properties? Will the project introduce any audible or atmospheric elements? Will the project result in the transfer, lease, or sale of any of the identified properties? Use additional sheets as necessary.

CHECKLIST: Did you provide the following information?

| | |
|--|--|
| <input type="checkbox"/> Completed form. | <input type="checkbox"/> Photographs* of current site conditions and all identified historic properties keyed to a site map. |
| <input type="checkbox"/> Maps with project area, APE, and any historic properties marked and identified. | <input type="checkbox"/> For new construction, rehabilitations, etc., attach work plans, drawings, etc. |
| <input type="checkbox"/> Other supporting documents (if necessary to explain the project). | <input type="checkbox"/> Description of present use and condition of the project area. |

*A note about photographs: Digital photos must be current, high resolution, and adequately show the resource. Take photographs of the overall property and the exterior of each building on the property, including outbuildings. Include views of the overall setting, views of the building in its immediate surrounding showing the relationship of the building to neighboring buildings, and views of significant landscape features (i.e. tree lined approaches, stone walls, formal gardens, etc.). Exterior views of the building should include full views of each side (if possible) and views of important architectural details. Key all photographs to a site map.

If the project involves rehabilitation, include photographs of the building(s) involved and especially the areas of the building slated for rehab work. Label each exterior view to a site map and label all interior views. If the project involves new construction, include photographs of the surrounding area looking out from the project site. Include photographs of any buildings that are located on the project property or on adjoining property.

NOTE: Section 106 regulations provide for a 30-day response time by the Alabama SHPO from the date of receipt. Project activities may not begin until our office has reviewed this information and issued comments.

Upon receipt, applications and attachments become the property of the State of Alabama.

For questions regarding this form or the Section 106 Review Process, contact Amanda McBride,
Section 106 Coordinator, at 334.230.2692 or Amanda.McBride@ahc.alabama.gov.

All projects must be submitted digitally

E-mail this form and supporting documents to Section.106@ahc.alabama.gov This is the only approved e-mail address for project submission. Projects sent to any other e-mail address will not be accepted. The attachment size cannot exceed 19 MB. Alternatively, you may submit projects with larger attachments through an online system to be determined by the AHC.

Please limit your submission to cultural resources information only.

Contact Amanda McBride for any questions on digital submissions

The Saraland Water and Sewer Service is proposing a project to improve the existing sewer system in Saraland, Mobile County, Alabama utilizing RESTORE Act grant funding. The project is located within Section 4, of Township-3-South, Range-1-West on the Chickasaw, AL U.S. Geological Survey quadrangle map. More specifically, the project central coordinate are N30.815164° W88.075398°. The project consists of three parts. 1) 5,500 linear feet of cure in place pipe lining of existing gravity sewer main and manhole rehabilitation. 2) Relocation of 260 linear feet of HDPE and PVC sewer main and three associated manholes utilizing directional drilling and open cut methods. 3) Relocating an existing lift station to the end of Commerce Street, within city right-of-way. Approximately 0.69-acre of temporary wetland impacts are anticipated in the form of vegetative clearing for access to the various components of the project. No permanent impacts to wetlands or streams are anticipated. A Nationwide Permit 58 has been acquired for the proposed temporary wetland impacts, SAM-2008-01303.

The project is located in Mobile County, Alabama. More specifically it is in:

Township 3 South, Range 1 West, Section 4

The project is to improve the existing sewer system in Saraland, Mobile County, Alabama. Through Restore Act grant funding, the Saraland Water & Sewer Service (SWSS) is seeking a Nationwide Permit 58 for temporary wetland impacts necessary for sewer rehabilitation efforts and construction. This effort will address inflow and infiltration and reduce overflows in manholes as well as reduce overflows at the sewer plant during rain events.

The project is broken up into three parts for contracting purposes:

Part A of this project consists of cured in place pipe (CIPP) lining of 5,500 linear feet of gravity sewer main and rehabilitation of associated manholes. Clearing for construction access will be required in the easements as shown on the attached map and noted on design plans.

Part B of this project consists of relocation and replacement of 260 linear feet of high-density polyethylene (HDPE) and PVC sewer main and three (3) 60" manholes utilizing both horizontal directional drill/drilling (HDD) and open cut methods. Pipe to be installed ranges from 12" - 30" in diameter. Clearing for construction access will be required in the easements as shown on the attached map and noted on design plans.

Part C of this project consists of the relocation of the Police Club Lift Station to the end of Commerce Street. The lift station will be constructed at the current end of the road, within the City ROW, which has already been paved and has been determined not to be in, or disturb any wetlands in that area (WL9, EC4). The connection of the sewer lift station to existing sewer lines will require about 100 linear feet of PVC pipe installed via open cut method in uplands.

All Phases Archaeology



FEBRUARY 26, 2024

A PHASE I CULTURAL RESOURCES SURVEY FOR THE NORTON CREEK SEWER EASEMENT REPAIR, MOBILE COUNTY, ALABAMA

Prepared for:
Volkert, Inc.
1680 West 2nd Street, Suite B
Gulf Shores, Alabama 36542

Prepared by:
All Phases Archaeology, LLC
257 Pinehill Drive
Mobile, Alabama 36606



All Phases Archaeology, LLC
www.allphasesarchaeology.com

A PHASE I CULTURAL RESOURCES SURVEY FOR THE
NORTON CREEK SEWER EASEMENT REPAIR,
MOBILE COUNTY, ALABAMA

By
AMY CARRUTH

PREPARED BY
ALL PHASES ARCHAEOLOGY, LLC
257 PINEHILL DRIVE
MOBILE, ALABAMA 36606

PREPARED FOR
VOLKERT, INC.
1680 WEST 2ND STREET, SUITE B
GULF SHORES, ALABAMA 36542

PRINCIPAL INVESTIGATOR



WILLIAM J. GLASS, RPA

APA REPORT No. 2024.003

FEBRUARY 26, 2024

A PHASE I CULTURAL RESOURCES SURVEY FOR THE NORTON CREEK SEWER EASEMENT REPAIR, MOBILE COUNTY, ALABAMA

INTRODUCTION

All Phases Archaeology, LLC (APA) of Mobile, Alabama was contracted by Volkert, Inc. of Gulf Shores, Alabama to conduct a cultural resources survey for the Norton Creek sewer easement repair in Saraland, Mobile County, Alabama. The survey was conducted on January 31 and February 1 and 23, 2024. William J. Glass served as Principal Investigator and was assisted by Nina Andersen, Alex Jones, Matthew Sumrall, and Dale Pate. The purpose of this study was to determine if any cultural resources exist within the limits of the survey tract, and if so to document and assess each based on the National Register of Historic Places (NRHP) criteria. All work was conducted in compliance with Section 106 of the National Historic Preservation Act, as amended, and with standards set by the Alabama Historical Commission (AHC). This project is federally funded through the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act).

The project area totals approximately 11.8 acres (4.78 hectares). This consists of a 1.44 mile-long (2.33 km) sanitary sewer easement plus a separate 0.8-acre lift station. It involves the selective clearing of vegetation to access manholes for inspection and possible repair, as well as select repairs to the existing line. The western end of the easement begins at Alabama Highway 213 (Shelton Beach Road) and briefly runs south-southeast before heading east to U.S. Highway 43, following Norton Creek. It then runs south along the west side of the highway before crossing U.S. 43 and running east along Section Street, stopping west of the railroad tracks (Figure 1). The lift station is southeast of the easement at the east end of Commerce Street Mobile County, Alabama (see Figure 1). The project area is found within Sections 3 and 4, Township 3 South, Range 1 West as seen on the 1953 (photorevised 1982) Chickasaw, Alabama USGS 7.5' series topographic quadrangle (Figure 2). The project area (PA) is the same as the area of potential effect (APE). Photographs depicting the present state of the project area are provided (Figures 3-14).

PROJECT AREA ENVIRONMENT

This is within the Floodplains and Low Terraces of the Southern Coastal Plain. The broad floodplains and terraces of major rivers, such as the Mobile-Tensaw, comprise the region. The Southern Coastal Plain contains barrier islands, coastal lagoons, marshes, and swampy lowlands. Native vegetation included longleaf pine, slash pine, pond pine, beech, sweetgum, southern magnolia, white oak, and laurel oak. This has largely been replaced by slash and loblolly pine with oak-gum-cypress forest in some low-lying areas, pasture for beef cattle, and urban uses. The Floodplains and Low Terraces are composed of stream alluvium and terrace deposits of sand, silt, clay, and gravel, along with some organic muck and swamp deposits. The region includes large sluggish rivers and backwaters with ponds, swamps, and oxbow lakes. River swamp forests of bald cypress and water tupelo and oak-dominated bottomland hardwood forests provide important wildlife habitat. (Griffith et al. 2001).

The Web Soil Survey (2024) lists seven soil types within the survey area (Table 1). Approximately 65 percent is occasionally or frequently flooded and about 25 percent is classified as Urban land.

2 - Norton Creek Sewer Easement Repair



Figure 1. Aerial image showing the project area.

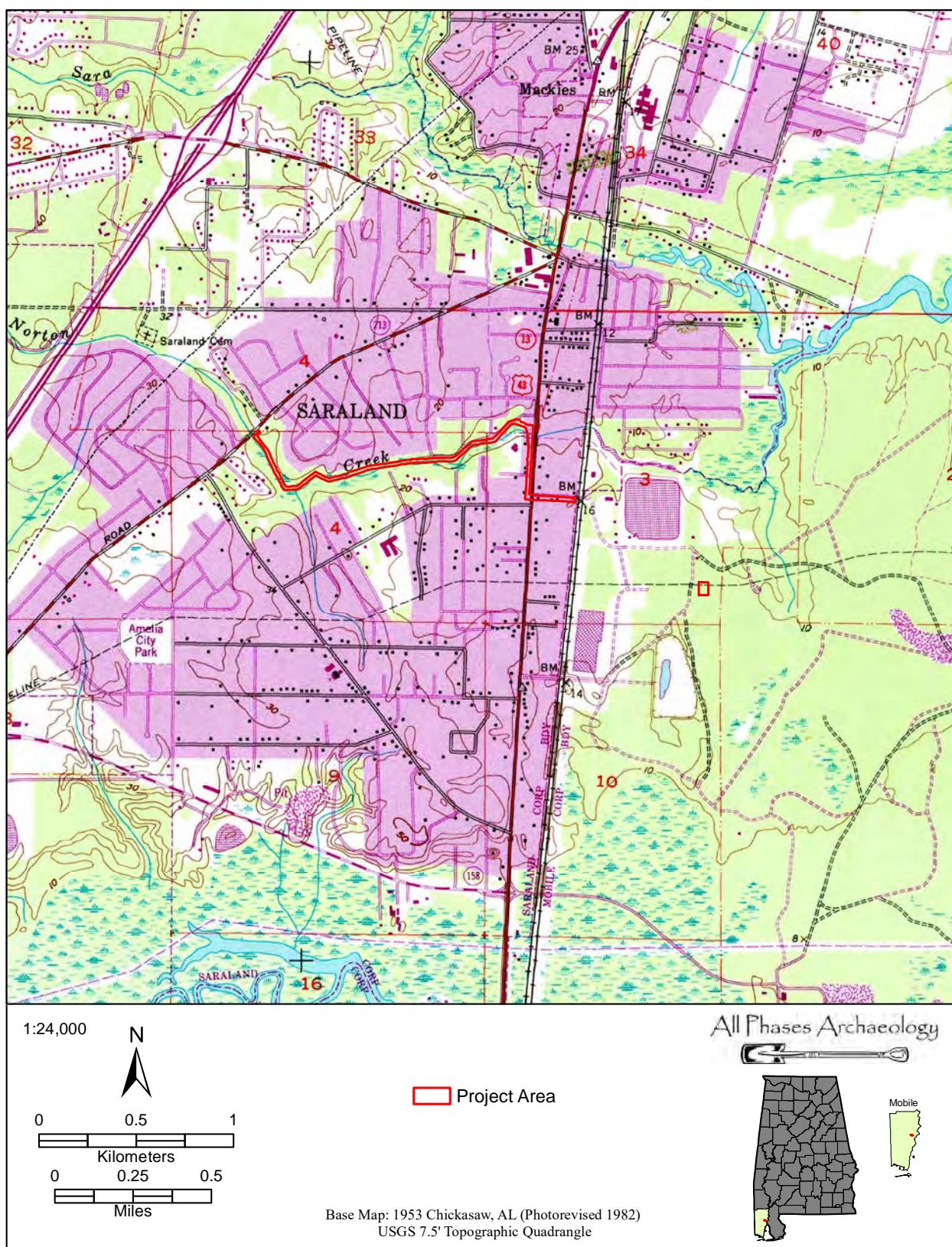


Figure 2. Map showing the project area.

4 - Norton Creek Sewer Easement Repair



Figure 3. View at the western terminus of the project area, facing southwest.



Figure 4. View of river cane in western portion of the project area, facing west.



Figure 5. View of Norton Creek and manhole in western portion of project area, facing west-southwest.



Figure 6. View of typical vegetation in the western portion of the project area, facing west.

6 - Norton Creek Sewer Easement Repair



Figure 7. View of Bethel Forest Park in eastern portion of the project area, facing east.



Figure 8. View of pipe crossing Norton Creek, facing east-southeast.



Figure 9. View of manhole cover in eastern portion of the project area, facing east.



Figure 10. View of eastern portion of project area, facing east.

8 - Norton Creek Sewer Easement Repair



Figure 11. View of typical vegetation in eastern portion of the project area, facing east.



Figure 12. View of Station Street from U.S. Highway 43, facing east.



Figure 13. View of vegetation in proposed lift station area, facing northeast.



Figure 14. View of pipeline corridor in proposed lift station area, facing east.

Table 1. Soil types within the project area.

| Soil Symbol | Soil Name | Acres in Project Area | Percent of Project Area |
|--------------------------------|--|------------------------------|--------------------------------|
| AIB | Alaga fine sand, 0 to 5 percent slopes | 0.0 | 0.4% |
| BuC | Benndale-Urban land complex, 0 to 8 percent slopes | 0.4 | 3.2% |
| DSA | Daleville and Smithton soils, 0 to 1 percent slopes, occasionally flooded | 7.6 | 64.5% |
| EuA | Escambia-Urban land complex, 0 to 2 percent slopes | 0.6 | 5.2% |
| JOA | Johnston, Bibb and Smithton soils, 0 to 3 percent slopes, frequently flooded | 0.2 | 1.9% |
| MbC | Malbis-Urban land complex, 0 to 8 percent slopes | 0.1 | 0.7% |
| UbA | Urban land, 0 to 8 percent slopes | 2.8 | 24.1% |
| Totals for Project Area | | 11.7 | 100.0% |

LITERATURE AND DOCUMENT SEARCH

Before conducting the fieldwork, APA performed a literature and document search in order to gather pertinent background information regarding the subject property and its surroundings. This research included inspections of the Alabama State Archaeological Site File (ASASF) (Office of Archaeological Research [OAR] 2024), the Alabama Register of Landmarks and Heritage (ARLH) (Alabama Historical Commission [AHC] 2024), and the National Register of Historic Places (NRHP) (National Park Service 2024).

Research revealed two previously recorded sites, nine AHC-listed historic resources, one cemetery on the Alabama Historic Cemetery Register, and 12 previously conducted surveys within a mile of the project area (Figure 15, Tables 2 and 3). There are no NRHP-listed properties in a one-mile radius.

Site 1Mb15 was recorded in 1978 by David Dejarnette as an unknown aboriginal site. The site was revisited in 2024 by New South, who found no trace of the site in their project area. They believe the site was incorrectly mapped. Its NRHP-eligibility is undetermined.

Site 1Mb247 was recorded by Wendell Gorum and Beth Ryba of the University of Alabama in 1992. The site consists of turpentine pot fragments and one prehistoric sherd found on the surface. The site eligibility is undetermined.

The Alvarez-Bailey (Saraland) Cemetery was placed on the Alabama Historic Cemetery Register in 2011 (097-00040). The oldest grave is from 1859. At that time (2011), there were 213 marked graves and 78 unmarked, for a total of 291. According to current FindaGrave records, there are now 432 graves.

Historic maps were reviewed for any structures within the survey area. One or more structures are shown within or adjacent to the project area on the following maps: the 1930 (North) Mobile County soil survey map (Figure 16), the 1941 and 1943 Chickasaw 1:31680 maps (Figures 17 and 18), the 1953 Chickasaw 7.5' series map (Figure 19), and the 1953 (photorevised 1967) Chickasaw 7.5' series topographic quadrangle (Figure 20).

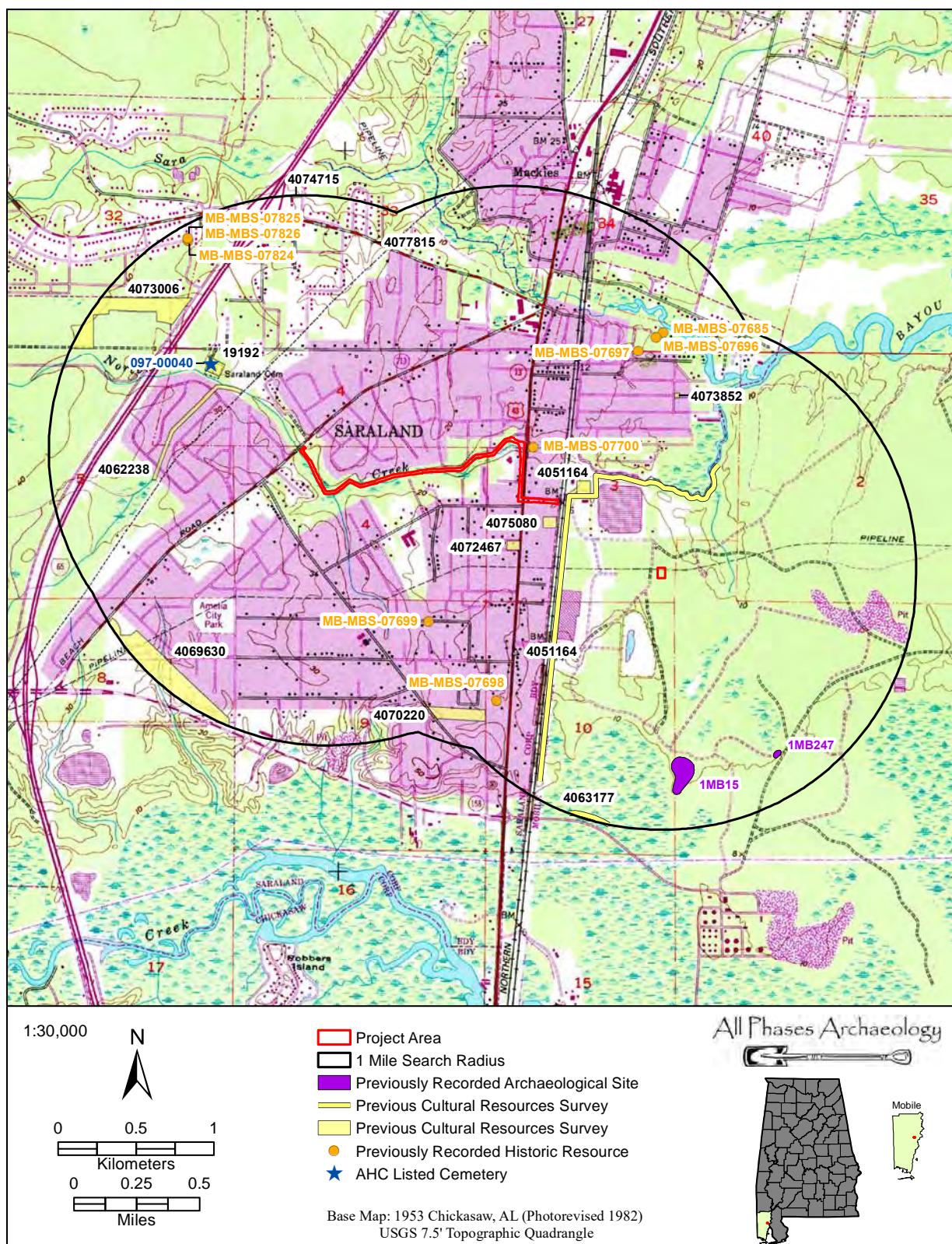


Figure 15. Map showing previous surveys, previously recorded sites, AHC-listed resources, and an Alabama Historic Cemetery within one mile of the project area.

Table 2. Previous surveys within one mile of the project area.

| Report Number | Report Title | Author & Year |
|----------------------|--|--|
| 19192 | A Ground Penetrating Radar Survey of the Cleveland House Project to Locate the Boundary of Bailey Cemetery in Saraland, Mobile County, Alabama | F. Lindsey Gordon 2019 |
| 4051164 | A Cultural Resources Assessment of the City of Saraland's Proposed Wastewater Treatment Plant and Discharge Line | N. Read Stowe & Richard S. Fuller 1982 |
| 4062238 | A Phase I Cultural Resources Assessment of a Proposed FEMA Hazard Mit. Grant, Clear and Grade Norton Creek, Saraland, Mobile County, Alabama | N. Read Stowe & Rebecca Stowe 1999 |
| 4063177 | A Cultural Resources Assessment of a Proposed Pipeline at the Shell Refinery near Saraland, Mobile County, Alabama | N. Read Stowe & Rebecca Stowe 2000 |
| 4069630 | A Phase I Cultural Resources Assessment of a Proposed Development on Industrial Parkway in Saraland, Alabama | Jason Gardner 2007 |
| 4070220 | Report on a Cultural Resources Assessment of a 7.757 Acre Parcel, as the Proposed Site of AHEPA Apartments for the Elderly, Saraland, Alabama | Diane Silvia Mueller 1990 |
| 4072467 | Phase I Cultural Resources Assessments of Two Regions Bank Construction Sites in Mobile County, Alabama | Bonnie Gums 2000 |
| 4073006 | A Phase I Cultural Resources Assessment of a Proposed Residential Subdivision on West I-65 Service Road in Saraland, Mobile County, Alabama | Jason Gardner 2008 |
| 4073852 | Phase I Cultural Resources Assessment of One Hurricane Katrina-Damaged Property, 415 Bayou Street, Saraland, Mobile County, Alabama | Tara Potts 2010 |
| 4074715 | A Phase I Cultural Resources Assessment of the Proposed Saraland West Cellular Tower in Mobile County, Alabama | Linda Hollis & Marla Spry 2011 |
| 4075080 | A Phase I Cultural Resources Assessment of the Proposed East Saraland Cellular Tower, Mobile County, Alabama | Linda Hollis & Marla Spry 2013 |
| 4077815 | Section 106 Review, TCNS ID 105508, Proposed 180-Foot Monopole Communications Structure (193-Foot Overall Height Including Appurtenances), North Saraland DS, Celeste Road, Saraland, Mobile County, Alabama | Karen Sauler 2014 |

Table 3. Previously recorded historic resources within one mile of the project area.

| AHC Number | Building Type | Build Date |
|-------------------|----------------------|-------------------|
| MB-MBS-07685 | vernacular | 1916-1930 |
| MB-MBS-07696 | vernacular/Craftsman | 1931-1945 |
| MB-MBS-07697 | vernacular/Craftsman | 1916-1930 |
| MB-MBS-07698 | vernacular | 1931-1945 |
| MB-MBS-07699 | vernacular | 1931-1945 |
| MB-MBS-07700 | unknown | unknown |
| MB-MBS-07824 | vernacular | 1916-1930 |
| MB-MBS-07825 | vernacular | 1916-1930 |
| MB-MBS-07826 | vernacular | 1916-1930 |

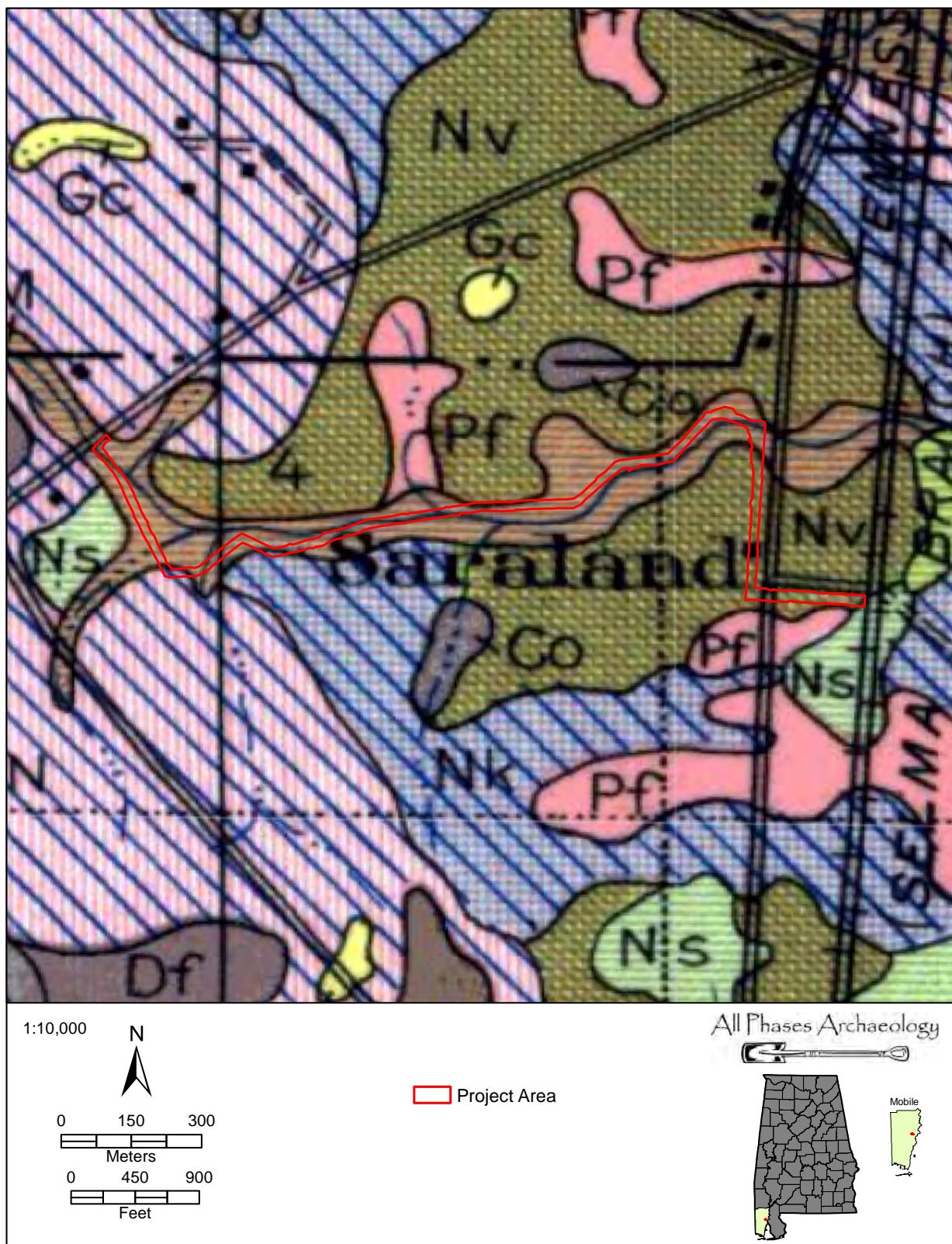


Figure 16. Historic 1930 map showing structures in and/or near the project area.

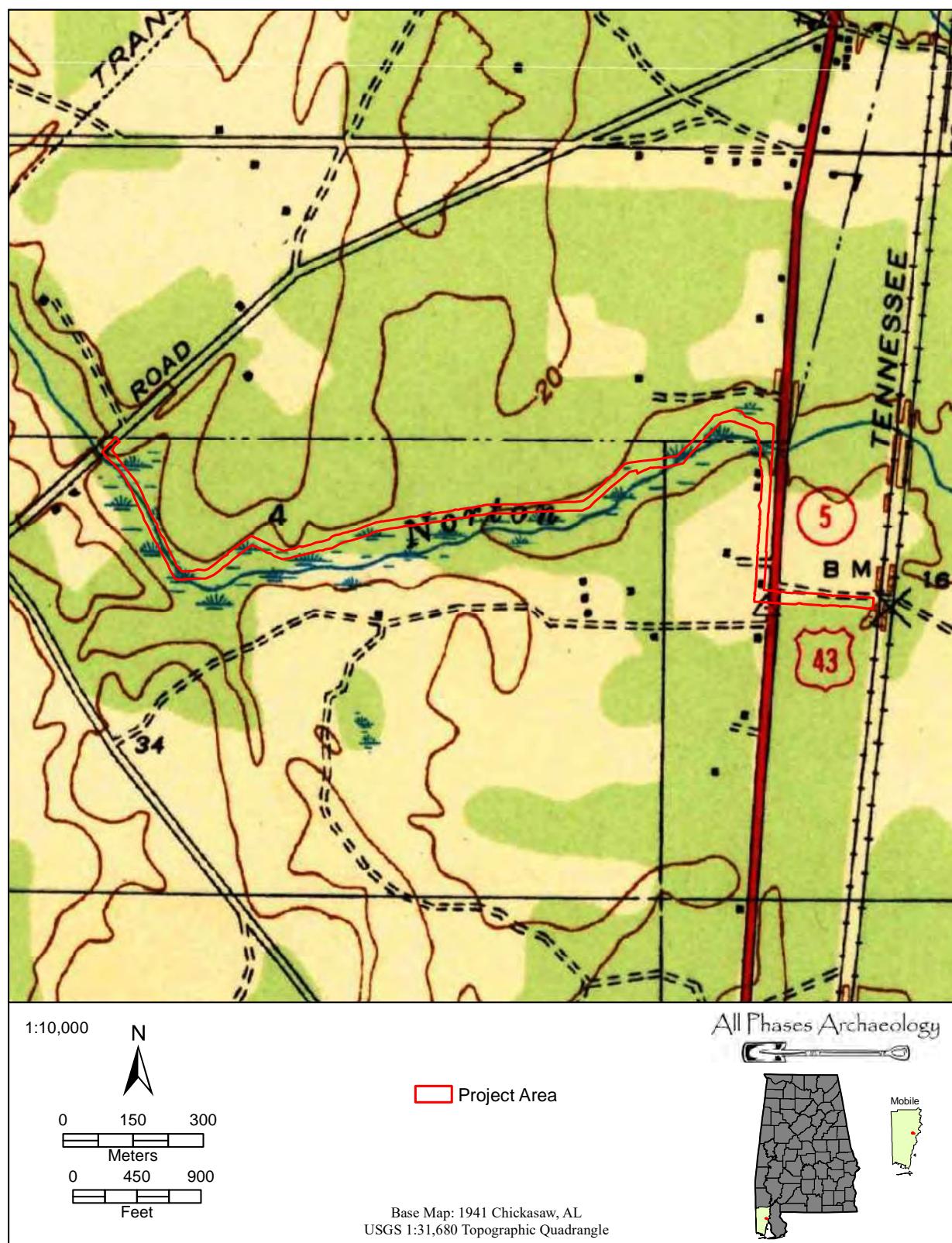


Figure 17. Historic 1941 map showing structures in and/or near the project area.

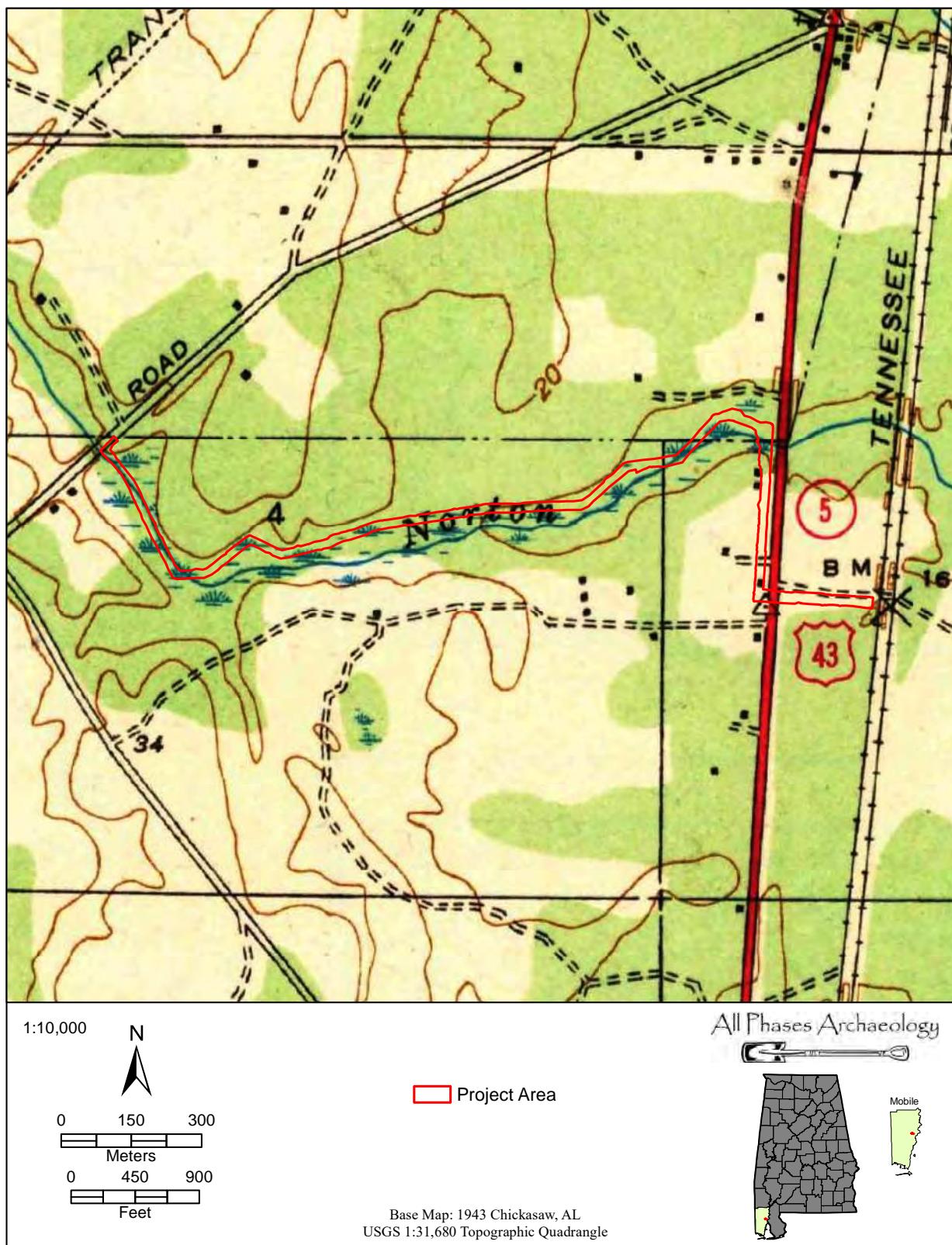


Figure 18. Historic 1943 map showing structures in and/or near the project area.

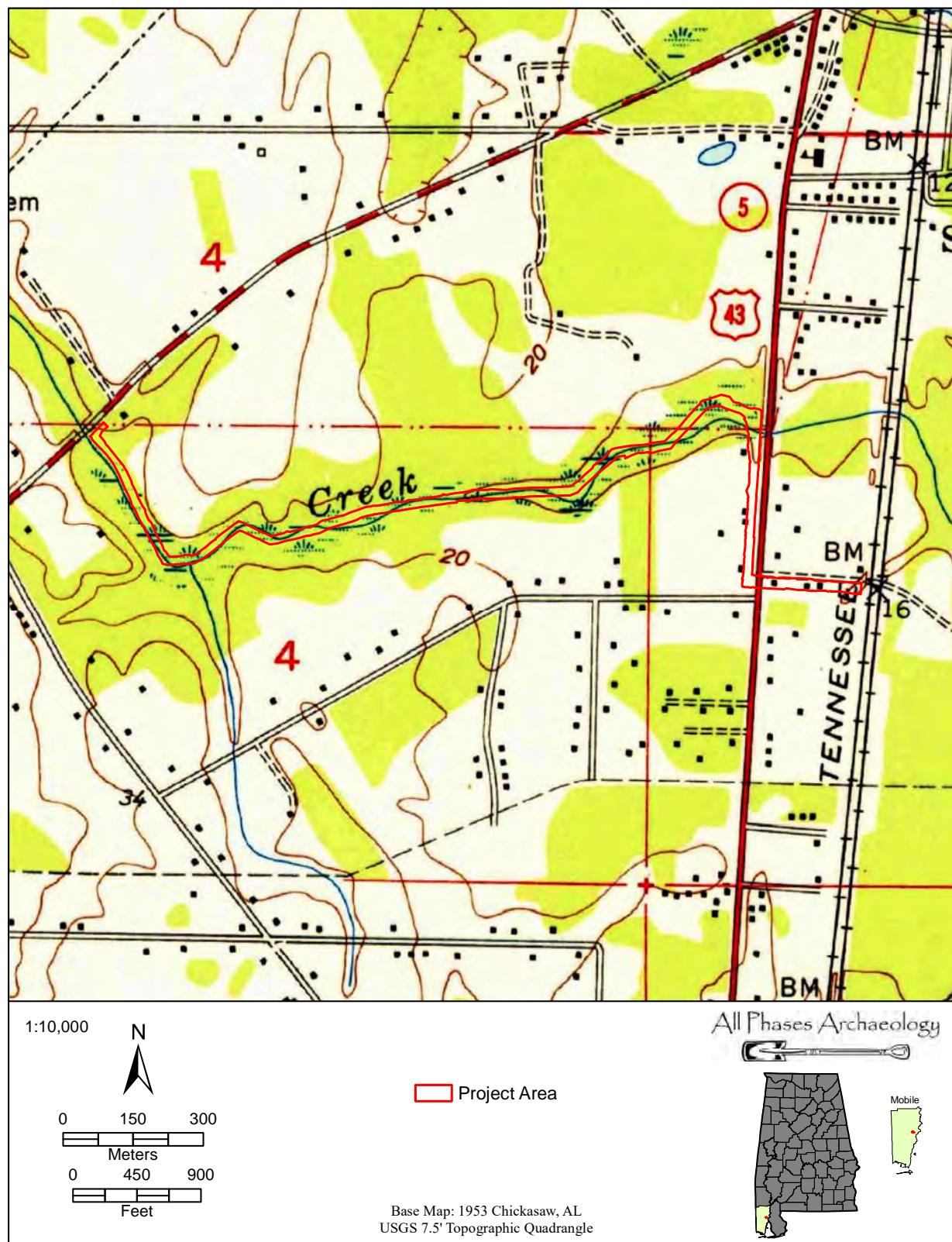


Figure 19. Historic 1953 map showing structures in and/or near the project area.

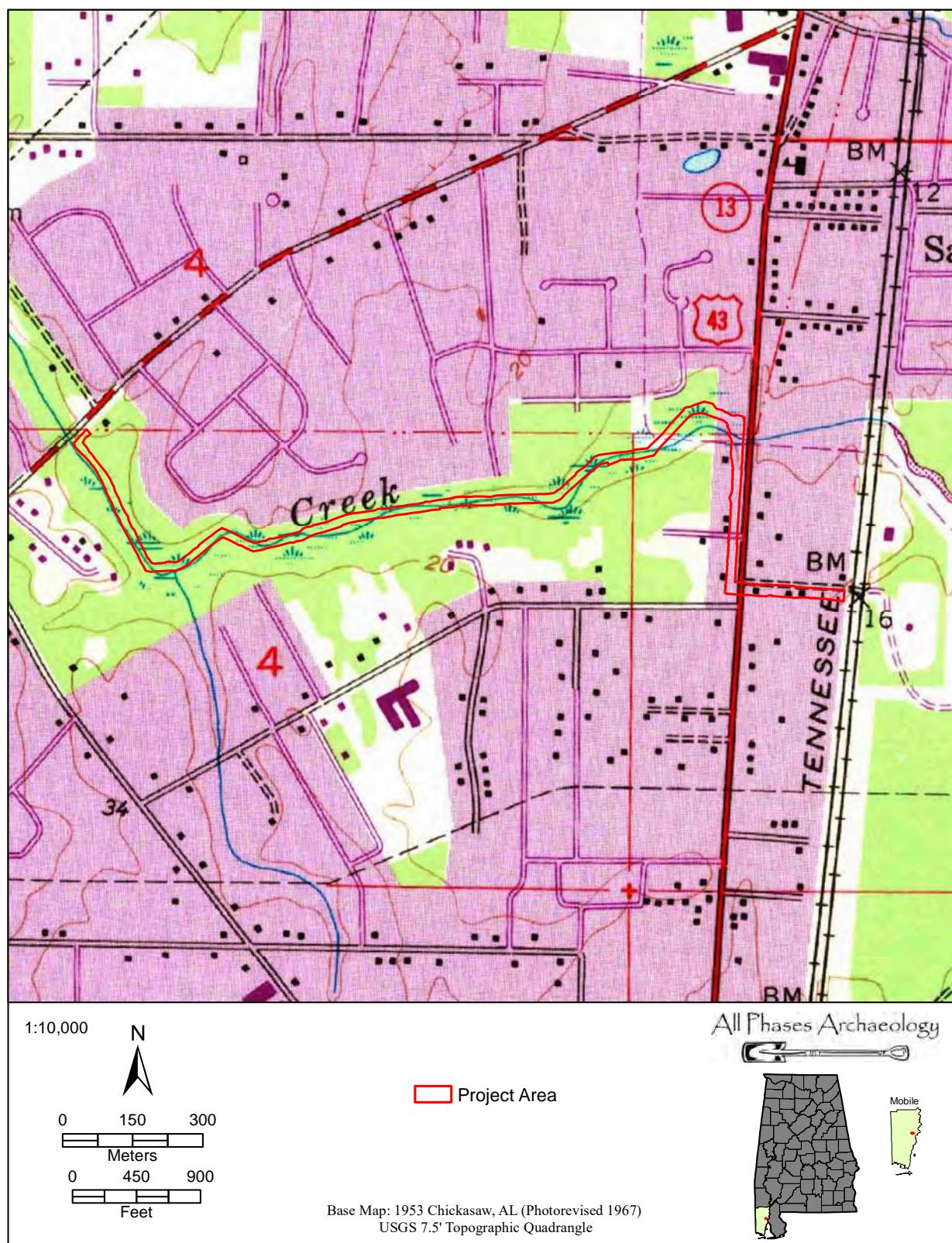


Figure 20. Historic 1967 map showing structures in and/or near the project area.

FIELD METHODS

The Phase I survey was guided by procedural standards created by the Alabama Council of Professional Archaeologists in concurrence with the Alabama Historical Commission's (2002) specifications as outlined in the Policy for Archaeological Surveying and Testing in Alabama. Land coverage requirements were achieved by walking and visually inspecting the entire survey area. Any exposed surfaces were carefully examined for cultural material. Shovel tests are generally excavated at 30 m intervals within 30-m interval transects. Standard shovel tests consist of 30 centimeter (cm) diameter cylindrical holes excavated to 80 cm or until subsoil or an obstruction/water is reached. Soils from each test are screened through 1/4-inch hardware cloth for the purpose of recovering any cultural material that may exist at that location. When cultural material is encountered, the material is sorted by provenience and placed into bags labeled with the pertinent excavation information before being transported to APA's laboratory.

LABORATORY METHODS AND COLLECTION CURATION

Any cultural materials recovered during field projects are delivered to APA's laboratory in Mobile, Alabama for processing. Here, materials are sorted by provenience, cleaned, and analyzed. Along with any cultural material, all project records, photographs, and maps produced while conducting the investigation are transported for curation at the Troy University Archaeological Research Center in Troy, Alabama. A copy of the curation agreement can be found in Appendix A.

RESULTS OF FIELD INVESTIGATION

Most of the easement portion of the project area follows Norton Creek, although the distance from the creek does vary. The area surrounding the creek contains mixed hardwoods and pines with areas of dense privet and river cane. The route also crosses the edge of Bethel Forest Park, residential backyards, and the paved drives and parking lots of businesses on U.S. 43. A few small drainages flow into Norton Creek. The existing easement is demarcated by manhole cover most of the way. The proposed lift station is mostly wooded with mixed hardwoods and pines, except for a well-maintained grassy area in a pipeline corridor that runs east-west through the area. A total of 84 transect shovel tests were attempted within the survey area, 73 of which were negative for cultural material (Figure 21). Eleven shovel tests could not be excavated due to pavement or gravel. A typical shovel test in the easement portion consisted of 55 cm of dark gray (10YR 4/1) sand over dark gray (10YR 4/1) sand mottled with light gray (10YR 7/1) sand to 80 cmbs (Figure 22). A typical shovel test in the proposed lift station area consisted of 30 cm of dark brown (10YR 3/3) sandy loam over yellowish brown (10YR 5/6) sand to 80 cmbs (Figure 23). Shovel tests were typically offset from the center of the project route in an effort to encounter less disturbed soils. No cultural material was encountered. Modern trash was observed in several soil profiles.

CONCLUSIONS AND RECOMMENDATIONS

APA, under contract with Volkert, Inc. of Gulf Shores, Alabama, performed the Phase I cultural resources survey of approximately 11.8 acres in Mobile County, Alabama. No cultural resources were found. Based on the findings of this investigation, no further cultural resources studies are recommended.

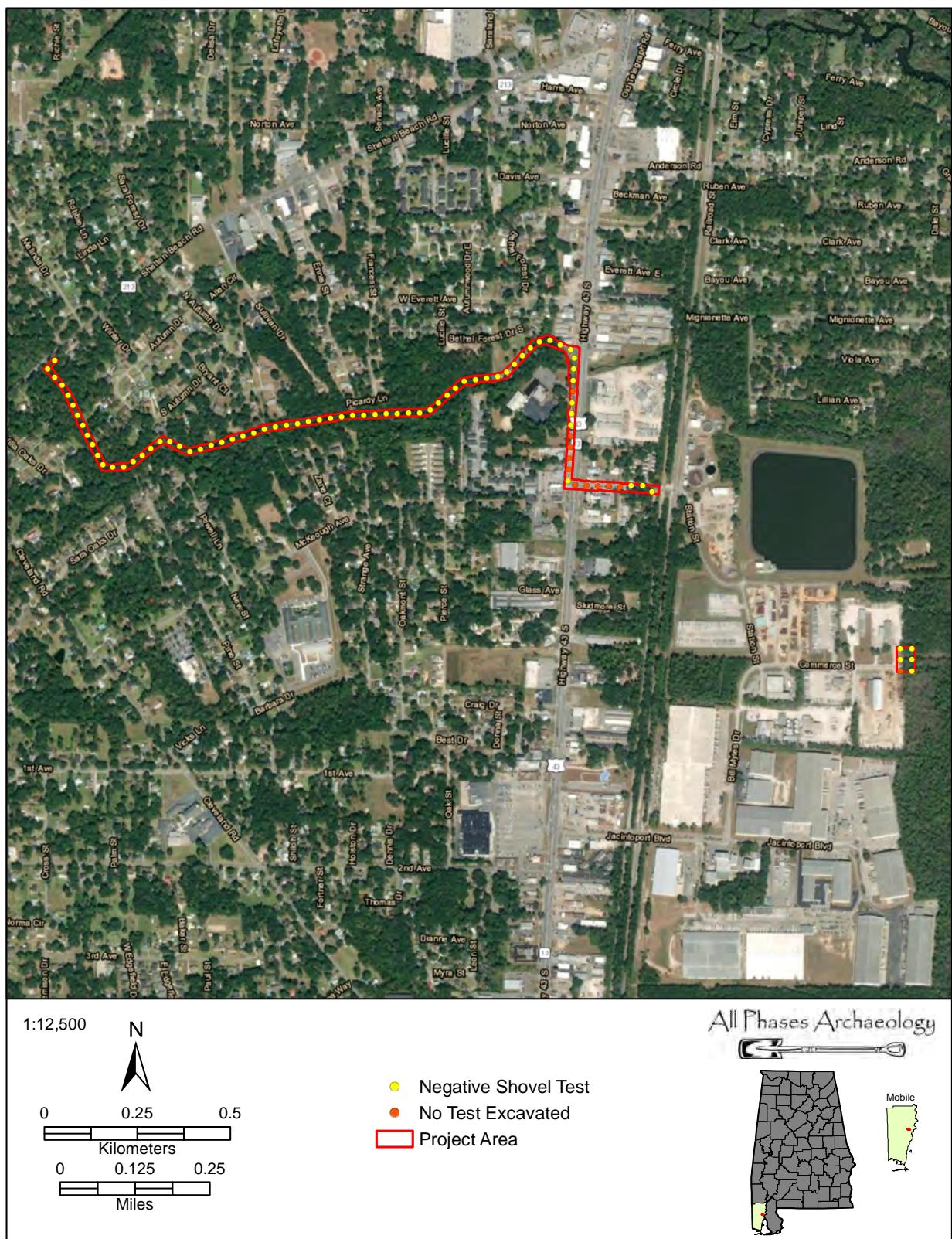


Figure 21. Aerial image showing shovel tests within the project area.



Figure 22. View of typical shovel test in easement portion of the survey area.



Figure 23. View of typical shovel test in lift station portion of the survey area.

REFERENCES

Alabama Historical Commission

- 2002 Alabama Historical Commission Policy for Archaeological Survey and Testing in Alabama. Alabama Historical Commission, Alabama State Historic Preservation Office (ALSHPO), Montgomery, Alabama. Adopted May 13, 1996, revised October 1, 2002.
- 2024 Alabama Register of Landmarks and Heritage. Electronic document, <http://www.preserveala.org/alabamaregister.aspx>, accessed January 2024.

Griffith, G.E., J.M. Omernik, J.A. Comstock, S. Lawrence, G. Martin, A. Goddard, V.J. Hulcher, and T. Foster
2001 Ecoregions of Alabama and Georgia, (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,700,000).

National Park Service

- 2024 National Register of Historic Places. Electronic document available online at <http://www.nps.gov/nr/research/>, accessed January 2024. Department of the Interior, Washington, D.C.

Office of Archaeological Research

- 2024 Alabama State Archaeological Site Files. The University of Alabama, Moundville, Alabama. Secure access website, accessed January 2024.

Web Soil Survey

- 2024 Online survey, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>, accessed February 2024.

ATTACHMENT D –

USACE NATIONWIDE

PERMIT



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, MOBILE DISTRICT
P.O. BOX 2288
MOBILE, AL 36628-0001

January 22, 2024

Special Projects Branch
Regulatory Division

SUBJECT: Department of the Army Nationwide Permit, File Number SAM-2008-01303-DEM, Board of Water and Sewer - City of Saraland, Saraland, Mobile County, Alabama

Board of Water and Sewer
Attention: Ron Mitchell
Email Address: saralandwater@bellsouth.net
307 Shelton Beach Road
Saraland, Alabama 36571

Dear Mr. Mitchell:

This letter is in response to your request for verification of Department of the Army Nationwide Permit (NWP) authorization to perform sewer maintenance and improvements adjacent to Norton Creek. The project has been assigned file number SAM-2008-01303-DEM, which should be referred to in any future correspondence with this office concerning this project. The project is located near Station Street along Norton Creek in the City of Saraland; in Section 4, Township 3 South, and Range 1 West; starting at Latitude 30.815087° North and Longitude -88.341058° West; ending at Latitude 30.710752 and Longitude -88.077307; in Saraland, Mobile County, Alabama.

Department of the Army permit authorization is necessary because your project involves the placement of fill in waters of the United States, including wetlands, under our regulatory jurisdiction. The project activities include the following:

Activities authorized under Nationwide Permit (NWP) 58, *Utility Line Activities for Water and Other Substances*:

- a. Maintenance and repair of existing sewer infrastructure adjacent to Commerce Drive, resulting in 0.003 acre of temporary wetland impacts; and
- b. Maintenance and repair of existing sewer infrastructure along Norton Creek in Saraland, Alabama, resulting in 0.69 acre of temporary wetland impacts.

Project activities result in approximately 0.693 acre of temporary impacts to riparian bottomland hardwood wetlands associated with the sewer infrastructure repairs. Fill from the maintenance activity must be removed and the area restored to pre-construction elevations following the completion of construction activities.

Based upon the information and plans you provided, we hereby verify the work described above, which would be performed in accordance with the attached drawings, is authorized by NWP 58, *Utility Line Activities for Water and Other Substances*, in accordance with 33 CFR Part 330 of our regulations. This NWP and associated General Conditions are attached for your review and compliance.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2022. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

Your use of these NWPs are subject to the following special conditions:

- a. The activity shall be conducted in accordance with the information submitted and meets the conditions applicable to the NWP, as described at Parts B and C of the NWP Program and State Regional Conditions.
- b. Within 30 days of completion of the work authorized, the attached Compliance Certification must be completed and submitted to the USACE.
- c. The attached yellow Notice of Authorization sign must be posted prominently at the site during construction of the permitted activity.
- d. It is the permittee's responsibility to ensure the contractors and subcontractors working on this project are aware of all general and special permit conditions.
- e. Best management practices shall be implemented to adequately retain fill material, minimizing erosion, siltation, turbidity, and damage to adjacent wetlands and waters of the United States. Appropriate control measures must be used and maintained in effective operating condition during construction and shall remain in place until permanent stabilization measures have been installed and become fully effective. The most recent edition of the *Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas*, may be found online at <https://alconservationsdistricts.gov/wp-content/uploads/2018/09/2018-Handbook-Vol-2.pdf>.
- f. The disposal of trees, brush and other project related debris in any wetland, stream corridor or other surface water outside the proposed project footprint is prohibited. Trees, brush, other debris, excess soil and other materials generated from project construction must be removed to an upland disposal area. Building materials, tools or other equipment associated with project construction shall not be stockpiled in

wetlands or other waters of the United States. All excess materials, tools, and equipment shall be removed immediately upon completion of the activity.

g. The movement of heavy equipment through wetlands and/or waters of the United States shall be limited to the minimum necessary to accomplish the work authorized herein. All equipment required to traverse wetlands or waters of the United States shall be supported on mats or other equivalent measures, which shall be used to minimize wetland soil disturbance and rutting. Upon completion of construction activities at the project site, all temporarily disturbed areas shall be returned to pre-construction elevations and revegetated.

h. Should historic properties, archaeological material, or cultural resources be encountered during project activities, all work shall cease and the USACE, Mobile District, shall be consulted immediately, such that appropriate coordination with federal, state, and tribal organizations may be initiated. The USACE, Mobile District must be contacted at (251) 510-1162 or (251) 690-2658. It is the permittee's responsibility to ensure that contractors are aware of this requirement.

Nothing in this letter shall be construed as excusing you from compliance with other federal, state, or local statutes, ordinances, or regulations which may affect this work. Revisions to your proposal may invalidate this authorization. In the event changes to this project are contemplated, it is recommended that you coordinate with us prior to proceeding with the work.

Electronic copies of this letter are also being sent to your agent, Volkert, Inc., Attention: Mr. Trent Farris, at trent.farris@volkert.com; and to the Alabama Department of Environmental Management, Mobile Branch / Coastal Section, Attention: Mr. Scott Brown, at coastal@adem.alabama.gov.

Please contact me at 251-386-4037, or at samuel.t.barber@usace.army.mil if you have any questions. For additional information about our Regulatory Program, visit our web site at <http://www.sam.usace.army.mil/Missions/Regulatory.aspx>, and please take a moment to complete our customer satisfaction survey. Your responses are appreciated and will allow us to improve our services.

Sincerely,

Samuel T. Barber
Project Manager
Special Projects Branch
Regulatory Division

Attachments

When the structures or work authorized by this nationwide permit (file number **SAM-2008-01303-DEM**) 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)

COMPLIANCE CERTIFICATION



**US Army Corps of Engineers
Mobile District**

Permit Number: **SAM-2008-01303-DEM**

Name of Permittee: **Board of Water and Sewer – City of Saraland**

Date of Issuance: **January 22, 2024**

Upon completion of the activity authorized by this permit and any mitigation required by the permit, please sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Mobile District
Regulatory Division
Post Office Box 2288
Mobile, Alabama 36628-0001

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with all terms and conditions of this permit, the permit is subject to permit suspension, modification, or revocation and you are subject to an enforcement action by this office.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit including any general or specific conditions, and the required mitigation was completed in accordance with the permit conditions and documentation required by 33 CFR 332.3(l)(3) has been provided to this office.

Signature of Permittee

Date



US Army Corps
of Engineers®

This notice of authorization must be
conspicuously displayed at the site of work.

A permit to perform work authorized by statutes and regulations of the Department of the Army at

_____ has been issued to _____ on _____

Address of Permittee:

PERMIT NUMBER

For the District Commander

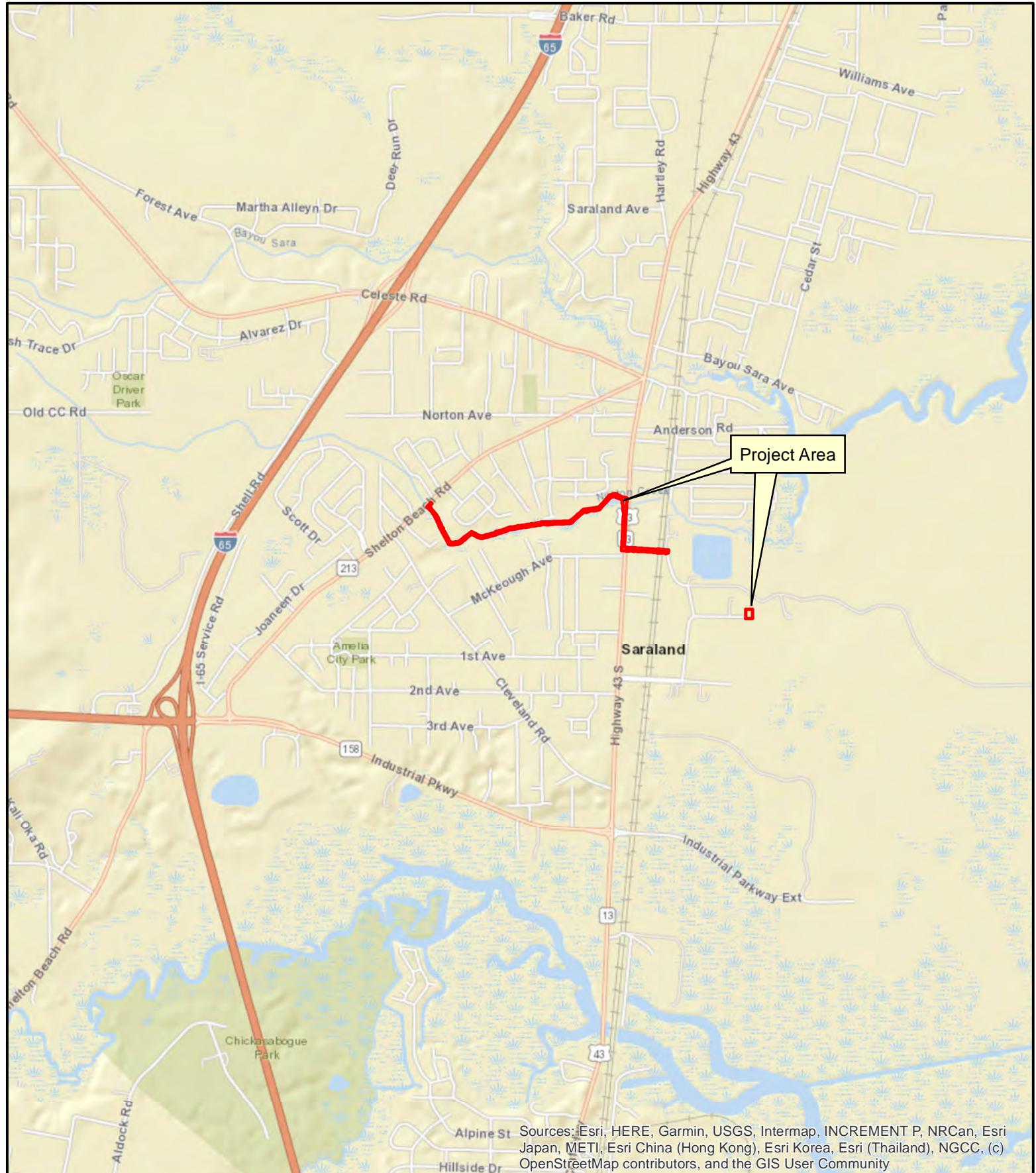


Figure 1
Vicinity Map
Saraland, Mobile County, AL

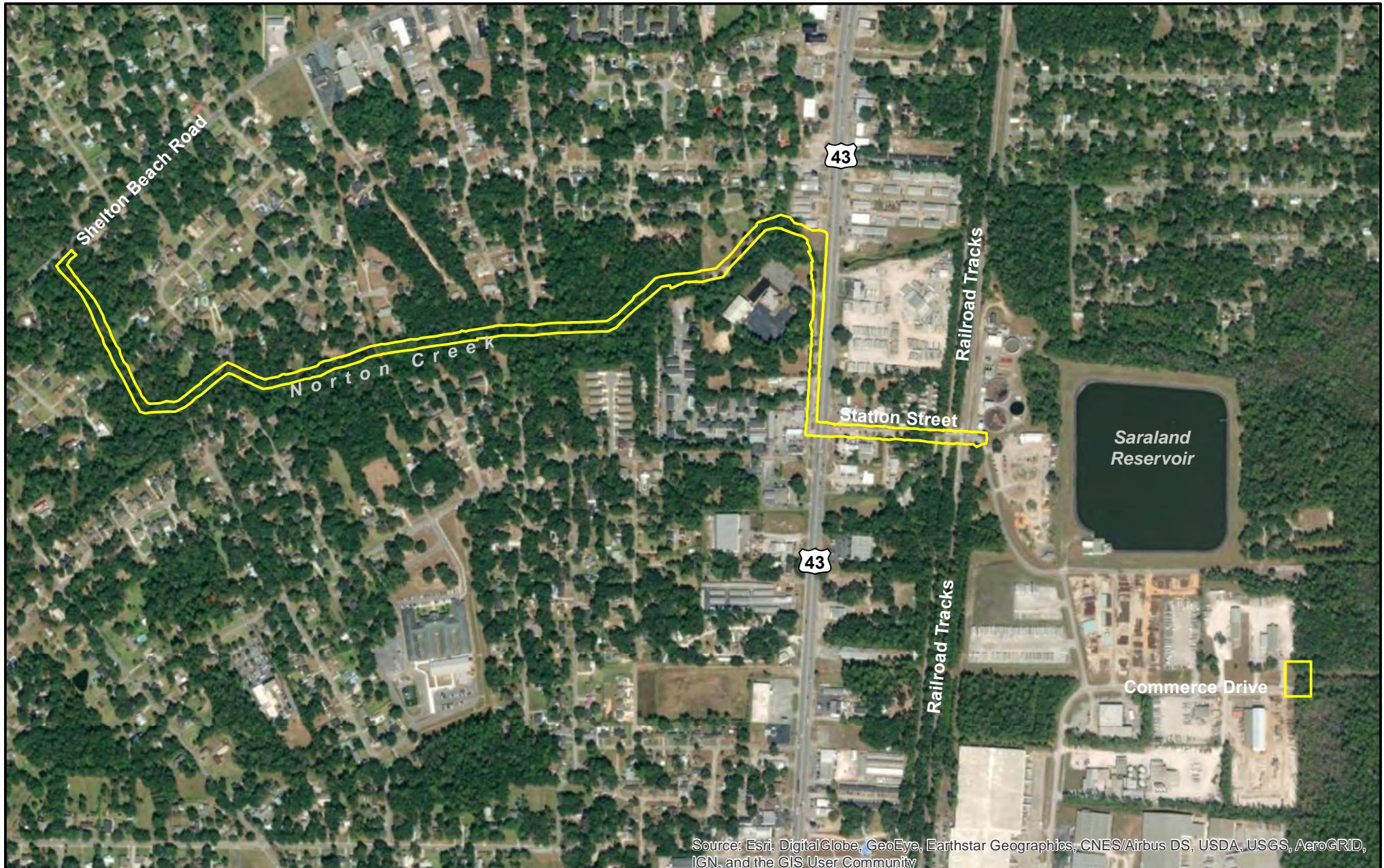
Legend

Project Area

0 2,500 5,000 10,000
Feet

1 inch = 3,000 feet





Legend

Project Area

Figure 2
Aerial
Saraland, Mobile County, AL

0 500 1,000 2,000
Feet



1 inch = 800 feet

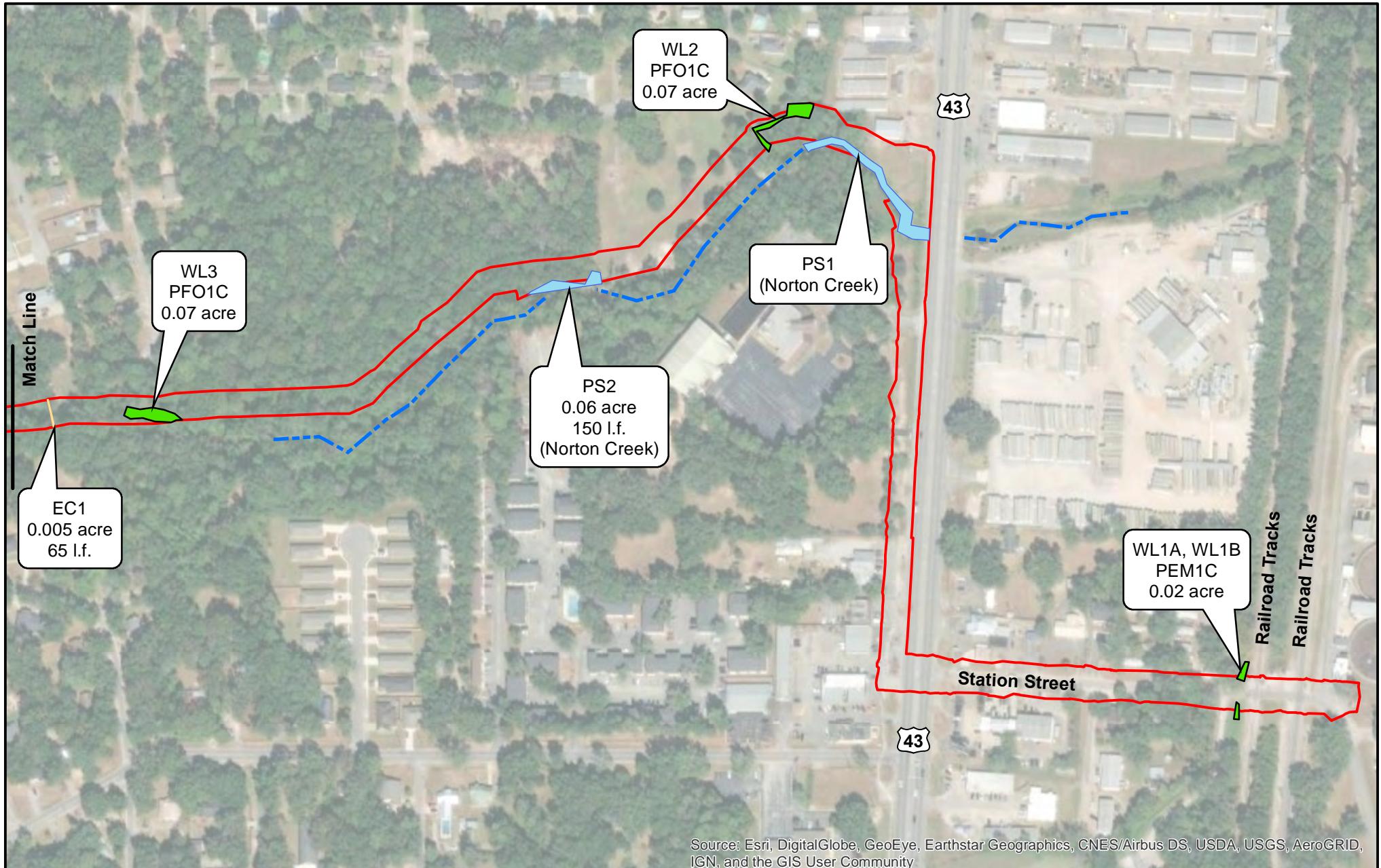
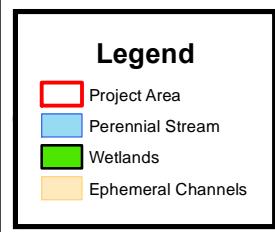


Figure 6A
Wetland and Stream Map
Saraland, Mobile County, AL



0 200 400 800 Feet

N
E
S
W
1 inch = 300 feet

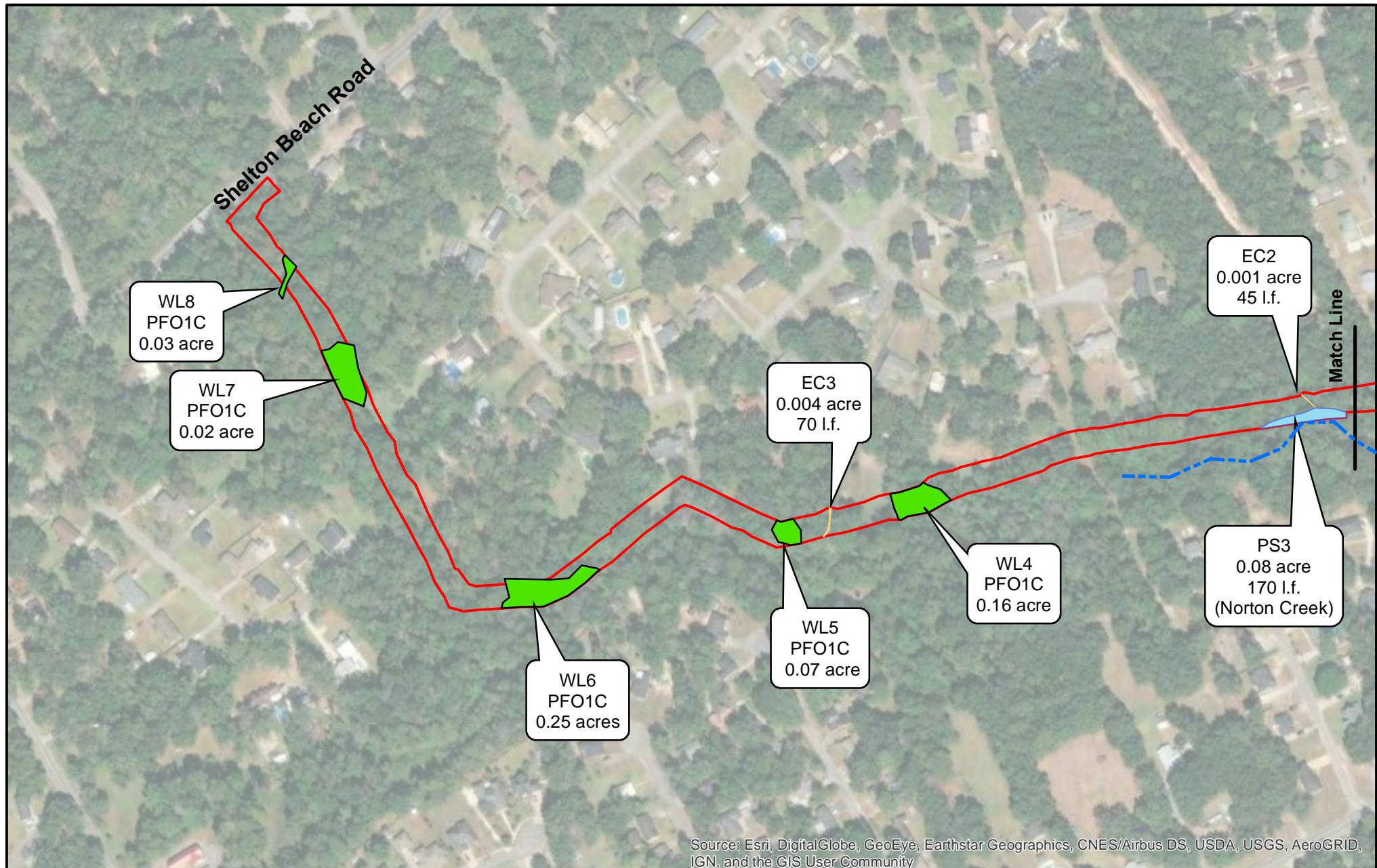
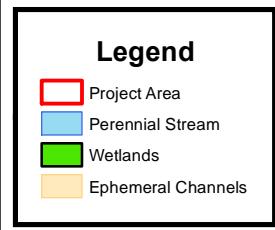


Figure 6B
Wetland and Stream Map
Saraland, Mobile County, AL



0 200 400 800 Feet



1 inch = 300 feet

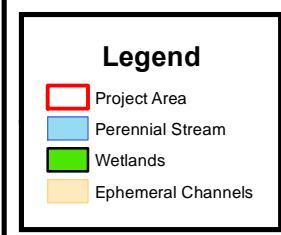


Figure 6C
Wetland and Stream Map
Saraland, Mobile County, AL

0 50 100 200
Feet

N
W E
S
1 inch = 100 feet



U S Army Corps of
Engineers

2021 Nationwide Permit Summary

33 CFR Part 330; Issuance of Nationwide
Permits – March 15, 2021

58. Utility Line Activities for Water and Other Substances.

Activities required for the construction, maintenance, repair, and removal of utility lines for water and other substances, excluding oil, natural gas, products derived from oil or natural gas, and electricity. Oil or natural gas pipeline activities or electric utility line and telecommunications activities may be authorized by NWPs 12 or 57, respectively. This NWP also authorizes associated utility line facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines for water and other substances, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A “utility line” is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquefied, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. Examples of activities authorized by this NWP include utility lines that convey water, sewage, stormwater, wastewater, brine, irrigation water, and industrial products that are not petrochemicals. The term “utility line” does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a utility line in non-tidal waters of the United States,

provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for above-ground utility lines: This NWP authorizes the construction or maintenance of foundations for above-ground utility lines in all waters of the United States, provided the foundations are the minimum size necessary.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the

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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 construction, 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.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if:

- (1) a section 10 permit is required; or
- (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed, installed, or maintained in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 4: Pipes or pipelines used to transport gaseous, liquid, liquefied, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to the General Bridge Act of 1946. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 5: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For activities that require pre-construction notification, the PCN must include 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 that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the

authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

A. 2021 Regional Conditions

1. [Alabama Water Quality Certification - See Attached](#)
2. [Alabama Coastal Zone Management Conditions - See Attached](#)

B. 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 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: <https://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 <https://www.fws.gov/> or <https://www.fws.gov/ipac/> and <https://www.fisheries.noaa.gov/topic/endangered-species-conservation> 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 110(k) 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.

C. 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.

D. 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).

E. 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 coarse 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 channel ward 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)).

December 14, 2020

Colonel Sebastien P. Joly
Commander, Mobile District
U.S. Army Corps of Engineers
P.O. Box 2288
Mobile, AL 36628-0001

RE: Clean Water Act (CWA) Section 401 Water Quality Certification (WQC), U.S. Army Corps of Engineers (COE) 2020 Proposed Issuance of Alabama Nationwide Permits (ALNWPs) For Activities Within the State of Alabama

Dear Colonel Joly:

This office has completed a review of the above-referenced notice and all associated materials submitted related to the proposed ALNWPs. Any comments made during the public notice period have also been forwarded to the Department for review.

1. Aids to Navigation
2. Structures in Artificial Canals
3. Maintenance
4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities
5. Scientific Measurement Devices
6. Survey Activities
7. Outfall Structures and Associated Intake Structures
8. Oil and Gas Structures on the Outer Continental Shelf
9. Structures in Fleeting and Anchorage Areas
10. Mooring Buoys
11. Temporary Recreational Structures
12. Oil or Natural Gas Pipeline Activities
13. Bank Stabilization
14. Linear Transportation Projects
15. U.S. Coast Guard Approved Bridges
16. Return Water From Upland Contained Disposal Areas
17. Hydropower Projects
18. Minor Discharges
19. Minor Dredging
20. Response Operations for Oil or Hazardous Substances
21. Surface Coal Mining Activities
22. Removal of Vessels
23. Approved Categorical Exclusions
24. Indian Tribe or State Administered Section 404 Programs
25. Structural Discharges
26. [Reserved]
27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities
28. Modifications of Existing Marinas

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- 29. Residential Developments
- 30. Moist Soil Management for Wildlife
- 31. Maintenance of Existing Flood Control Facilities
- 32. Completed Enforcement Actions
- 33. Temporary Construction, Access, and Dewatering
- 34. Cranberry Production Activities
- 35. Maintenance Dredging of Existing Basins
- 36. Boat Ramps
- 37. Emergency Watershed Protection and Rehabilitation
- 38. Cleanup of Hazardous and Toxic Waste
- 39. Commercial and Institutional Developments
- 40. Agricultural Activities
- 41. Reshaping Existing Drainage Ditches
- 42. Recreational Facilities
- 43. Stormwater Management Facilities
- 44. Mining Activities
- 45. Repair of Uplands Damaged by Discrete Events
- 46. Discharges in Ditches
- 47. [Reserved]
- 48. Commercial Shellfish Mariculture Activities
- 49. Coal Remining Activities
- 50. Underground Coal Mining Activities
- 51. Land-Based Renewable Energy Generation Facilities
- 52. Water-Based Renewable Energy Generation Pilot Projects
- 53. Removal of Low-Head Dams
- 54. Living Shorelines
 - A. Seaweed Mariculture Activities
 - B. Finfish Mariculture Activities
 - C. Electric Utility Line and Telecommunications Activities
 - D. Utility Line Activities for Water and Other Substances
 - E. Water Reclamation and Reuse Facilities

Because action pertinent to WQC is required by Section 401(a)(1) of the CWA, 33 U.S.C. Section 1251, et seq., we hereby issue certification that there is reasonable assurance that the discharge resulting from the proposed activities as submitted will not violate applicable water quality standards established under Section 303 of the CWA and Title 22, Section 22-22-9(g), Code of Alabama, 1975, provided the applicant acts in accordance with the following conditions as specified. We further certify that there are no applicable effluent limitations under Sections 301 and 302 nor applicable standards under Sections 306 and 307 of the CWA in regard to the activities specified. This certification shall expire at the same time as the expiration date for the above-referenced Alabama Nationwide Permits for activities within the State of Alabama.

To minimize adverse impacts to State waters, by copy of this letter we are requesting the Mobile District Corps of Engineers to incorporate the following as special conditions as appropriate to the type, location, scope, duration, and potential impact of each activity in Alabama authorized by the COE NWPs:

1. During project implementation, the applicant shall ensure compliance with applicable requirements of ADEM. Admin. Code Chapter 335-6-6 [National Pollutant Discharge Elimination System (NPDES)], Chapter 335-6-10 (Water Quality Criteria), and Chapter 335-6-11 (Water Use Classifications for Interstate and Intrastate Waters).

2. ADEM permit coverage may be required prior to commencing and/or continuing certain activities/operations relating to or resulting from the project. If an applicant has any questions regarding ADEM regulated activity or the need for NPDES permit coverage, the applicant can contact ADEM's Water Division at (334) 271-7823. If an applicant has any questions regarding ADEM regulated activity or the need for air permit coverage, the applicant can contact ADEM's Air Division at (334) 271-7869. If the applicant has any questions regarding ADEM regulated activity or the need for hazardous, toxic, and/or solid waste permit coverage, the applicant can contact ADEM's Land Division at (334) 271-7730.
3. Upon the loss or failure of any treatment facility, Best Management Practice (BMP), or other control, the applicant shall, where necessary to maintain compliance with this certification, suspend, cease, reduce or otherwise control work/activity and all discharges until effective treatment is restored. It shall not be a defense for the applicant in a compliance action that it would have been necessary to halt or reduce work or other activities in order to maintain compliance with the conditions of this certification.
4. The applicant shall retain records adequate to document activities authorized by this certification for a period of at least three years after completion of work/activity authorized by the certification. Upon written request, the applicant shall provide ADEM with a copy of any record/information required to be retained by this paragraph.
5. The applicant shall conduct or have conducted, at a minimum, weekly comprehensive site inspections until completion of the proposed activity to ensure that effective BMPs are properly designed, implemented, and regularly maintained (i.e. repair, replace, add to, improve, implement more effective practice, etc.) to prevent/minimize to the maximum extent practicable discharges of pollutants in order to provide for the protection of water quality.
6. The applicant shall implement a project-specific or a detailed general BMP Plan prepared by an ADEM recognized qualified credentialed professional (QCP) applicable to and commensurate with activities of the type proposed. Effective BMPs shall be implemented and continually maintained for the prevention and control of turbidity, sediment, and other sources of pollutants, including measures to ensure permanent revegetation or cover of all disturbed areas, during and after project implementation.
7. The applicant shall implement a Spill Prevention Control and Countermeasures (SPCC) Plan for all temporary and permanent onsite fuel or chemical storage tanks or facilities consistent with the requirements of ADEM Admin. Code R. 335-6-6-.12(r), Section 311 of the Federal Water Pollution Control Act, and 40 CFR Part 112. The applicant shall maintain onsite or have readily available sufficient oil & grease absorbing material and flotation booms to contain and clean-up fuel or chemical spills and leaks. The applicant shall immediately notify ADEM after becoming aware of a significant visible oil sheen in the vicinity of the proposed activity. In the event of a spill with the potential to impact groundwater or other waters of the State, the applicant should immediately call the National Response Center at 1-800-424-8802 and the Alabama Emergency Management Agency at 1-800-843-0699. The caller should be prepared to report the name, address and telephone number of person reporting spill, the exact location of the spill, the company name and location, the material spilled, the estimated quantity, the source of spill, the cause of the spill, the nearest downstream water with the potential to receive the spill, and the actions taken for containment and cleanup.

8. Additional, effective BMPs shall be fully implemented and maintained on a daily basis as needed to prevent to the maximum extent possible potential discharges of pollutants from activities authorized by this certification, directly to or to a tributary or other stream segment, that have the potential to impact a State water currently considered impaired [waterbody is identified on the Alabama 303(d) list, a total maximum daily load (TMDL) has been finalized for the waterbody, and/or the waterbody is otherwise considered a Tier 1 water pursuant to ADEM Admin. Code Ch. 335-6-10]. The applicant shall inspect all BMPs as often as is necessary (daily if needed) for effectiveness, need for maintenance, and the need to implement additional, effective BMPs. Additional effective BMPs shall immediately be implemented as needed to ensure full compliance with ADEM requirements and the protection of water quality in the impaired waterbody.
9. All construction and worker debris (e.g. trash, garbage, etc.) must be immediately removed and disposed in an approved manner. If acceptable offsite options are unavailable, effective onsite provisions for collection and control of onsite worker toilet wastes or gray waste waters (i.e. port-a-lot, shower washdown, etc.) must be implemented and maintained. Soil contaminated by paint or chemical spills, oil spills, etc. must be immediately cleaned up or be removed and disposed in an approved manner. Also, the applicant shall manage and dispose of any trash, debris, and solid waste according to applicable state and federal requirements.
10. All materials used as fill, or materials used for construction of structures in a waterbody, must be non-toxic, non-leaching, non-acid forming, and free of solid waste or other debris. This requirement does not preclude the use of construction materials authorized by the COE that are typically utilized in marine or other aquatic applications.
11. The applicant shall implement appropriate measures to minimize the potential for a decrease of instream dissolved oxygen concentrations as a result of project implementation. In addition, the applicant shall ensure that the activities authorized by this certification do not significantly contribute to or cause a violation of applicable water quality standards for instream dissolved oxygen.
12. The applicant shall implement appropriate, effective BMPs, including installation of floating turbidity screens as necessary, to minimize downstream turbidity to the maximum extent practicable. The applicant shall visually monitor or measure background turbidity. The applicant must suspend operations should turbidity resulting from project implementation exceed background turbidity by more than 50 NTUs. Operations may resume when the turbidity decreases to within acceptable levels.
13. The applicant shall evaluate, characterize, and as necessary, conduct regular analysis of any material proposed to be dredged/removed/disturbed in order to ensure that potential pollutants are not present in concentrations that could cause or contribute to a violation of applicable water quality standards. Information regarding the evaluation, characterization, or detailed results of any analyses shall be made available to ADEM upon request.
14. If upland disposal areas are utilized, the applicant shall be responsible for the condition of the disposal area, including the structural integrity of any embankments, until the disposal area is permanently reclaimed or adequately stabilized, to ensure that sediment and/or turbidity in the return water and/or stormwater runoff will not cause substantial visible contrast with the receiving waters, or result in an increase of 50 NTUs above background turbidity levels in the receiving waters.
15. For proposed activities associated with new or updated docks, marinas, multiple boat slips, floating docks, large or multiple piers, etc. or that increase the number of berthing areas, the applicant shall

ensure that these facilities are equipped with appurtenances (i.e. trash receptacles, receptacles for fish offal and carcasses, SPCC for fueling facilities, and a sewage pump out system where appropriate) as needed to protect water quality.

16. The applicant is encouraged to consider additional pollution prevention practices, low impact development (LID), and other alternatives to assist in complying with applicable regulatory requirements and possible reduction/elimination of pollutant discharges. LID is an approach to land development or re-development that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to implement these sustainable ideas such as bio-retention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed.
17. The applicant is encouraged to consider and implement a site design plan/strategy for post-construction hydrology to mimic pre-construction hydrology to the extent feasible, and for post-construction stormwater runoff peak flows and total stormwater volume to minimize potential downstream channel and stream bank erosion.
18. In recognition that projects are site specific in nature and conditions can change during project implementation, ADEM reserves the right to require the submission of additional information or require additional management measures to be implemented, as necessary on a case-by-case basis, in order to ensure the protection of water quality. Liability and responsibility for compliance with this certification are not delegable by contract or otherwise. The applicant shall ensure that any agent, contractor, subcontractor, or other person employed by, under contract, or paid a salary by the applicant complies with this certification. Any violations resulting from the actions of such person may be considered violations of this certification.
19. Issuance of a certification by ADEM neither precludes nor negates an operator/owner's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals. This certification does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations, and in no way purports to vest in the applicant title to lands now owned by the State of Alabama, nor shall it be construed as acquiescence by the State of Alabama of lands owned by the State of Alabama that may be in the applicant's possession.

Please feel free to contact me at 334/394-4304 in the event you have any questions.

Sincerely,



Anthony Scott Hughes, Chief
Field Operations Division

File: WQ401

c: Nashville District COE & EPA Region IV

Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

December 15, 2020

Colonel Sebastien P. Joly
District Commander
U. S. Army Corps of Engineers, Mobile District
109 St. Joseph Street
Mobile, Alabama 36619

RE: U. S. Army Corps of Engineers Nationwide Permits (NWPs) Program
State of Alabama Coastal Consistency Concurrence
2020 NWP Reissuance
ACAMP-2016-301.1 | COE-2020-0002

Dear Colonel Joly:

The NWPs listed below have been determined by the ADEM, based on their scope or nature, not to have a significant impact on coastal resources when implemented in accordance with the specific conditions described herein and are therefore categorically certified to be consistent with the ACAMP pursuant to ADEM Administrative Code 335-8-1-03(4).

1. **Aids to Navigation**
No additional coastal consistency conditions.
2. **Structures in Artificial Canals**
The permittee must obtain all appropriate authorizations required by the Alabama Department of Conservation and Natural Resources – State Lands Division (ADCNR-SLD) prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.
3. **Maintenance**
 - A. Activities authorized under Nationwide Permit 3 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
 - B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.
4. **Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities**
The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.
5. **Scientific Measurement Devices**
 - A. Activities authorized under Nationwide Permit 5 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
 - B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.
6. **Survey Activities**
No additional coastal consistency conditions.



7. Outfall Structures and Associated Intake Structures

- A. Activities authorized under Nationwide Permit 7 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. There must be no placement of new riprap in previously unarmored areas.
- C. There must be no construction of new outfall and/or intake structures on properties fronting the Gulf of Mexico, Pelican Bay, Weeks Bay, Dauphin Island Audubon Sanctuary, or the Point aux Pines wetland system owned by the Board of Trustees of the University of Alabama.
- D. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

8. Oil and Gas Structures on the Outer Continental Shelf

No additional coastal consistency conditions.

9. Structures in Fleeting and Anchorage Areas

The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

11. Temporary Recreational Structures

The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

12. Utility Line Activities

- A. The permittee must submit a copy of the Pre-Construction Notification (PCN) required by the Corps to the ADEM Mobile-Coastal office.
- B. Activities authorized under Nationwide Permit 12 must not be located within or in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.
- C. The permittee must demonstrate avoidance and minimization of wetland impacts to the maximum extent practicable. Wetland impacts may be considered only after utilization of all available uplands.
- D. The permittee must undertake restoration of any wetland areas or State waterbottoms temporarily impacted as a result of activities authorized under Nationwide Permit 12. Disturbed areas must be returned to preproject elevations and wetland areas must be revegetated.
- E. The permittee must provide compensatory mitigation for any authorized permanent wetland impacts and must submit supporting documentation (e.g. certificate of credit purchase) to the ADEM Mobile-Coastal office for verification.
- F. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

14. Linear Transportation Crossings

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. Nationwide Permit 14 may not be used to authorize wetland dredge or fill activities on residential or commercial lots, except on legally platted lots or parcels in existence on or before 14 August 1979. This condition does not apply to uses of regional benefit such as roads, highways, railways, trails, airport runways, and taxiways.
- C. The permittee must demonstrate avoidance and minimization of wetland impacts to the maximum extent practicable. Wetland impacts may be considered only after utilization of all available uplands.
- D. The permittee must provide compensatory mitigation for any authorized permanent wetland impacts and must submit supporting documentation (e.g. certificate of credit purchase) to the ADEM Mobile-Coastal office for verification.
- E. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

15. U.S. Coast Guard Approved Bridges

The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

16. Return Water from Upland Contained Disposal Areas

- A. The permittee must ensure the salinity of return waters from dredge disposal sites is similar to the salinity of the receiving waters.
- B. The discharge from the upland contained disposal area(s) must not cause a violation of State water quality standards or applicable conditions of the State Clean Water Act Section 401 Water Quality Certification.

17. Hydropower Projects

No additional coastal consistency conditions.

18. Minor Discharges

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office. The PCN must include a copy of the legal plat.
- B. There must be no dredging or filling of wetlands, except on legally platted lots or parcels in existence on or before 14 August 1979.
- C. Nationwide Permit 18 must not be used to authorize fill to accommodate construction of swimming pools, boat ramps, tennis courts, lawns, play areas or other ancillary projects or activities not directly related to the construction of residential dwellings and/or associated access drives and parking.
- D. Activities authorized under Nationwide Permit 18 must not be located in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.
- E. The permittee must demonstrate avoidance and minimization of wetland impacts to the maximum extent practicable. Wetland impacts may be considered only after utilization of all available uplands.
- F. The permittee must provide compensatory mitigation for any authorized permanent wetland impacts and must submit supporting documentation (e.g. certificate of credit purchase) to the ADEM Mobile-Coastal office for verification.
- G. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

19. Minor Dredging

- A. Activities authorized under Nationwide Permit 19 must not be located in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. Dredging is prohibited in the Gulf of Mexico or Pelican Bay in an area from the ADEM Construction Control Line to a point 1,500 feet seaward of Mean High Tide.
- C. Dredging is prohibited in the Gulf of Mexico in an area from the City of Gulf Shores Construction Control Line to a point 1,500 feet seaward of Mean High Tide.
- D. Dredged material must be placed in an upland disposal area and properly contained to prevent re-entering the waterway or wetlands unless specifically authorized by other approved permits or exemptions.
- E. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

20. Response Operations for Oil and Hazardous Substances

The permittee must undertake restoration of any wetland areas or State waterbottoms temporarily impacted as a result of activities authorized under Nationwide Permit 20. Disturbed areas must be returned to preproject elevations and wetland areas must be revegetated.

22. Removal of Vessels

- A. The permittee must undertake restoration of any wetland areas or State waterbottoms temporarily impacted as a result of activities authorized under Nationwide Permit 22. Disturbed areas must be returned to preproject elevations and wetland areas must be revegetated.
- B. Vessel removal related to a catastrophic natural disaster (e.g. hurricane, discrete flooding event, etc.) is not authorized during the time an applicable Temporary State/Regional General Permit for Emergency Vessel Removal related to the natural disaster recovery is in effect.

23. Approved Categorical Exclusions

No additional coastal consistency conditions.

25. Structural Discharges

- A. Activities authorized under Nationwide Permit 25 must not be located in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. There must be no construction of open water areas in existing wetlands unless the impacted wetland acreage is replaced elsewhere within the restoration, establishment, and/or enhancement project area.
- C. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

28. Modifications of Existing Marinas

- A. The permittee must submit notification to the ADEM Mobile-Coastal office prior to reconfiguration of existing docking facilities at marinas having 10 or more wet slips.
- B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

31. Maintenance of Existing Flood Control Facilities

No additional coastal consistency conditions.

32. Completed Enforcement Actions

No additional coastal consistency conditions.

33. Temporary Construction, Access and Dewatering

No additional coastal consistency conditions.

35. Maintenance Dredging of Existing Basins

- A. Dredged material must be placed in an upland disposal area and properly contained to prevent re-entering the waterway or wetlands unless specifically authorized by other approved permits or exemptions.
- B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

36. Boat Ramps

- A. Activities authorized under Nationwide Permit 36 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. Nationwide Permit 36 must not allow construction of boat ramps on properties fronting the Gulf of Mexico, Pelican Bay, Weeks Bay, Dauphin Island Audubon Sanctuary, or the Point aux Pines wetland system owned by the Board of Trustees of the University of Alabama.
- C. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

37. Emergency Watershed Protection and Rehabilitation

No additional coastal consistency conditions.

38. Cleanup of Hazardous and Toxic Waste

No additional coastal consistency conditions.

45. Repair of Uplands Damaged by Discrete Events

- A. Activities authorized under Nationwide Permit 45 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources.
- B. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

46. Discharges in Ditches and Canals

No additional coastal consistency conditions.

48. Commercial Shellfish Aquaculture Activities

- A. Activities and structures authorized under Nationwide Permit 48 must not be located within or in close proximity to existing wetlands, submersed grassbeds, or natural oyster reefs and shall not result in adverse impacts to those resources. The permittee may be required to submit a submersed grassbed survey to the ADEM Mobile-Coastal office prior to commencement of work.
- B. There must be no placement or addition of fill onto State-Owned Submerged Lands.
- C. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

53. Removal of Low-Head Dams

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. The permittee must undertake the restoration of any wetland areas or State waterbottoms temporarily impacted as a result of activities authorized under Nationwide Permit 53. Disturbed areas must be restored to preproject elevations and wetland areas must be revegetated.
- C. The permittee must obtain all appropriate authorizations required by the ADCNR-SLD prior to commencement of activities that would impact or be located over State-Owned Submerged Lands.

54. Living Shorelines

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. Activities and structures authorized under Nationwide Permit 54 must not be located within or in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources. The permittee may be required to submit a submersed grassbed survey to the ADEM Mobile-Coastal office prior to commencement of work.

NWP C Electric Utility Line and Telecommunications Activities

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. Activities and structures authorized under NWP C must not be located within or in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.

NWP D Utility Line Activities for Water or Other Substances

- A. The permittee must submit a copy of the PCN required by the Corps to the ADEM Mobile-Coastal office.
- B. Activities and structures authorized under NWP D must not be located within or in close proximity to existing submersed grassbeds or natural oyster reefs and shall not result in adverse impacts to those resources.

Recognizing that projects are site specific in nature and scope and that conditions may change during project implementation, the ADEM reserves the right to require a permittee to submit additional information or require additional management measures to be implemented, as necessary on a case-by-case basis, in order to ensure that activities authorized under one or more NWPs are being conducted in a manner that protects water quality and coastal resources.

These coastal consistency concurrences only addresses activities which are also regulated under the enforceable policies of the ACAMP as codified in ADEM Admin. Code R. 335-8. These concurrences do not convey any property rights in either real or personal property, or any exclusive privileges, nor do they authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations and in no way purports to vest in any person title to lands now owned by the State of Alabama nor may it be construed as acquiescence by the State of Alabama of lands owned by the State that may be in anyone's possession. These concurrences do not obviate the responsibility of any applicant to acquire all other needed permits nor do these concurrences, in any way, imply that proposed activities comply with the requirements of any other jurisdictional entity nor do they imply that the projects can or should be approved by any other jurisdictional entity.

The following NWPs have been found to be inconsistent with the ACAMP and are not authorized for use within the coastal area of Alabama without individual review of the applicant's certification of coastal consistency.

- 10. Mooring Bouys
- 13. Bank Stabilization
- 21. Surface Coal Mining Activities
- 24. Indian Tribe or State Administered Section 404 Programs
- 26. Reserved
- 29. Residential Developments
- 30. Moist Soil Management for Wildlife
- 34. Cranberry Production Activities
- 39. Commercial and Institutional Developments
- 40. Agricultural Activities
- 41. Reshaping Existing Drainage Ditches
- 42. Recreational Facilities
- 43. Stormwater Management Facilities
- 44. Mining Activities
- 47. Reserved
- 49. Coal Remining Activities
- 50. Underground Coal Mining Activities
- 51. Land-Based Renewable Energy Generation Facilities

52. Water-Based Renewable Energy Generation Pilot Projects

NWP A – Seaweed Mariculture Activities

NWP B – Finfish Mariculture Activities

NWP E – Water Reclamation and Reuse Facilities

Call, write, or email the Mobile-Coastal office anytime with questions. Always include the ADEM tracking code above when corresponding on this matter. The ADEM contact for this and other coastal zone management issues is J. Scott Brown. He may be reached by telephone at 251. 304.1176 or via e-mail (jsb@adem.alabama.gov).

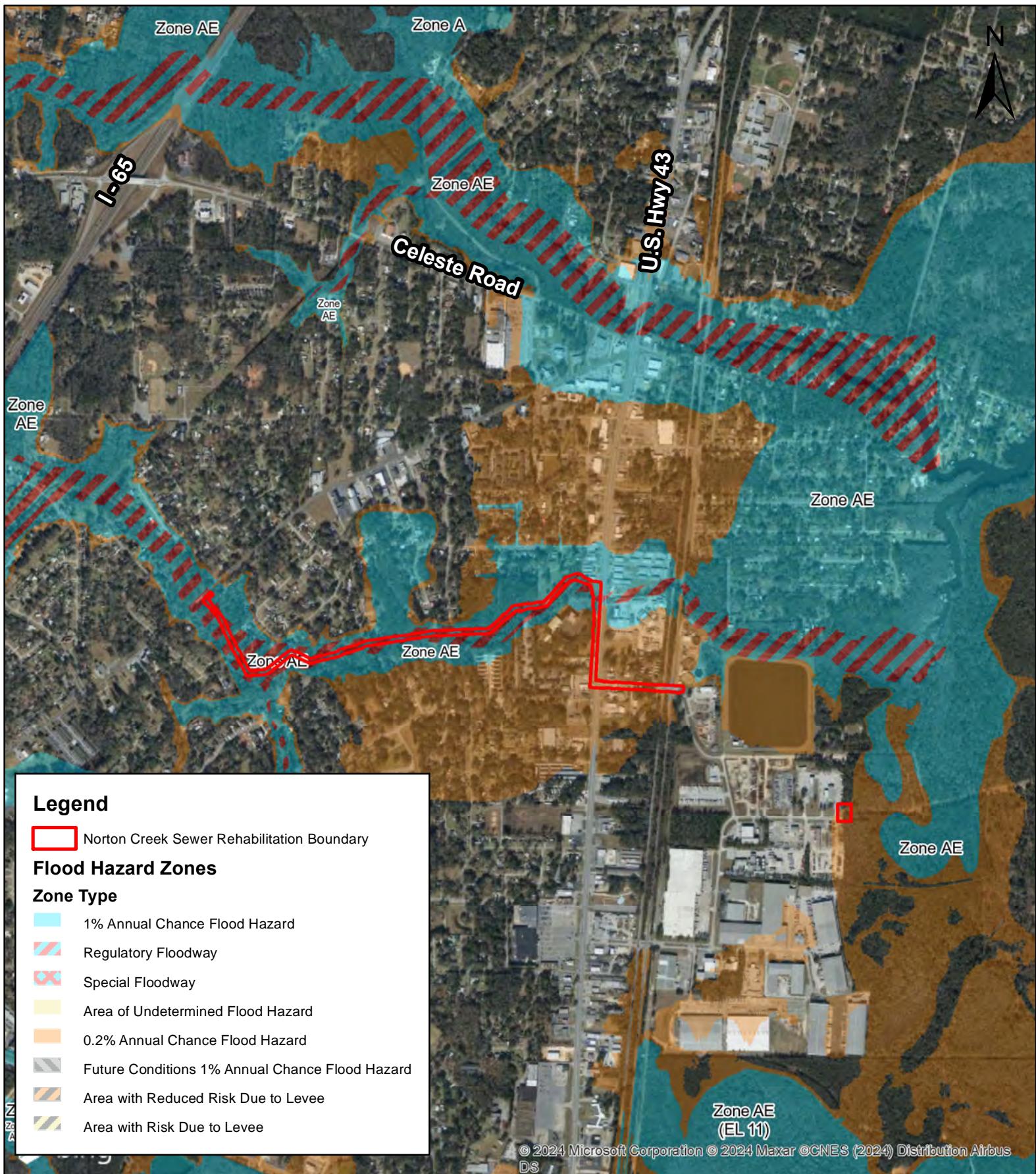
Sincerely,



A. Scott Hughes, Chief
Field Operations Division

cc: DCNR.Coastal@dcnr.alabama.gov

ATTACHMENT E - FLOODPLAINS



VOLKERT

0 1,500 3,000
Feet
1" = 1,500'

Note: This map is not intended for construction.

**Figure X: FEMA Floodplain
Norton Creek Sewer Rehabilitation
Saraland, Mobile County, AL
Proj No.: 1074316**