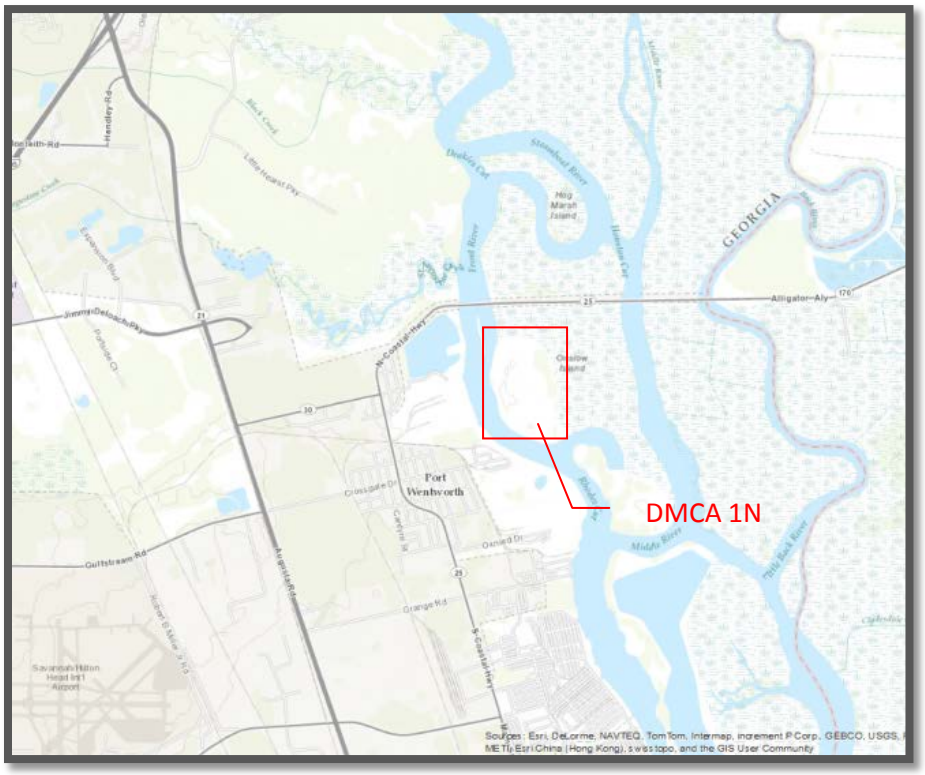
Final
Environmental Assessment

Savannah Harbor Navigation Project

Rehabilitation of Dredged Material Containment Area 1N (Onslow Island) Chatham County, Georgia

August 2013



US Army Corps of Engineers®
Savannah District

Savannah Harbor Navigation Project
Rehabilitation of
Dredged Material Containment Area 1N (Onslow Island)
Chatham County, Georgia

Environmental Assessment

Figures

Tables

Appendices

Executive Summary

The Savannah District US Army Corps of Engineers (Corps) and the US Fish and Wildlife Service (USFWS) are proposing to restore dredged material containment area (DMCA) 1N (Onslow Island) back into a functional state for the purposes of storing dredged material and creating wildlife habitat. Use of Onslow Island as a DMCA was authorized in a Special Use Permit on June 15, 1973 between the Department of the Interior (USFWS) and the Department of the Army (Corps) "To use lands of the Savannah National Wildlife Refuge, Chatham County, Georgia, with right of entry for construction of dikes, and for disposal and/or removal of spoil, as provided hereafter." The Corps' August 1996 Savannah Harbor Long Term Management Strategy (LTMS) Environmental Impact Statement (EIS) included a description of how maintenance sediments would be handled in the harbor and provided environmental clearances for use of DMCA 1N. In the LTMS, Area 1N is described as having an area of 130 acres and designated to receive dredged material from channel Stations 107+500 to 112+600. Sediments were deposited in DMCA 1N periodically from the mid-1970's until the late-1990's. Since deposition has ceased, the area has become overgrown with vegetation including many invasive species such as salt cedar, sesbania, and chinaberry. The dikes and weirs have fallen into disrepair, and the area is now used primarily for removal of material for road construction projects (or sand mining) and storage of equipment by USFWS. Salinity in this area is typically below 10 parts per thousand (ppt) but above 0.5 ppt and is considered brackish. The areas surrounding the DMCA are vegetated primarily with stands of Spartina alterniflora, Juncus roemerianus, and Borrichia frutescens.

This EA evaluates the impacts and benefits of establishing and maintaining wildlife habitats at DMCA 1N, for which the Corps could receive mitigation credits in the same manner as the DMCAs located in South Carolina. No environmental approvals are needed to rehabilitate the site for dredged material disposal purposes, since those actions were included in the 1996 LTMS EIS.

1. Introduction

This Environmental Assessment (EA) identifies and evaluates the environmental impacts associated with rehabilitating the Savannah Harbor Navigation Project DMCA 1N and using it for mitigation purposes in the same manner as the DMCAs in South Carolina.

The National Environmental Policy Act (NEPA) of 1969, as amended, requires consideration of the environmental impacts for major Federal actions. The purpose of this EA is to ensure the environmental consequences of the proposed action are considered and that environmental and project information are available to the public.

This EA has been prepared in accordance with the NEPA of 1969, the Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations (CFR) parts 1500-1508), U.S. Army Corps of Engineers Department of the Army procedures for implementing NEPA (33 CFR parts 230 and 325), and Engineering Regulation (ER) 200-2-2.

1.1 Background

In 1996, the Corps Savannah District completed an Environmental Impact Statement (EIS) that evaluated operation and maintenance activities for the Savannah Harbor Navigation Project. The evaluation resulted in a Long Term Management Strategy (LTMS) for the Savannah Harbor Navigation Project. That strategy outlined actions (e.g., improvements to dredge pipe ramps) that would result in environmental impacts in both Georgia and South Carolina. The strategy also identified the need for another DMCA, which would become DMCA 14A located in Jasper County, South Carolina. Wetlands were present on the site, so the Corps committed to several mitigation actions, including a water management strategy to create beneficial habitat for shorebirds, migratory birds, waterfowl and colonial nesting seabirds while maintaining the primary purpose of the areas, which is dredged material disposal. The mitigation plan was approved by the US Environmental Protection Agency (EPA), US Fish and Wildlife Service (USFWS), South Carolina Department of Health and Environmental Control (SC DHEC), South Carolina Department of Natural Resources (SC DNR), and Georgia Department of Natural Resources (GA DNR).

The LTMS EIS identified nine sites in the inner harbor where dredged material would be deposited: Areas 12A, 12B/13A, 13B, 14A, 14B, Jones/Oysterbed Island, 2A, and 1N. DMCA 1N and portions of DMCA 2A are located in Georgia and are owned by the USFWS and are part of the Savannah National Wildlife Refuge. The remaining areas are located in South Carolina and were owned by the Georgia Department of Transportation. Figure 1 is a location map of the DMCAs for the Savannah Harbor Navigation Project. Since the EIS was prepared, ownership of DMCAs 14A and 14B was transferred and they are now jointly owned by the Georgia and South Carolina State Port Authorities.

Disposal area activities in all the sites were covered in the LTMS EIS. Some of those actions (including the diking of a new area) would cause environmental impacts and the LTMS EIS contained a mitigation plan to compensate for those impacts. One of the mitigation features is creation and maintenance of wildlife habitat within the DMCAs. The habitats included bare ground islands for use by colonial nesting

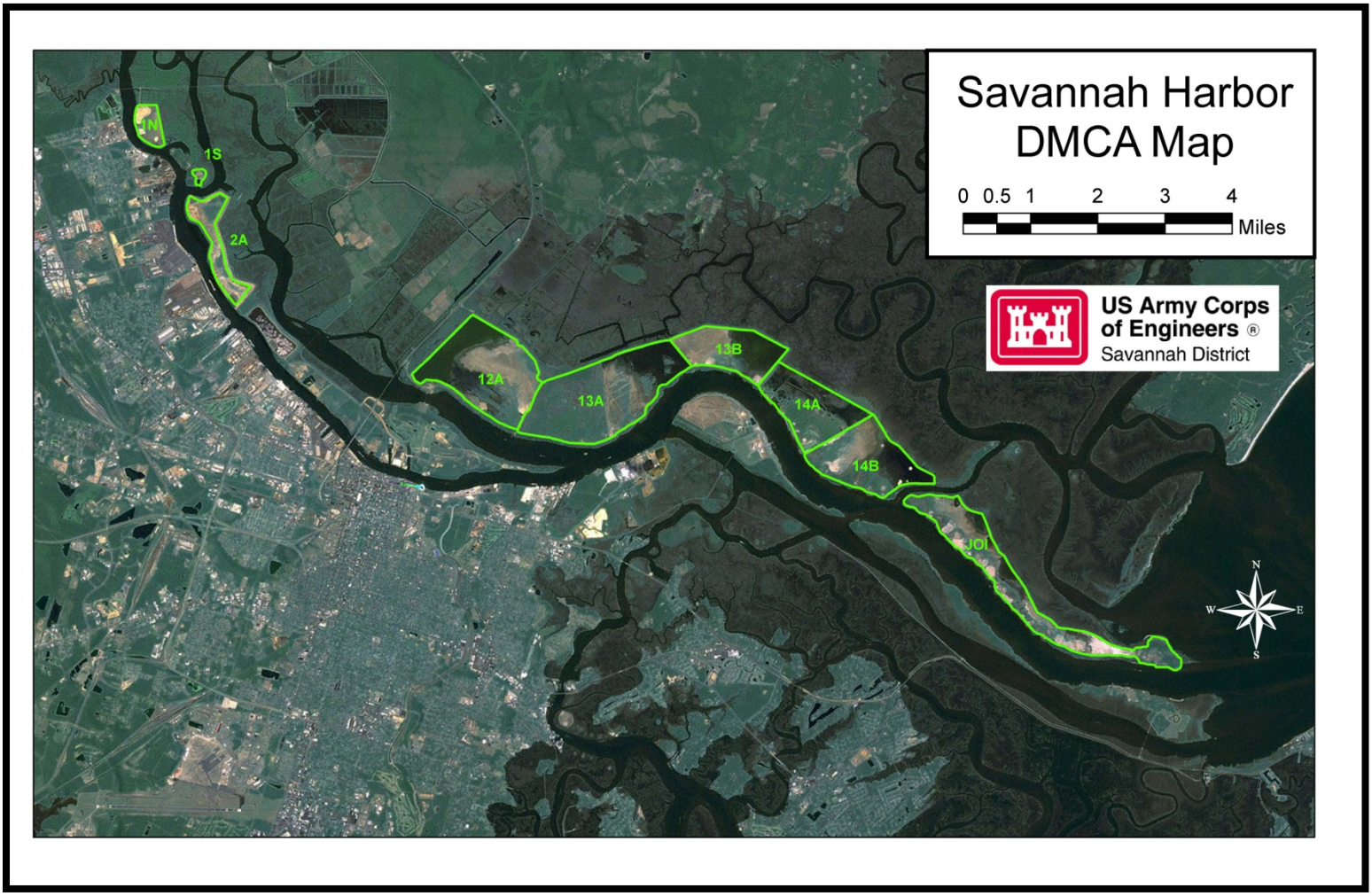


Figure 1: Location map of Savannah Harbor Navigation Project DMCAs.

birds, as well as shallow water areas for foraging/roosting by waterfowl and shorebirds. The LTMS identified these activities as being performed in seven of the DMCAs. DMCAs 1N and 2A were not included in the LTMS wildlife mitigation plan. These areas were identified as only receiving deposited dredged material.

Since the late 1990s, the Corps has not regularly used DMCA 1N for sediment placement. The site has become overgrown, the dikes and weirs have fallen into disrepair, and the USFWS now uses it to store vehicles and heavy equipment. DMCA 2A was identified as being nearly full and close to the end of its useful life. The Corps has continued to place small amounts of sediment into DMCA 2A each year.

1.2 Existing Project

The LTMS EIS describes DMCA 1N as having an area of 130 acres. It could reasonably receive Operations and Maintenance (O&M) dredged sediments from channel Stations 103+000 to 112+500 (the upstream end of the navigation channel, river mile 19.5 to 21.3). Sediment in this reach generally consists of poorly graded sands with some sandy silts. The center coordinates for DMCA 1N are approximately 32.157307°N and -81.148998°W.

The Corps deposited dredged material at the site until 1999 when silt was pumped onto the site for several days. The quantity of silt placed upon the site was unacceptable to the USFWS, as it degraded wildlife habitats occurring within the site. Invasive species, such as salt cedar and phragmites, began to colonize in the area, further degrading the site. Prior to the degradation of the area, the site functioned as a bird management area for USFWS.

A third party constructed a nesting island within the site to provide rare nesting habitat for bare ground nesting birds such as Least Terns. The island has not been maintained since the Corps discontinued using the DMCA in 1999. The site no longer provides bird nesting habitat.

Since 1999 the USFWS has occasionally used the area for sand mining. An additional function of the site has been for storage of old USFWS equipment and vehicles. Figure 2 is a recent picture of the site.

Figure 2. Typical condition of DMCA 1N inside the perimeter dike.

1.3 Purpose and Need

The Corps is evaluating restoring DMCA 1N to provide additional capacity for deposition of dredged material from the Savannah Harbor Navigation Project and enhance wildlife habitat in the area. No additional environmental approvals are needed to make the area functional for sediment deposition, as those construction activities would be performed as described in the 1996 LTMS EIS. The Corps has worked with the USFWS staff of the Savannah National Wildlife Refuge (SNWR) and they support the proposed rehabilitation of the site and enhancement of wildlife habitat.

1.4 Proposed Action

The Corps is proposing to create and maintain wildlife habitats within DMCA 1N and count those habitats as mitigation in the same manner as it does for the other DMCAs identified in the LTMS EIS. The method for calculating mitigation credits as described in the LTMS is expressed in habitat units (HUs) defined as the value of an area for wildlife function. To obtain this value the area available for wildlife use (in acres) is multiplied by the duration available (in months) and then multiplied by a habitat factor (based on the quality or scarcity of the habitat within the region). Habitat factors are defined in mitigation plan section 7 of the LTMS. A factor of 1 was applied to bare ground nesting (not isolated islands), wetland nesting, shorebird feeding and waterfowl feeding. A factor of 2.5 was applied to small isolated islands within the DMCAs. Table 1 shows the maximum number of bird habitat units that could reasonably be produced by creating wildlife habitats in DMCA 1N. The table lists the potential maximum mitigation credits; the actual creditable acreages will be calculated based on their actual occurrence and usage in a given month. Table 1 assumes that the western side of 1N may have shorebird feeding habitat available for 3 months out of the year (3/12 = 0.25) versus the eastern side which is assumed to have shorebird feeding habitats available 12 months out of the year (12/12 = 1). The bird island is assumed to be available and surrounded by water for the entire nesting season, 4 months (4/4 = 1). Table 2 details the mitigation required annually by the Savannah Harbor Navigation Project for various habitats.

Table 1. Potential Mitigation Credits at DMCA 1N

Habitat Types	Acres available for potential mitigation credits	Utilization (months)	Habitat Factor	Calculated Value (HU)
Western Side				
Damp Mud/Shallow Water (Shorebird feeding)	60	3	1	15
Shallow Water (waterfowl feeding)	60	2	1	10
Eastern Side				
Damp Mud/ Shallow Water (shorebird feeding)	60	12	1	60
Shallow Water (waterfowl feeding)	60	12	1	60
Bird Island (bare ground nesting)	2	4	2.5	5
Total Maximum Credits*				150

*** Mitigation credits will be subject to actual documented usage and habitat availability as described in the LTMS EIS.**

Table 2. Annual Required Mitigation Credits

Habitat Types	Habitat Units
Bare ground nesting	74
Waterfowl feeding	505
Shorebird feeding	740
Wetland nesting	450

DMCA 2A is the only other DMCA in the upper harbor, and as mentioned above, it is reaching the end of its useful life. Restoring DMCA 1N would advance the mission of both the Corps and USFWS by providing additional dredged material placement capacity while lowering operating costs and providing valuable wildlife habitat and recreational opportunities. Currently, it costs approximately $12 per cubic yard to pump material from the upper harbor reaches downstream to DMCA 12A (the next available

DMCA) compared to $3.40 per cubic yard to pump the same material into DMCA 1N. Shortening the pumping distance and decreasing the number of booster pumps is expected to result in a savings to the government of $8.60 per cubic yard.

2. Alternatives

2.1 Alternative 1: Without Project Condition/No Action Alternative

For this project, the Without Project condition alternative (Alternative 1) is defined as no rehabilitation of DMCA 1N. Under this alternative the site would remain in its current state and used for sand mining (borrow for road construction), equipment storage, and undisturbed areas would continue to support large amounts of invasive vegetation. The site would continue in its dysfunctional state and not be suitable for dredged material placement, nor would it provide benefit to wildlife, particularly migratory birds.

2.2 Alternative 2

The rehabilitation of DMCA 1N with its wildlife habitat features, is defined as Alternative 2. The proposed project design would affect approximately 120 acres covering the interior of the area and the surrounding dikes. The perimeter dike would be raised to an elevation of 26 feet above Mean Lower Low Water (MLLW). The existing access road from Georgia Highway 25 would be repaired if damaged by equipment accessing the site during the project. Three existing pipe ramps will be repaired. During the period of disuse the ramps have eroded and become overgrown with vegetation. In order to provide emergency vehicle access after project completion a ramp will be built connecting the access road with the DMCA. The ramp is approximately 160 feet in length and 16 feet in width will extend from the raised dike down to the existing driveway. The length of 160 feet is to provide a flat enough slope for fire trucks, ambulances, etc. to access the area since it will be occasionally open to the public. No impacts to any surrounding marsh or wetlands are anticipated. The existing discharge weir structures will be replaced and remain in their present locations. The weir design is similar to that at the other DMCAs (12A-14B) consisting of HDPE half-pipe and galvanized steel risers, fiberglass grated steel catwalks, and composite weir boards. This alternative may also include construction of a cross-dike in the middle of the site to allow better long term water management options. The cross-dike would be built to elevation 24 feet MLLW and include weirs to allow the ponding and release of water to the eastern side after sufficient settling of fines has occurred. A 2-acre island would be constructed to provide habitat for colonial nesting birds such as least terns, Wilson's plovers, sandwich terns, and gull-billed terns. This island would be kept in a bare ground state to mimic isolated beach nesting sites which have become rare due to development. The island is intended to be surrounded by water during nesting season (1 April to 30 September) to reduce predation. The proposed design is shown in Figure 3. Figure 4 shows a typical cross-section of the rehabilitated weir structures.

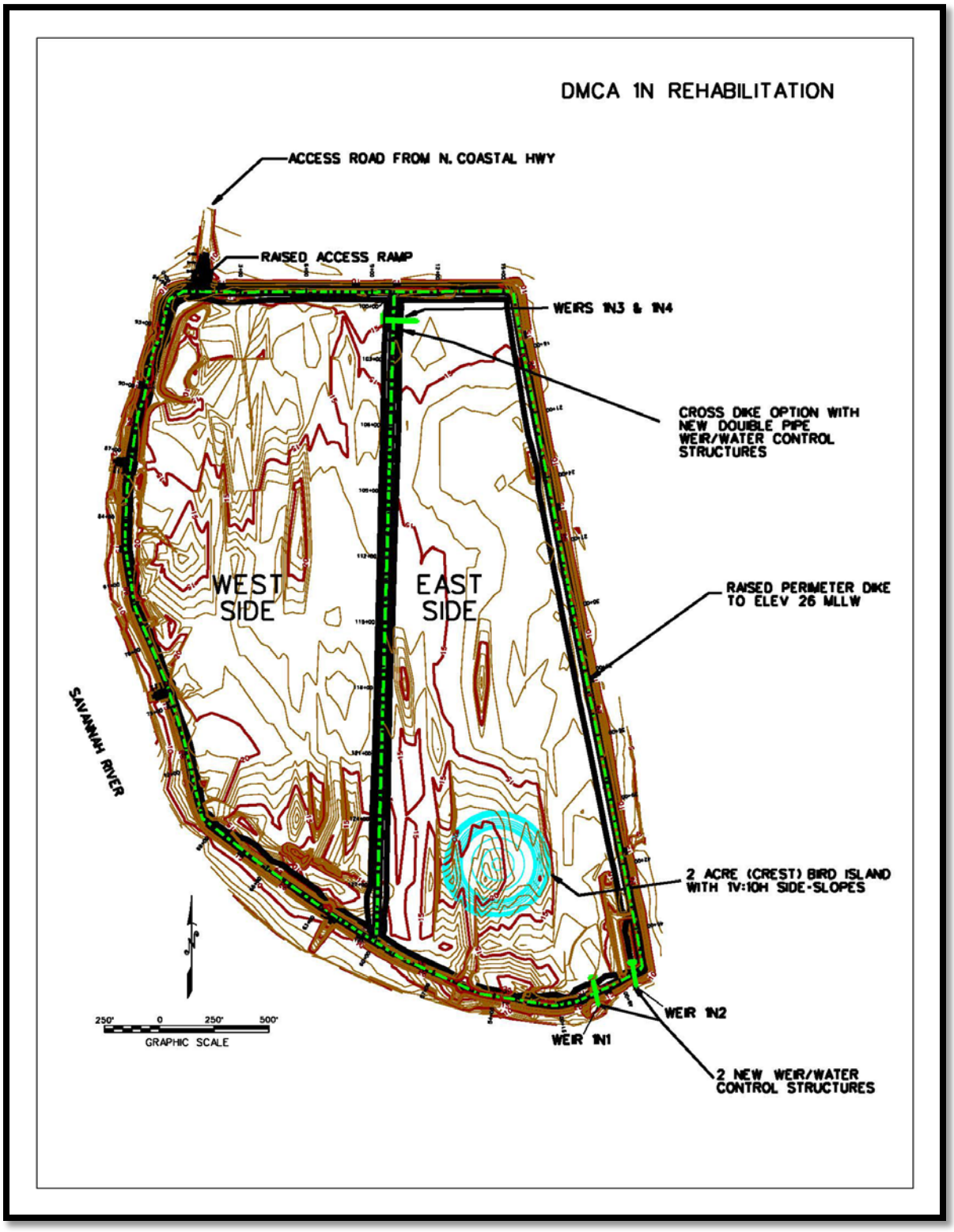


Figure 3: Alternative 2, proposed design for rehabilitation of DMCA 1N.

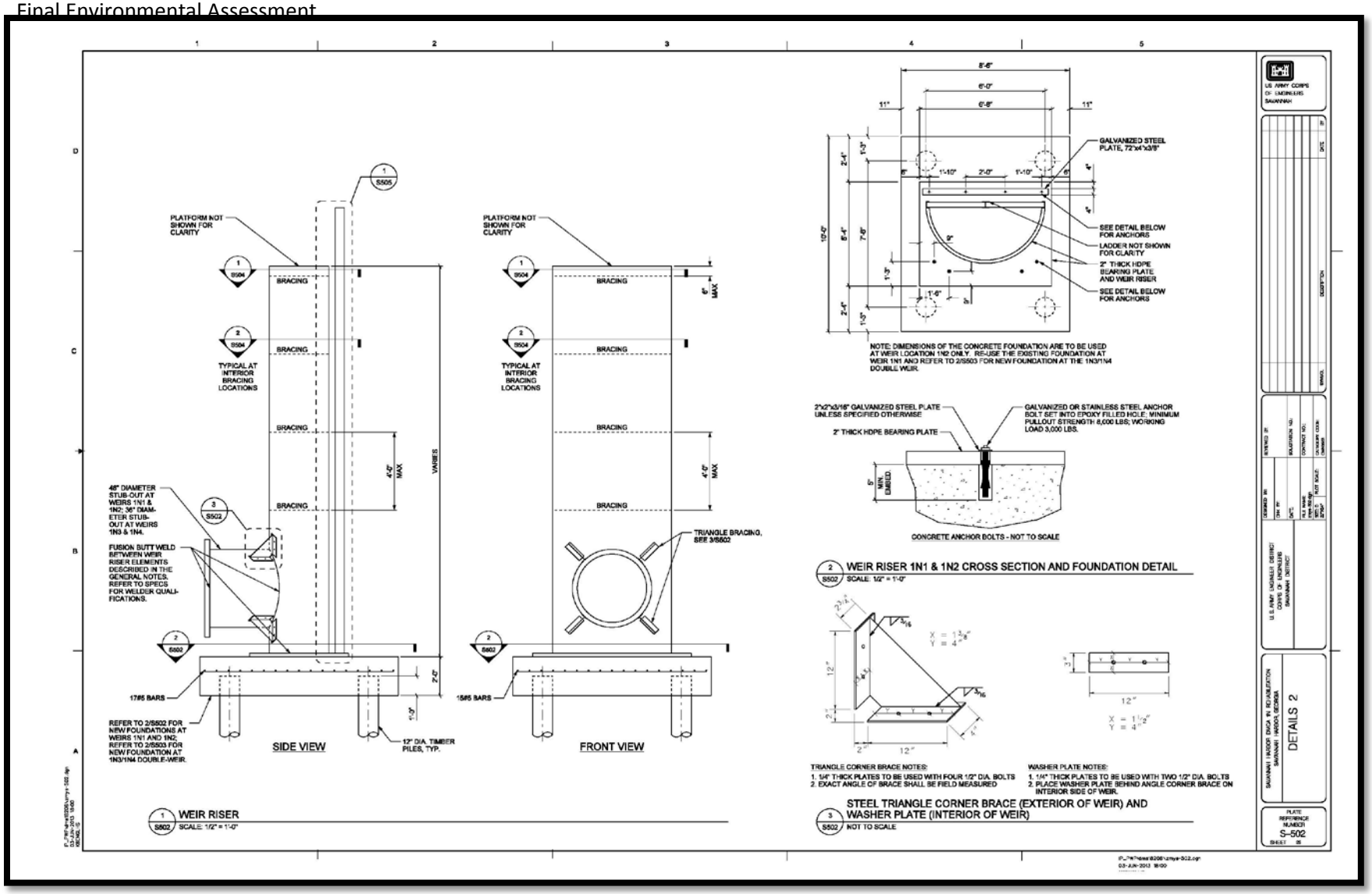


Figure 4. Typical cross-section of weir.

No additional environmental approvals are needed for the intended construction activities, which would be performed as described in the 1996 EIS. However, if the proposed action is approved, the Corps would also construct and maintain features within the DMCA that would provide wildlife habitats. The Corps would count those wildlife habitats as mitigation credits in the same manner as in the DMCAs in South Carolina. No wetland impacts are anticipated as a result of the project since all work would be performed within the footprint of the existing DMCA 1N. Discharge of water through the weirs into the Savannah River will be tested to ensure compliance with the Georgia water quality certifications, as described in the LTMS EIS. Savannah District and the USFWS are presently developing a Memorandum of Understanding (MOU) to describe each agency's management objectives and responsibilities for operating the site. A management plan is also being developed in collaboration with USFWS to describe ways in which the area can be more appropriately and efficiently operated to serve as a containment area and wildlife habitat after construction is completed. This document will be collaboratively updated as appropriate and contain no legal binding actions.

2.3 Alternative Selection and Recommendation

The recommended plan is Alternative 2 – rehabilitation of DMCA 1N. Restoring DMCA 1N would provide additional dredged material placement capacity while lowering operating costs and provide valuable wildlife habitat and recreational opportunities to the public. The Corps estimated the cost to rehabilitate Area 1N to be 1.5 million dollars. The annual Operations and Maintenance (O&M) is estimated to be $20,000 for this alternative. Wildlife benefits will be generated by the habitats created within the site.

3. Affected Environment

The environment to be impacted consists of an upland dredged material containment area that has been in disuse since 1999 and become overgrown with a variety of grasses, weeds, trees, shrubs, and other vegetation. There are small pockets of standing water after rainfall events that support some wetland vegetation. Two derelict wooden weirs and associated outfall pipes are present. A gravel/sand access road connects Highway 25 to the area. Inside elevations vary from 14 to 10 feet MLLW. Old USFWS equipment, vehicles, and construction debris were being stored on site but have now been disposed of appropriately.

Wildlife observed at Area 1N includes fire ants, deer, snakes, small songbirds, birds of prey, and migratory birds. The SNWR and adjacent private lands are home to a large variety of wildlife including ducks, geese, wading birds, shorebirds and several endangered, rare, or threatened species such as Wood Storks, manatees, Least Terns, Purple Gallinules, alligators, Atlantic and Shortnose sturgeon. The SNWR also provides nesting and foraging areas for Wood Ducks, Great Horned Owls, Bald Eagles, Osprey, Pintail Ducks, Mississippi and Swallow-tailed Kites and several other species. The SNWR impoundments are considered managed wetlands, providing freshwater wetland functions to migrating waterfowl.

Table 3. Resource Impacts for Each Alternative

Resource Impacts	Alternative 1- No Action	Alternative 2- Rehabilitation
Economic	O&M dredging costs of $12 per cubic yard.	$1.5 million initial cost to rehabilitate DMCA 1N. O&M dredging cost savings of $8.40 per cubic yard.
Real Estate	No impacts	Access and staging areas would be on government-owned land by permit from USFWS.
Water Quality	No impact	Possible temporary minor impacts to water quality during construction.
Hydrology	No impact	Minor impact during times of water release and pumping activity.
Vegetation	Continued growth of native and invasive vegetation	Implementation of invasive vegetation prevention and elimination plan.
Wildlife	No impact	Creation of habitat for shorebirds, waterfowl, colonial nesting birds and aquatic prey food base. Some temporary disturbance to land species would be expected during construction.
Mitigation Requirements	No impact	Additional DMCA available to provide wildlife habitats and receive wildlife mitigation credits.
Recreation	No impacts	Increase in recreation benefits by group hunts, wildlife viewing, and outreach events.
Geomorphology	No impact	Temporary changes depending on types of dredged material deposited into the DMCA.

3.1 Geology and Sediments

The project area is in the Coastal Plain and consists of a mixture of uplands and wetlands. Sediments are a mixture of silts, clays, sands, kaolin, and calcareous sediments (http://www.gaepd.org/Files_PDF/plans/savannah/sav2.pdf).

3.2 Water Resources

DMCA 1N is located on the Savannah River at approximately river mile 21 and is considered class SA waters, coastal fishing. Several industries are present along the river, including the Weyerhaeuser Company Paper Mill in Port Wentworth which is located across from 1N. The majority of the lands located east of Area 1N are either SNWR impoundments or Corps DMCAs and consist of diked impoundments that are primarily used for dredged material deposition and waterfowl management. The project area is within the Lower Savannah River Watershed, Hydrologic Unit Code 3060109.

3.2.1 Hydrology

There is no water flow on the site other than rainwater. The SNWR typically prefers to have an area flooded year round to manage for various bird species. If rehabilitation occurs, the design will allow for various levels of water to be held throughout the year. Temporary impacts will occur to the Savannah River during times of dredging or water release through the weirs.

3.2.2 Water Supply

Water supply to Area 1N will depend on dredging cycles and rainfall. However a hydraulic pump may be used to provide water in the event dredging does not occur and the Corps uses the area for wildlife habitat and mitigation credits.

3.2.3 Aquatic Resources

There are small ephemeral rainwater pools present on the site. No survey of aquatic resources has been conducted but it is likely any species occurring would be those typical of the coastal plain ephemeral pools such as tadpoles, reptiles and aquatic invertebrates.

3.2.4 Wetlands and Floodplains

The project area contains 130 acres of uplands surrounded by tidal brackish marsh. No floodplains exist on the site and no wetland impacts are anticipated as part of the proposed alternative.

3.2.5 Ground Water

The project area is underlain by a surficial aquifer and the Upper Floridan aquifer. No groundwater impacts are anticipated as part of the proposed alternative.

3.3 Hazardous and Toxic Waste

The Corps collected soil samples from the interior of Area 1N to assess the possible presence of contaminants. Those samples were evaluated for metals, Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated biphenyls (PCBs), volatile organic hydrocarbons (VOCs), semi-VOCs, and pesticides. Some samples were found to contain low levels of acetone and other PAHs. Very few samples were over the Effects Range Low (ERL) levels and none were close to the Effects Range Median levels (ERM). To avoid exposure of the PAHs, the interior area would be cleared with the bottom elevation varying from approximately 10 to 20 feet Mean Lower Low Water (MLLW) avoiding exposure of sediments containing contaminants. The sampling results and summary are included as Appendix A.

3.4 Air Quality and Noise

The project area is located in an attainment area as defined by the Clean Air Act. Ambient noise levels in Chatham County are low to moderate. This site would typically have lower noise levels due to the remote location. An increase in noise would occur during construction but impacts would be temporary.

3.5 Threatened and Endangered Species

A variety of protected species use the SNWR for foraging. Endangered species include the Wood Stork (*Mycteria americana*) and state-listed Swallow-tailed Kite (*Elanoides forficatus*). Threatened species include state-listed Least Terns (*Sterna antillarum*). Many species of colonially nesting wading birds are also found foraging and roosting in the area. These include the Black-crowned Night Heron (*Nycticorax nycticorax*, Highest Priority), Glossy Ibis (*Plegadis falcinellus*, Species of Concern), Little Blue Heron (*Egretta caerulea*, Species of Concern), Snowy Egret (*Egretta thula*, Highest Priority), Tricolored Heron (*Egretta tricolor*, Highest Priority), White Ibis (*Eudocimus albus*, Highest Priority), Yellow-crowned Night Heron (*Nyctanassa violacea*, Highest Priority). Marsh birds listed as Species of Concern in the area include Common (Wilson's) Snipe (*Gallinago gallinagoI)*, American Bittern (*Botaurus lentiginosus*), Least Bittern (*Ixobrychus exilis*), Purple Gallinule (*Porphyrula martinica*), Black Rail (*Laterallus jamaicensis*), King Rail (*Rallus elegansI*), Pied-billed Grebe (*Podilymbus podiceps*, breeding populations), and American Coot (*Fulica americana*, breeding populations). Bald Eagles (*Haliaeetus leucocephalus*) which are protected under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act also forage in the general area. Other endangered species occurring near but not inside the project area are the West Indian Manatee (*Trichechus manatus*), Shortnose and Atlantic Sturgeon (*Acipenser brevirostrum* and *Acipenser oxyrinchus*).

3.6 Cultural Resources

There are no known archaeological or architectural resources in the project area, including the access road and construction staging area. Several cultural resources investigations have been conducted in the vicinity of DMCA 1N, however, no investigations have been conducted within the project area itself (James et al. 2013, Marrinan 1979).

3.7 Socio-Economic Resources

The only socio-economic resources currently provided by the site are sand mining sales which go into the US Treasury. The current site is not open for public recreation or access. If the rehabilitation occurs the site would be of use to the public and provide some revenue to USFWS from public hunts and special outreach programs. Continuation of the present dredged material disposal practices results in high O&M dredging costs of roughly $12 per cubic yard.

3.8 Real Estate

Real estate interests needed to perform the rehabilitation were obtained as part of the perpetual easements obtained at the time the Special Use Permit was signed.

3.9 Safety

Currently public access is not allowed at DMCA 1N. If rehabilitation occurs, public access will not be allowed during construction. Public safety after rehabilitation will be the responsibility of the SNWR USFWS staff.

3.10 Environmental Justice

The potential project complies with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations". Either alternative would not cause disproportionally high adverse human health or environmental effects on minorities or children. Rehabilitation of Area 1N may result in increased opportunities for hunting for disabled persons.

3.11 Special Resources of Concern

The Savannah National Wildlife Refuge (SNWR) Laurel Hill Wildlife Drive is adjacent to the project area. The primary purpose of the SNWR is to provide habitat for wintering waterfowl and other migratory birds. The SNWR consists of 29,175 acres of palustrine forested wetlands, palustrine and estuarine emergent wetlands, palustrine scrub-shrub wetlands, riverine wetlands, diked waterfowl impoundments (managed wetlands), and uplands. The SNWR staff supports rehabilitation of Area 1N and has signed an MOU with the Corps which outlines each agency's responsibilities.

3.12 Wildlife Resources

DMCA 1N has become overgrown with a variety of grasses, weeds, trees, shrubs, and other vegetation. Wildlife observed at the site includes fire ants, deer, snakes, small songbirds, birds of prey, and migratory birds. The site provides minimal wildlife habitat and does not substantially support the goals of the SNWR.

The SNWR and adjacent private lands are home to a large variety of wildlife including ducks, geese, wading birds, shorebirds and several endangered, rare, or threatened species such as Wood Storks, manatees, Least Terns, Purple Gallinules, alligators, Atlantic and Shortnose sturgeon. The SNWR also provides nesting and foraging areas for Wood Ducks, Great Horned Owls, Bald Eagles, Osprey, Pintail Ducks, Mississippi and Swallow-tailed Kites and several other species. The SNWR impoundments are considered managed wetlands, providing freshwater wetland functions to migrating waterfowl.

4. Environmental Impacts

This section of the EA addresses the environmental impacts of both the Without Project condition Alternative (Alternative 1) and the recommended alternative (Alternative 2).

4.1 Hydrology

If the Without Project Condition Alternative is chosen, no hydrological changes will occur.

The recommended alternative (Alternative 2) would restore Area 1N for the purposes of dredged material deposition. The plan would also create beneficial wildlife habitat to be included in the LTMS mitigation plan. Minor hydrology changes would occur throughout the year during routine dredging operations involving deposition and release of water and sediments. All discharges would be monitored for water quality certification compliance.

4.2 Water Supply

Neither the Without Project condition nor the recommended alternative would impact water supplies.

4.3 Groundwater

Neither the Without Project condition nor the recommended alternative would impact groundwater resources.

4.4 Hazardous and Toxic Waste

The Without Project condition could potentially have impacts from hazardous or toxic wastes if the site was utilized for abandoned vehicles/equipment that may degrade in place.

The recommended alternative (Alternative 2) would be constructed in such a manner to not disturb sediments at the site containing PAHs over the ERL levels, therefore not having an effect on hazardous or toxic wastes. The SNWR staff has removed derelict vehicles/equipment, thereby eliminating any possible future hazardous waste concerns related to metal corrosion, spill of gasoline, oil, hydraulic, cooling, or other associated fluids.

4.5 Air Quality and Noise

The Without Project condition would not impact air quality or noise.

The recommended alternative (Alternative 2) would have only short term, minor impacts to air quality and noise during construction activities. Any burning of vegetation on site would require a burn permit, the use of an air curtain, and would be conducted in compliance with all federal and state regulations.

4.6 Aquatic Resources

The Without Project condition would not impact aquatic resources.

The recommended alternative (Alternative 2) would create aquatic resources on the site by pumping in nutrients, water, and macroinvertebrates that would be used as prey for birds and other wildlife.

4.7 Wetlands and Floodplains

The Without Project condition alternative would have no effect on wetlands or floodplains.

The recommended alternative (Alternative 2) would create approximately 120 acres of managed wetted habitat.

4.8 Threatened and Endangered Species

The Without Project is not likely to adversely affect threatened or endangered species. No known threatened or endangered species have been recorded at the DMCA in recent years.

The proposed action (Alternative 2) is likely to restore/create habitat for threatened or endangered species such as the Wood stork, swallow-tailed kite, and least tern.

4.9 Cultural Resources

Neither the Without Project condition nor proposed action (Alternative 2) is likely to affect historic properties, as there are none recorded within the proposed project area.

For Alternative 2 the work will be conducted within the original construction footprint of the DMCA. The access road from Highway 17/US-25 was constructed in 1973, diking occurred in 1979, and clearing and construction of weirs in 1989.

If further analysis reveals that any repairs or removal cannot be performed without creating ground disturbance outside of the existing construction footprint, the Corps will examine the area and initiate further consultation under the National Historic Preservation Act (P.L. 89-665, as amended) and 36 CFR Part 800.

A construction staging area and access road will be necessary for Alternative 2. An existing unpaved road will be used to access the project site. The proposed construction staging area (approximately 1 acre) is adjacent to the road in an area relatively clear of vegetation. At this time it is assumed that no ground-disturbing activities will be necessary in either of these areas; only cutting of low hanging branches will be necessary. If further analysis reveals that vegetation clearing or grubbing is required, the Corps will examine the area and initiate further consultation under the National Historic Preservation Act (P.L. 89-665, as amended) and 36 CFR Part 800.

4.10 Socio-Economic Resources

Socio-Economic impacts are not expected as part of the Without Project condition alternative.

The recommended alternative (Alternative 2) will increase socio-economic resources by creating a public recreation site and allow for cost-savings during O&M dredging operations by saving $8.60 per cubic yard.

4.11 Safety

Public safety will not be affected by the Without Project condition.

The recommended alternative will create a public access point to DMCA 1N that will be monitored and controlled by USFWS/SNWR personnel.

DMCA 1N, similar to DMCA 2A, is within 4 miles of the Savannah-Hilton Head International airport. To avoid the creation of a potential hazard of bird interactions with aviation and the resulting threat to human safety, the Corps has coordinated with the Federal Aviation Administration (FAA) and USFWS to address potential concerns and minimize risks resulting from the usage of the site by birds. DMCA 1N is located on roughly a 45 degree angle from the two major runways at the Savannah/Hilton Head International Airport. As a result, planes do not regularly fly over the site. In addition, the birds expected to use the site are relatively small in size and are not known to present a major threat to the jet planes that call at this airport. In summary, Savannah District does not believe the proposed use of DMCA 1N for wildlife purposes would present a public safety concern. FAA has provided comments (appendix B) on the potential for increased safety risks due to the proposed project. The District has prepared a Wildlife Hazard Management Plan (appendix C) to address FAA concerns and will continue coordination with FAA to minimize wildlife and aircraft interaction potential. A Wildlife Hazard Assessment may be developed by a USDA-WS biologist.

4.12 Special Resources of Concern

The Without Project condition would have no impacts to the Savannah National Wildlife Refuge.

Alternative 2 (rehabilitation of DMCA 1N) would create additional opportunities for public usage and recreational benefits.

4.13 Wildlife Resources

The Without Project Condition would have no impacts on wildlife. Existing resources at the site are upland trees, shrubs, and other plants. Existing habitat is mainly used by small birds, reptiles, insects, and mammals for foraging and loafing.

Alternative 2 has the potential for creating a variety of beneficial uses for rare or threatened avian species. As designed, up to 120 acres of DMCA 1N could hold some degree of water. Also included in the design is a 2-acre bird island for bare ground nesting seabirds. The island would be kept surrounded by water to encourage nesting by rare or threatened colonial seabirds and limit terrestrial predators. Deposition of dredged sediments could keep the area wet and supplied with nutrients and a prey base, thereby benefiting many bird species.

Wood storks have established a colony within approximately 4 miles from DMCA 1N (not within five miles of the Savannah HHI airport) and are often seen roosting and foraging in the adjacent impoundments. Swallow-tailed kites are regularly seen during their spring migration feeding and flying over the adjacent SNWR impoundments. Least terns have used the other Savannah Harbor DMCAs for foraging and nesting in areas where bird islands or bare sand mounds exist. Other rare species observed nesting on bare ground bird islands include Black skimmers, Wilson's plovers, and Gull-billed terns. Wading birds not listed as rare but known to use similar impoundments for nesting include Black-necked stilts, Anhingas, a variety of herons and egrets.

The USFWS has expressed a desire to manage the site to attract both migratory waterfowl and shorebirds. A large variety of waterfowl are present in adjacent impoundments. Examples of duck species includes Wood, Black-bellied whistling, Mallard, Mottled, Pintail, Gadwall, Northern Shoveler, Blue-winged Teal, Green-winged Teal, Canvasback, Ruddy, Ring-necked, Bufflehead, Scaup, Mergansers, and Redhead.

With implementation of Alternative 2, the SNWR would use DMCA 1N for public activities such as wildlife viewing, outreach and possibly mobility-impaired hunting. In collaboration with the Corps, the Refuge would manage water levels to create variable water levels within the site to attract different migratory bird species. Water could be raised in the fall and winter to attract waterfowl and lowered in the spring to attract shorebirds. The site may provide suitable nesting habitat for both waterfowl and shorebirds along the dikes or if a rookery habitat (small trees inundated with water) is present.

The proposed operation of DMCA 1N to provide habitat for birds (Alternative 2) would greatly enhance wildlife use of the site and make the property more useful in supporting the goals of the Savannah National Wildlife Refuge.

5. Cumulative Impacts

Cumulative effects are defined in 40 CFR 1508.7 as those effects that result from:

> *…the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

Cumulative environmental effects for the proposed project were assessed in accordance with guidance provided by the President's Council on Environmental Quality (CEQ).

All impacts on affected resources can be called cumulative. However, according to CEQ guidance, *"the role of the analyst is to narrow the focus of the cumulative effects analysis to important issues of national, regional, or local significance"* (CEQ 1997, p. 12). In addition to this relevancy criterion, only those resources expected to be directly or indirectly affected by the project as well as by other actions within the same geographic scope and time frame were chosen for the analysis. Based on these criteria, the following resources were identified as target resources for the cumulative effects analysis:

Items/Resources of concern to be examined for cumulative significant impacts

- Wetlands
- Water Quality
- Hazardous and Toxic Waste
- Aquatic Resources
- Threatened or Endangered Species
- Cultural Resources

- Special Resources of Concern

Resource Study Area: The study area in this EA for assessing cumulative effects on resources includes the SNWR, adjacent DMCAs 1S and 2A and water bodies including the Savannah River, Front River, Back River and the Kings Island Turning Basin.

5.1 Wetlands

Historical Context and Current Condition: Prior to harbor deepenings, the majority of the study area contained freshwater wetlands. Since the SNWR began operations in 1927, there have been four harbor deepening projects. In addition, the Sediment Control Works Project was constructed and placed into operation. The Savannah Harbor navigation channel was deepened to 30 feet in 1937, to 34 feet in 1958, to 38 feet in 1975, and to 42 feet in 1994. All of these deepening projects allowed saltwater to migrate farther upstream. Sea level rise has also occurred in the more than 250 years since the City of Savannah was founded in 1751.

Information supplied in the Fish and Wildlife Coordination Act Report, Savannah Harbor Expansion Project, January 2012 indicates that the freshwater interface has moved from near the City of Savannah (Mile 14 of Savannah Harbor) in 1940 (30-foot channel) to near the upstream limit of the project (Mile 21.3) just below the Georgia Highway 25 (Houlihan) Bridge (42-foot channel). Figure 5 taken from the January 2012 Fish and Wildlife Coordination Act Report, shows the historical change in the location of the freshwater interface from 1875 to the present.

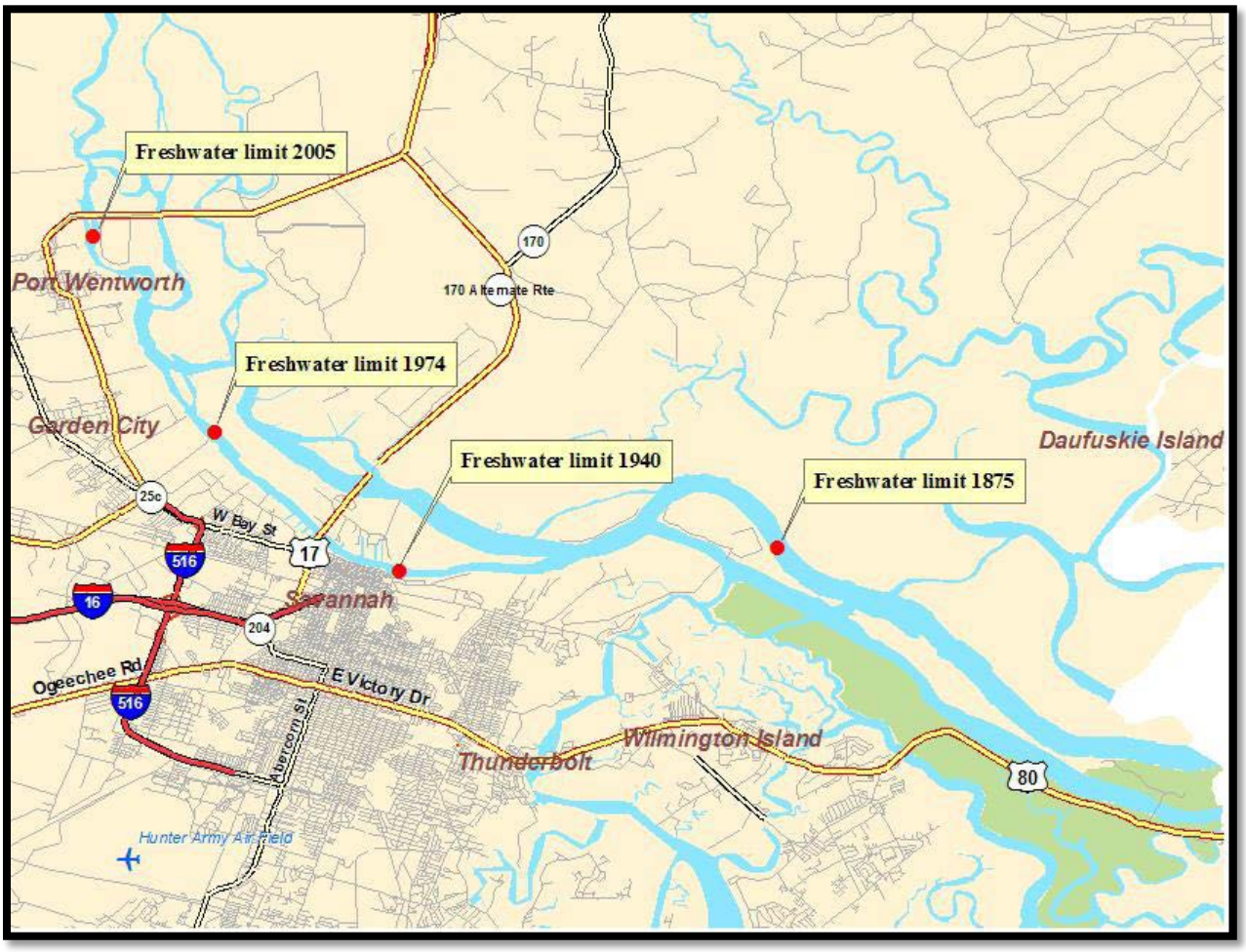


Figure 5. Historical freshwater interface in Savannah Harbor.

In addition to the harbor deepening projects described above, the Sediment Control Works Project became operational in 1977 just after completion of the 38-foot channel deepening. The Sediment Control Works Project consisted of a Tidegate Structure across Back River and a Sediment Basin downstream of the Tidegate. The project also included a drainage canal (New Cut) across Argyle Island to increase velocities in the navigation channel and thus reduce shoaling. This project was designed to concentrate sedimentation outside the navigation channel in a location (Sediment Basin) close to dredged material disposal areas.

A Freshwater Control System (FWCS) was designed to mitigate for increased salinity in the area of the SNWR. The original FWCS included channel modifications in McCoys Cut, Middle River and Little Back River, a main water supply structure off Little Back River, water control structures and supply canals in the Refuge, and a supply canal to the adjacent private landowners. At the request of the USFWS, one component of the system (cutting off a bend in Little Back River), was not constructed. System maintenance problems caused by higher than anticipated salinity levels in Little Back River resulted in detrimental impacts to the SNWR. Personnel at the SNWR were unable to withdraw freshwater (0.5 or less ppt salinity) during periods of low flows and high tides. Periods of low flows in the Savannah River

normally occur during the fall months when the SNWR starts filling their impoundments. The USFWS subsequently retrofitted water control structures that rusted and failed. The Corps completed rehabilitation of the water control structures in the FWCS in 2012.

In addition to problems with the FWCS, the USFWS identified impacts from high salinity levels in Little Back River on freshwater marsh and striped bass habitat. As a result, the Tidegate Structure was taken out of operation in March 1991 and New Cut was closed in March 1992 to reduce salinity levels in the vicinity of the SNWR. Taking the Tidegate Structure out of operation and closing New Cut helped to mitigate any further increases in upstream salinity levels from construction of the 42-foot channel, which was completed in 1994.

Present Actions/Stresses: In 1973 a dike raising occurred at DMCA 2A and the access road was constructed to Area 1N. DMCA 1N was diked in 1979. Dike reconstruction was conducted at Area 2A in 1984 and another dike raising in 1988 to elevation 35 feet MLW. A finger dike was constructed at Area 1N in 1989 and weirs were built in 1992 and 2000. The Kings Island Turning Basin was constructed in 1981.

Summary of Direct and Indirect Effects: The Without Project condition alternative would have no direct or indirect effects on the project area.

The proposed action would directly impact the area by creating additional wildlife habitats (shallow wetted areas).

Other Reasonably Foreseeable Effects: The recommended alternative (Alternative 2) would be expected to require minimal structural maintenance as the structural features would be designed to last at least 50 years. Increased operational activities would be required to produce the proposed wildlife habitats at the site. Increased bare ground nesting success of endangered seabirds could occur and overall improvements to the LTMS mitigation plan should result from the creation of additional wildlife habitats.

Results of the Cumulative Effects Analysis: There appear to be no adverse incremental effects on wetlands resulting from the rehabilitation of DMCA 1N. The proposed action would not contribute to cumulative adverse effects.

5.2 Water Quality

Historical Context and Current Condition: The SNWR was established in 1927 to serve as a preserve and breeding ground for native birds. Most of the area consisted of rice fields and rice trunk levees. Historically, the Refuge staff was able to supply freshwater from Little Back River to the area. Reports indicate that by 1940 the saltwater interface had moved significantly upstream, close to the SNWR. This migration was partially the result of Savannah Harbor deepenings (1937, 1958, 1975, 1994) and the associated Sediment Control Works projects (1977). The current conditions (repair of the FWCS on SNWR) are discussed in the wetlands section above.

Summary of Direct and Indirect Effects: The Without Project condition alternative would have no effect on water quality.

The proposed action would indirectly affect water quality by storing adjacent sediments and water from the navigation channel during dredging and associated water release events.

Other Reasonably Foreseeable Effects: A water quality monitoring plan is in place for all DMCAs and would be implemented at DMCA 1N to ensure compliance with state water quality criteria.

Results of the Cumulative Effects Analysis: There appear to be no adverse incremental effects on water quality resulting from the rehabilitation of Area 1N. The proposed action would not contribute to cumulative adverse effects.

5.3 Hazardous and Toxic Waste

The Corps collected sediment samples from the interior of Area 1N to assess the possible presence of contaminants. Those samples were evaluated for metals, PAHs, PCBs, VOCs, semi-VOCs, and pesticides. Some samples were found to contain low levels of acetone and other PAHs. Very few samples were over the Effects Range Low (ERL) levels and none were close to the Effects Range Median levels (ERM). Appendix A contains sampling results and analysis.

Summary of Direct and Indirect Effects: The Without Project condition alternative would have no effect on hazardous and toxic waste.

To avoid exposure of the PAHs, the interior area would be cleared with bottom elevations varying from approximately 10 to 20 feet Mean Lower Low Water (MLLW). The proposed action would directly affect hazardous and toxic waste by removing derelict equipment and debris from the site to create clean wildlife habitat.

Other Reasonably Foreseeable Effects: Periodic sampling for contaminants in the river sediments occurs to ensure the sediments are handled in an appropriate manner.

Results of the Cumulative Effects Analysis: There appear to be no adverse incremental effects on hazardous or toxic wastes resulting from the rehabilitation of DMCA 1N. The proposed action would not contribute to cumulative adverse effects.

5.4 Aquatic Resources

Historical Context and Current Condition: Historic species compositions are unknown, but likely similar to those present in surrounding brackish impoundments today. Current conditions support only upland species such as deer, snakes, small birds, insects, and small rodents or other mammals.

Summary of Direct and Indirect Effects: The Without Project condition alternative would have no direct affect on aquatic resources, as there is currently no aquatic habitat in the area.

The proposed action would directly impact aquatic resources by providing up to 120 acres of wetted area.

Other Reasonably Foreseeable Effects: If the recommended alternative is approved, temporary aquatic habitats would be produced within the DMCA.

Results of the Cumulative Effects Analysis: There appear to be no adverse incremental effects on aquatic resources resulting from the rehabilitation of DMCA 1N. The proposed action would not contribute to cumulative adverse effects.

5.5 Threatened and Endangered Species

Historical Context and Current Condition: Section 3.5 discusses the listed species or species of concern in the project area.

Summary of Direct and Indirect Effects: The Without Project condition alternative would have no affect on threatened or endangered species.

The proposed action would increase wildlife habitats in the project area. Listed species would be able to use the flooded portion of the site for foraging and the bird island for nesting/roosting.

Other Reasonably Foreseeable Effects: If the recommended alternative is approved, the Savannah Harbor Navigation Project would receive one more DMCA in which to provide wildlife habitat and receive mitigation credits. The SNWR would increase their public usage and wildlife management acreage.

Results of the Cumulative Effects Analysis: There appear to be no adverse incremental effects on threatened, endangered, or species of concern resulting from the rehabilitation of DMCA 1N. The proposed action would not contribute to cumulative adverse effects.

5.6 Cultural Resources

Summary of Direct and Indirect Effects: There are no anticipated effects to cultural or archaeological resources from either alternative, as there are no recorded resources in the action area. If any cultural or archaeological resources are discovered during construction, work will cease and the appropriate agencies notified.

Other Reasonably Foreseeable Effects: It is unlikely any unknown cultural or archaeological resources would be discovered, but a protection plan will be in place, should any be encountered.

Results of the Cumulative Effects Analysis: Because the proposed project is not likely to adversely affect cultural resources, there would be no incremental effects of the project that would contribute to adverse cumulative impacts on cultural resources.

5.7 Special Resources of Concern

Summary of Direct and Indirect Effects: The Without Project condition alternative would have no impact to the Refuge.

The proposed action would restore up to 120 acres of aquatic habitats for wildlife. No direct or indirect effects would be expected during construction, as the area is not being used for any public access or management activity. Other effects include removal of invasive vegetation.

The Savannah National Wildlife Refuge supports the proposed rehabilitation of the site with its additional wildlife habitats. They would like the site to provide more benefits to wildlife than it does in its present state. In order to minimize potential impacts to aviation safety, coordination with the FAA is being conducted to outline strategies for minimizing these risks.

Other Reasonably Foreseeable Effects: If the proposed alternative is approved, it will be used to provide an additional site to mitigate for authorized impacts from operation of the Savannah Harbor Navigation Project.

Results of the Cumulative Effects Analysis: There appear to be no adverse incremental effects on the Refuge resulting from the rehabilitation of DMCA 1N. The proposed action would not contribute to cumulative adverse effects.

6. Compliance with Environmental Requirements

Except where noted and described below, the Corps is not requesting additional environmental approvals for the proposed action, as the activities will be performed as described in the 1996 LTMS EIS. The Corps is seeking concurrence to add DMCA 1N to the existing wildlife mitigation plan as described in the 1996 LTMS EIS.

Table 4: Environmental Permits and Approvals

Federal Policy/Statute	Status	NEPA Coordination Timeline
Anadromous Fish Conservation Act, 16 U.S.C. 757, et seq.	The recommended alternative is in full compliance with all applicable policies.	Compliant per clearances in LTMS EIS.
Archaeological and Historic Preservation Act, as amended, 16 U.S.C. 469, et seq.	The recommended alternative is in full compliance with all applicable policies.	Compliant per clearances in LTMS EIS.
Clean Air Act, as amended, 42 U.S.C. 1857h-7, et seq.	EA will be coordinated with appropriate agencies for compliance concurrence.	Draft EA was sent to EPA for concurrence – no response.
Clean Water Act, as amended (Federal Water Pollution Control Act) 33 U.S.C. 1251, et seq.	EA will be coordinated with appropriate agencies for compliance concurrence.	Compliant per clearances in LTMS EIS.
Coastal Zone Management Act	EA will be coordinated with appropriate agencies for compliance concurrence.	Compliant per clearances in LTMS EIS.
Endangered Species Act	EA includes an assessment of impacts on T&E species. EA will be coordinated with appropriate agencies for compliance concurrence.	Draft EA has been coordinated with NMFS and USFWS –concurrence received.
Executive Orders 12898 and 13045 (Environmental Justice)	EA will be coordinated with appropriate agencies for concurrence of compliance.	Comments may be received up to 30 days after Public Notice is issued.
Erosion and Sedimentation Control Act	Erosion Control Plan would be developed before construction begins.	Coordination with Chatham County will be required prior to construction – 30 days.
Estuary Protection Act	EA will be coordinated with NMFS for compliance concurrence.	Compliant per clearances in LTMS EIS.
Federal Water Project Recreation Act	EA will be coordinated with appropriate agencies for compliance concurrence.	Compliant per clearances in LTMS EIS.
Fish and Wildlife Coordination Act	EA will be coordinated with appropriate agencies for N/A concurrence.	Draft EA has been coordinated with federal and state natural resource agencies for concurrence.
Fishery Conservation and Management Act of 1976	EA will be coordinated with appropriate agencies for compliance concurrence.	Compliant per clearances in LTMS EIS.
Floodplain Management	EA will be coordinated with appropriate agencies for compliance concurrence.	Compliant per clearances in LTMS EIS.
Magnuson-Stevens Act	No EFH analysis is required.	N/A
Migratory Bird Conservation Act of 1929	EA will be coordinated with appropriate agencies for compliance concurrence.	Compliant per clearances in LTMS EIS.
Migratory Bird Treaty Act of July 3, 1918	EA will be coordinated with appropriate agencies for compliance concurrence.	Compliant per clearances in LTMS EIS.
National Environmental Policy Act	Draft EA and FONSI will be coordinated with the public and natural resource agencies.	The Corps has prepared responses to the comments and made them available to the Corps decision-maker.
National Historic Preservation Act	EA will be coordinated with appropriate agencies for compliance concurrence.	Coordination with GA SHPO for no effects determination – 30 days. No response yet.
Protection of Wetlands	EA will be coordinated with appropriate agencies.	Compliant per clearances in LTMS EIS.
Stream Buffer Variance	EA will be coordinated with appropriate agencies and request for variance waiver obtained before construction begins.	Chatham County will be consulted and concur or non-concur that a variance is not required prior to construction – 30 days.
U.S. Department of Transportation Federal Aviation Administration	EA will be coordinated with appropriate agencies for compliance concurrence.	FAA and USDA have been consulted to determine if a Wildlife Hazard

Advisory Circular No: 150/5200-33B		Management Plan is appropriate. USDA is going to schedule a site visit. Other comments are included in appendix B.

6.1 Anadromous Fish Conservation Act

Anadromous fish species are not likely to be affected. The project will be conducted as approved in the 1996 LTMS EIS and is compliant with this Act.

6.2 Archaeological and Historic Preservation Act

No archaeological sites are known to occur in the area and will therefore not be affected. The project will be conducted as approved in the 1996 LTMS EIS and is compliant with this Act.

6.3 Clean Air Act of 1972

No permanent sources of air emissions are part of the Without Project condition alternative or the proposed plan. No air quality permits will be required for this project. The draft EA will be coordinated with USEPA, the public, and other agencies. Therefore, this project would comply with the Clean Air Act. A burn permit will be required for the proposed plan. This will be coordinated with the USFWS and appropriate state agencies.

6.4 Clean Water Act

Discharge of water through the weirs into the Savannah River will be tested to ensure compliance with the Georgia water quality certification, as described in the LTMS EIS. The Corps is requesting the location of mitigation credits be expanded to include DMCA 1N, a site that was not included in the 1996 mitigation plan. The Corps will operate DMCA 1N in the same manner it operates other DMCAs.

6.5 Coastal Zone Management Act

With the proposed action, the Corps would operate DMCA 1N in the same manner it operates other DMCAs. As the Savannah Harbor Navigation Project will still be conducted as approved in the 1996 LTMS EIS, the Corps believes the project is fully consistent with the enforceable policies of the Coastal Management Plans of both states.

6.6 Endangered Species Act

This EA has been coordinated with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service to ensure this project is in compliance with the Act. As the project will still be conducted as approved in the 1996 LTMS EIS, the Corps believes the project is compliant with this Act.

6.7 Protection of Children and Environmental Justice

The project will not result in adverse human health or environmental effects, nor would it pose a disproportionate environmental health risk or safety risk to children. The proposed project is in compliance with this Act.

6.8 Erosion and Sedimentation Control Act

The construction contractor would develop and implement and erosion and sedimentation control plan, including recommended best management practices from GA DNR. The plan will be coordinated with Chatham County to ensure its compliance with the latest guidelines. The proposed project would be in compliance with this Act.

6.9 Estuary Protection Act

Neither alternative would have an adverse effect on estuaries. The proposed project would be in compliance with this Act.

6.10 Federal Water Project Recreation Act

The proposed project would be in compliance with this Act. The proposed alternative would enhance recreation by providing a wildlife viewing area for the public.

6.11 Fish and Wildlife Coordination Act

This EA will be coordinated with the USFWS and the State natural resource agencies. The Corps will consider the views of those agencies before making its final decision on the proposed action. Therefore, the project is compliant with this Act.

6.12 Fishery Conservation and Management Act

Neither alternative would affect fishery conservation zones. Both alternatives would be in compliance with this Act.

6.13 Floodplain Management Act

Impacts to floodplains have been evaluated in this EA. Neither alternative would have an adverse effect to floodplains; therefore the proposed project is in compliance with this Act.

6.14 Magnuson-Stevens Act

No habitat of any listed fish species would be impacted by either alternative. As the project will still be conducted as approved in the 1996 LTMS EIS, the project is compliant with this Act.

6.15 Migratory Bird Conservation Act of 1929

This EA will be coordinated with USFWS and GA DNR. As the project will still be conducted as approved in the 1996 LTMS EIS, the project is compliant with this Act.

6.16 Migratory Bird Treaty Act of July 3, 1918

As the project will still be conducted as approved in the 1996 LTMS EIS, the project is compliant with this Act.

6.17 National Environmental Policy Act

In compliance with the act, this EA and FONSI were prepared for the proposed work and have been coordinated with appropriate natural resource agencies and the public.

6.18 National Historic Preservation Act

This EA will be coordinated with the Georgia State Historic Preservation Office and federally recognized tribes. An action plan will be in place in the event any archaeological or cultural resources are discovered during construction. The proposed project will be in compliance with this Act.

6.19 Protection of Wetlands

Measures will be in place to minimize impacts to wetlands. The proposed rehabilitation work consists of previously permitted dike raisings and replacement of existing water control structures as described in the LTMS EIS. The proposed project is in compliance with Executive Order 11990.

6.20 Stream Buffer Variance

A buffer variance waiver will be applied for and obtained from Chatham County before construction begins.

6.21 U.S. Department of Transportation Federal Aviation Administration Advisory Circular

This EA and FONSI have been coordinated with the FAA and USDA to ensure hazardous wildlife attractants near airports will be minimized and addressed appropriately.

7. Public and Agency Involvement

The steps leading to implementation of the proposed action are outlined below. The draft Environmental Assessment will be made available for public and agency review through multiple means, including a public notice. After a 30-day review by the public and natural resource agencies, a final report will be prepared. Award of the construction contract to rehabilitate the DMCA is expected by the end of August 2013.

1. Request for Proposal to Construction Contractor 6/24/13

2.	Public Notice of Draft EA and Agency Letters sent	6/28/13 (30 days)
3.	Receive Proposal from Construction Contractor	7/23/13
4.	Incorporation of Comments on Draft EA	7/31/13
5.	Final EA/Finding of No Significant Impacts (FONSI) Signed	9/5/13
6.	Contract Negotiation	8/15/13
7.	Task Order Award	TBD

8. Conclusions

The proposed project would have no net adverse effects on wetlands, water quality, hazardous or toxic wastes, aquatic resources, threatened or endangered species, cultural resources, or special resources of concern. The proposed project would not provide any known incremental result that would contribute to adverse cumulative impacts of biological or cultural resources. The proposed action will provide additional dredged material storage capacity, reduce O&M dredging costs, provide valuable habitat for birds (including migratory waterfowl and shorebirds), and provide recreational opportunities to the public.

9. References

- Council on Environmental Quality (CEQ), 1987. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act. 40 Code of Federal Regulations (CFR) Parts1500–1508.

- Council on Environmental Quality (CEQ), 1997. Guidance for analyzing the Cumulative Effects Impacts. 40 Code of Federal Regulations (CFR) Part 1508.7.

- Executive Order 12898, 1994. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

- Executive Order 11990, 1997. Protection of Wetlands.

- Test America. 2013. Analytical Report on Sediments from Area 1N. Job ID: 680-90307-1, U.S. Army Corps of Engineers, Savannah District.

- U.S. Army Corps of Engineers Department of the Army Procedures for Implementing National Environmental Policy Act (NEPA) 1987. 33 Code of Federal Regulations (CFR) parts 230 and 325.

- U.S. Army Corps of Engineers Engineering Regulation (ER) 200-2-2, 1988. Procedures for Implementing National Environmental Policy Act (NEPA).

- U.S. Army Corps of Engineers, Savannah District, Letter Report 2009. Savannah Harbor Navigation Project, Freshwater Control System Savannah, Georgia.

- U.S. Army Corps of Engineers, Savannah District, Environmental Impact Statement 1996. Savannah Harbor Long Term Management Strategy Study Harbor Operation and Maintenance Chatham County, Georgia, and Jasper County, South Carolina.

- U.S. Department of the Interior. 1973. Special Use Permit between Savannah National Wildlife Refuge and Department of the Army, Corps of Engineers.

- U.S. Department of Transportation Federal Aviation Administration Advisory Circular NO: 150-5200-33B, 2007. Hazardous Wildlife Attractants On or Near Airports.

- U.S. Fish and Wildlife Service. 2012. Fish and Wildlife Coordination Act Report, Savannah Harbor Expansion Project.