

**Atlantic Intracoastal Waterway Federal Navigation Channel Cumberland  
Dividings Maintenance Dredging  
Camden County, Georgia  
Environmental Assessment and Finding of No Significant Impact**

**Appendix E**

**Clean Water Act**

**U.S. ARMY CORPS OF ENGINEERS  
SAVANNAH DISTRICT  
100 WEST OGLETHORPE AVENUE  
SAVANNAH, GEORGIA 31401  
January 2023**



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**E.1**

**Correspondence**

**U.S. ARMY CORPS OF ENGINEERS  
SAVANNAH DISTRICT  
100 WEST OGLETHORPE AVENUE  
SAVANNAH, GEORGIA 31401  
January 2023**



## Hill, Suzanne CIV USARMY CESAS (USA)

---

**From:** Smith, Bradley <Bradley.Smith@dnr.ga.gov>  
**Sent:** Tuesday, December 20, 2022 9:38 AM  
**To:** Hill, Suzanne CIV USARMY CESAS (USA)  
**Subject:** [Non-DoD Source] AIWW Dredging - Cumberland Dividing

Suzanne,

The Georgia EPD Wetlands Unit, along with assistance from our Risk Assessment Unit, has reviewed the Tier I and are good with the continuation of dredging. I'm forwarding some back and forth coordination between our two units in case you need that additional information.

Hey Bradley, I checked the location of where they will be dredging from and there do not appear to be any industrial activities near that area. Given that and the high sand content, I'm good with the dredging activities and beneficial reuse of the dredged sediments.

Amy

---

**From:** Smith, Bradley <[Bradley.Smith@dnr.ga.gov](mailto:Bradley.Smith@dnr.ga.gov)>  
**Sent:** Thursday, December 1, 2022 7:20 PM  
**To:** Potter, Amy <[Amy.Potter@dnr.ga.gov](mailto:Amy.Potter@dnr.ga.gov)>  
**Subject:** Re: Cumberland Dividings AIWW Maintenance Dredging- Tier 1

I agree with the points you mentioned earlier. The sand content is very high and contaminants are unlikely. Bradley.

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---

**From:** Potter, Amy <[Amy.Potter@dnr.ga.gov](mailto:Amy.Potter@dnr.ga.gov)>  
**Sent:** Thursday, December 1, 2022 2:51:48 PM  
**To:** Smith, Bradley <[Bradley.Smith@dnr.ga.gov](mailto:Bradley.Smith@dnr.ga.gov)>  
**Subject:** Fw: Cumberland Dividings AIWW Maintenance Dredging- Tier 1

Hey Bradley, hope you are doing well. Has Stephen retired? I had not heard anything.

I took a quick look at the report. Two of the samples had a sand content of almost 100%. Most of the contamination can be found in the fines (silt and clay), so I believe these samples to be okay. One of the 3 samples had a sand content of 78%, but the Corps says that the area is not near any contaminated areas and therefore, should not be contaminated. I'm going to look at the area in detail a little more and give you some feedback. Let me know what you think.

Thanks!

Amy

If you need anything else please let me know,  
Thanks,

Bradley Smith  
GA EPD – Wetlands Unit  
Coastal District Project Specialist  
1050 Canal Road  
Brunswick, GA 31525  
912-399-6680

**From:** [Hill, Suzanne CIV USARMY CESAS \(USA\)](#)  
**To:** [Zeng, Wei](#); [stephen.weidl@dnr.ga.gov](mailto:stephen.weidl@dnr.ga.gov); [Bradley.smith \(Bradley.Smith@dnr.ga.gov\)](mailto:Bradley.smith@dnr.ga.gov); [Potter, Amy](#)  
**Cc:** [Lopes, J M CIV USARMY CESAS \(USA\)](#); [Gregory, Alexander B CIV USARMY CESAS \(USA\)](#); [Garvey, Kimberly L CIV USARMY CESAS \(USA\)](#); [GODFREY, ANNA DOMINIQUE CIV USARMY CESAS \(USA\)](#)  
**Subject:** Cumberland Dividings AIWW Maintenance Dredging- Tier 1  
**Date:** Thursday, December 1, 2022 11:09:22 AM  
**Attachments:** [Tier 1 Cumberland Dividings.pdf](#)

---

Dear All,

The Corps is seeking approval from GADNR-EPD to continue O&M dredging of the AIWW with placement of sediment for beneficial use, specifically within the Cumberland Dividings reach. The Corps has been closely coordinating this effort with GADNR- CRD and together have identified two sites for beneficial use placement. Attached is the Tier 1 Evaluation of sediments that will be dredged and beneficially used to restore degraded bird foraging and nesting habitat, as well as stabilize the shoreline in the Cabin Bluff area. Previously GA EPD determined that a new 401 CWA WQC would not be required for the continued O&M dredging of the AIWW, as these actions would constitute ongoing work since issuance of 1983 401 WQC for AIWW. The bird island and shoreline stabilization placements are a slight modification to pre-existing work. We are requesting GADNR-EPD review of the Tier 1 Evaluation as a condition of the 1983 AIWW 401 WQC.

Additionally, the Corps continues to work toward completing an updated Dredged Material Maintenance Plan for the AIWW, which will include new certifications and compliance for future projects.

We are currently preparing an Environmental Assessment (EA) for maintenance dredging in Cumberland Dividings, with a public comment period planned for the draft EA from January 9 through February 8, 2023 . We are hoping to have compliance completed by the end of the public comment period, and therefore are seeking approval by February 8<sup>th</sup>. We would be more than happy to set up a call to discuss any comments. Please, feel free to call or email me or Alex Gregory (cced on this email) with any questions or comments.

Thank you,

Suzy Hill

Suzanne Hill  
NEPA Team Lead  
USACE Savannah District, Planning Branch  
Ph. 912.423.2324

**Atlantic Intracoastal Waterway  
Cumberland Dividings Tier I Evaluation**

**E.2**

**Prepared by US Army Corps of Engineers,  
Savannah District**

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## **1.0 Project Information**

### **1.1 Project Overview**

The U.S. Army Corps of Engineers, Savannah District (Corps) has prepared this Tier I Evaluation for the placement of dredged material from maintenance dredging of the Atlantic Intracoastal Waterway (AIWW). The evaluation was prepared in accordance with regulations for evaluation of dredged materials in compliance with the Clean Water Act (CWA) (40 CFR 230.60). As part of the fiscal year 2023 (FY23) and ongoing Operations and Maintenance (O&M) dredging cycles in the AIWW, the Corps proposes to dredge portions of the East River in the Cumberland Dividings to the Congressionally authorized depth of 12 feet.

As detailed below, the Corps has reviewed historical and current data on the sediment within the federal navigation channel in Cumberland Dividings and has determined that there is no potential for contamination and therefore no need for additional testing.

### **1.2 Project Description**

The project involves maintenance dredging of shoaled in areas within the Cumberland Dividings in AIWW, river mile 704.5-709.5. Placement of the dredged material on a highly eroded bird island (BU-E) and nearshore linear berm for shoreline stabilization and restoration (BU-F). Placement at BU-E will add additional material to the eroding bird island providing elevation and stabilization for the shoreline and restoring foraging and roosting habitat for birds. Placement at BU-F in the nearshore zone would result in the further stabilization and encourage recruitment of oysterbeds. Dredge and placement locations are shown in the attached figures. Dredged material consists of 78-99% sand. The location of the dredging and placement sites are within the same CBRA zone, Unit N06. Approximately 316,000 cubic yards of sediment will be removed from the channel through use of cutterhead hydraulic dredge and piped to the placement sites. Material will first be placed on the bird island (BU-E) to restore this degraded habitat (Figure 1), any dredged material that is not needed for the bird island restoration site will be placed in the nearshore stabilization site (BU-F) (Figure 2).



**Figure 1. BU-E Placement Site**



**Figure 2.** BU-F Placement Site



**Figure 3.** Proposed dredge area (orange bars) and locations of sampling stations (yellow pins) in Cumberland Dividings.

### 1.3 Previous Testing

In July 2021 GHD Inc. was engaged by the Corps, Savannah District, to undertake a sediment sampling and analysis along the AIWW for upcoming maintenance dredging and potential beneficial use (BU) projects. Sediment characterization is required to determine the suitability of utilizing sediments for certain BU projects. Three borings were collected within in the proposed action area within the Cumberland Dividings (Figure 3). The sediment consists largely of coarse sandy material with very little fines and organics (Table 1).

**Table 1. Grain Size Distribution.**

Sample Number	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Organic Content LOI (%)
32	0.00	99.80	0.20	0.00	0.27
33	0.00	78.30	17.10	4.60	1.48
34	0.00	99.80	0.20	0.00	0.29

Borings 32, 33, and 34 were also analyzed for organic content. All three had organic content of less than 2%. No pesticides, PAHs, and PCBs were detected above the screening levels in the three boring samples (GHD, 2021).

## **2.0 Need for Testing**

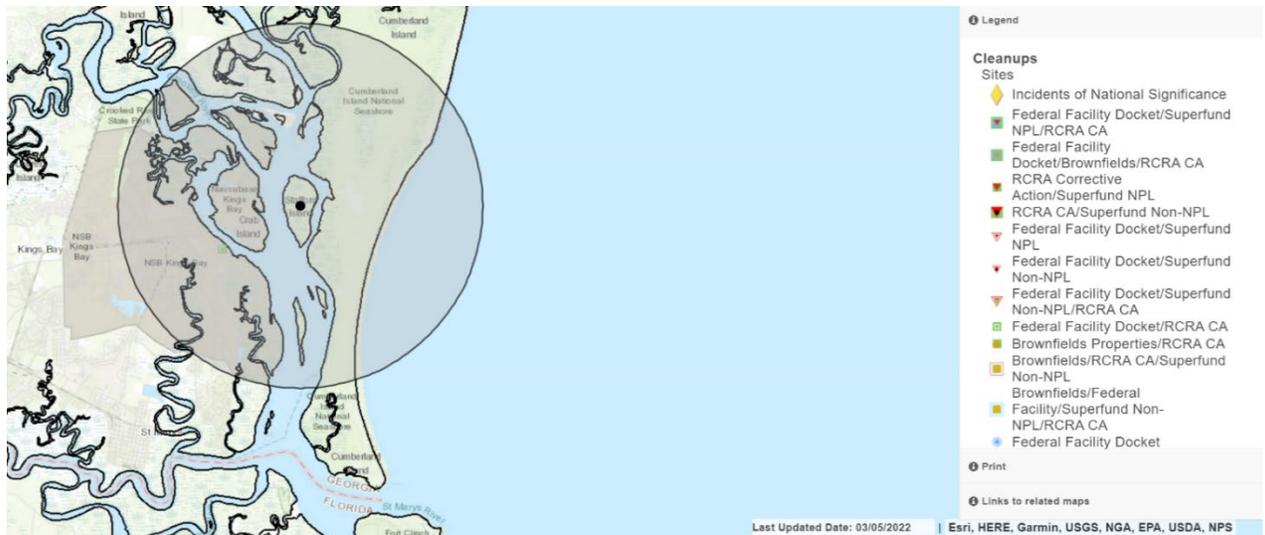
After consideration of all available information including previous testing, dredging history, and records of spills and discharges into the waters adjacent to Cumberland Dividings, the Corps has determined that the sediment testing and analysis performed in 2021 provides a sufficient basis for making a decision about whether the maintenance dredged material is suitable for open-water placement, beneficial use, or placement into a DMMA. Therefore, the Corps has determined that this Tier I Evaluation of area sediments for confirmation of the suitability of the dredged material for these placement options is sufficient and additional sampling and Tier II are not necessary.

## **3.0 Locations, Quantities and Types of Pollutants Discharged Upstream and/or Within the Dredged Area**

The Corps queried the Cleanups in My Community (CIMC), Toxics Release Inventory (TRI), and How's My Waterway reporting in the EPA EnviroFacts database in April 2022. Additionally, the Corps requested Marine Information for Safety and Law Enforcement (MISLE) data from the US Coast Guard and performed an interview with Kurt Mosley, Natural Resource Manager at King's Bay Naval Base, to gather information about any known incidents that could have resulted in contamination or other hazards.

### *U.S. Environmental Protection Agency EnviroFacts Database:*

A search of the CIMC database (<https://www.epa.gov/enviro/topic-searches#land>) on 14 October 2022 found zero (0) cleanup sites and RCRA listed within 5 miles of proposed dredging activity in Camden County (Figure 4). The CIMC database lists sites that have the following characteristics: *“Accidents, spills, leaks, and past improper disposal and handling of hazardous materials and wastes ... that have contaminated our land, water (groundwater and surface water), and air (indoor and outdoor). These contaminated sites can threaten human health as well as the environment.”*



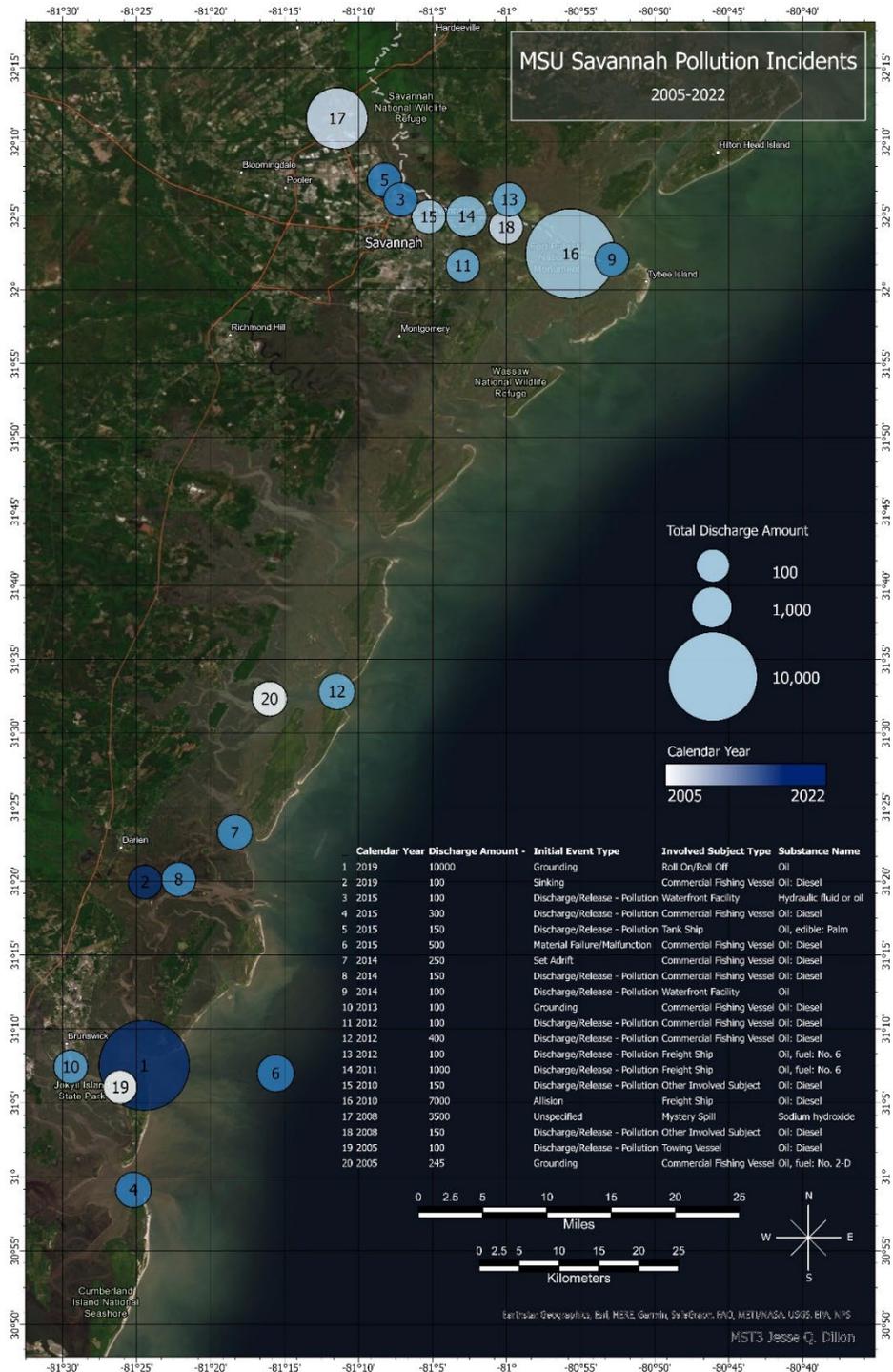
**Figure 4.** Camden County, Georgia Cleanups In My Community Map

A search of the Toxics Release Inventory (TRI) in that database (<https://edap.epa.gov/public/extensions/newTRISearch/newTRISearch.html?>) found zero (0) cleanup sites and one RCRA site in the general vicinity of Cumberland Dividings. RCRA sites are locations where an entity has registered and been allowed to manage hazardous materials; therefore, this site poses little threat to the surrounding area. The TRI database lists sites that have the following characteristics: “The Toxics Release Inventory (TRI) contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment. Manufacturers of these chemicals are required to report the locations and quantities of chemicals stored on-site to state and local governments. EPA compiles this data in an on-line, publicly accessible national computerized database ... which tabulate air emissions, surface water discharges, releases to land, underground injections, and transfers to off-site locations.”

*EPA How’s My Waterway:*

A search on EPA’s website, How’s My Waterway (<https://mywaterway.epa.gov/>) revealed the waterway to be in good condition for aquatic life (Figure 5). Plants and animals depend on clean water. Impairments can affect the quality of water, which can have adverse effects on plants and animals living in the water. Cumberland Dividings did not have any impaired areas noted.





**Figure 6. MISLE Data from US Coast Guard**

The Corps has determined that this discharge should have no significant impact on the quality of the dredge material due to the temporal and spatial distance from the sites that dredging will occur. Reference Attachment 2 for correspondence.

*Interview with Natural Resource Manager, Kurt Mosely:*

US Army Corps of Engineers Biologist, Alexander Gregory, performed a phone interview

on 8 April 2022 with Kurt Mosely, Natural Resource Manager, at the King's Bay Naval Base in Georgia. The purpose of the interview was to discover if there are any known incidents or conditions that could result in contamination or other hazards at this site. The Natural Resource Manager indicate that there were no significant incidents or unsafe conditions that could cause any adverse effects to human, wildlife, or environmental health. The full interview is enclosed as Attachment 1.

#### **4.0 Determination**

The physical and chemical properties of the sediment within Cumberland Dividings show no indication of contamination through past testing and historical research. Muddy sediments (grain size < 50 µm) tend to accumulate contaminants such as PAHs to a much greater extent than sand (grain size > 300 µm) (Landrum & Robbins, 1990). The samples collected showed that the sediment in these reaches are primarily sand and is highly unlikely to contain contaminants. Material dredged from the federal navigation channel and placed via open-water placement, containment in a DMMA, or beneficial use applications is not expected to significantly degrade or endanger human health, welfare, amenities, the marine environment, ecological systems, or economic potentialities. There is limited available local upland placement capacity and the area has little to no development. A tier II analysis is not required given these factors.

#### **5.0 References**

- GHD. 2021. Atlantic Intracoastal Waterway Sediment Sampling and Analysis. W912HN21F2011-Final Report.
- Landrum, Peter F. and John A. Robbins.1990. "Bioavailability of Sediment-Associated Contaminants to Benthic Invertebrates." Sediments: Chemistry and Toxicity of In-place Pollutants. CRC Press.
- Mosely, Kurt. Phone Interview on 8 April 2022.
- U.S. Coast Guard. United States Coast Guard National Response Center. <http://nrc.uscg.mil>.
- USEPA. Envirofacts. <https://enviro.epa.gov/>. Accessed April 2022.
- USEPA. EPA How's My Waterway. <https://mywaterway.epa.gov/>. Accessed April 2022.
- USEPA. EPA Toxics Release Inventory. <https://edap.epa.gov/public/extensions/newTRISearch/newTRISearch.html>. Accessed April 2022.

## **ATTACHMENT 1**

### **ECP INTERVIEW QUESTIONNAIRE WITH NATURAL RESOURCE MANAGER OF KING'S BAY NAVAL BASE**

## ECP INTERVIEW QUESTIONNAIRE

Interviewee (print name):     Kurt Moseley      
 Employment Location:     NSB Kings Bay, GA    

Title     Natural Resource Manager      
 Phone:     912-573-4678    

Key Site Manager     Current/former employee     Agency official  
 Occupant/employee (Indicate duration of occupancy/employment: \_\_\_yr. \_\_\_mos.)

Interviewer (print name):     Alexander Gregory      
 Employment Location:     USACE-SAS      
 Title:     Biologist      
 Phone:     912-515-5148    

Date of Interview:     4/8/2022                          Via  phone  in person  in writing

*“Please be as specific as reasonably possible, and answer in good faith and to the extent of your knowledge”*

1. Do any of the following documents exist for the property (check all that apply)?

Environmental site assessments, PA, SI, etc.	<input type="checkbox"/>	Preparedness & Prevention Plans, e.g. SPCC, etc.	<input checked="" type="checkbox"/>
Environmental audit reports	<input type="checkbox"/>	Hydrogeologic reports of property or surrounding area	<input type="checkbox"/>
Environmental permits, e.g. solid waste disposal, hazardous waste disposal, wastewater, NPDES, air emissions	<input checked="" type="checkbox"/>	Govt. agency notices regarding environmental non-compliance, past or current	<input type="checkbox"/>
UST / AST registrations	<input type="checkbox"/>	Notices regarding environmental liens on property	<input type="checkbox"/>
MSDSs	<input type="checkbox"/>	Hazardous waste generator notices or reports	<input type="checkbox"/>
Community RTK plan	<input type="checkbox"/>	Geotechnical studies	x
Safety plans	x	Other (DMMA Management Plan)	x

2. Is there any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

No

3. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

No

4. Are you aware of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

No

5. Was, or is, any of the operations listed below in existence on the property (check all that apply)? None

Gasoline station	<input type="checkbox"/>	Medical/dental facility	<input type="checkbox"/>
Motor repair facility	<input type="checkbox"/>	Junkyard or landfill	<input type="checkbox"/>
Dry cleaners	<input type="checkbox"/>	Training area	<input type="checkbox"/>
Photo developing lab	<input type="checkbox"/>	Waste TSD facility	<input type="checkbox"/>
Plating shop	<input type="checkbox"/>	Waste processing or recycling	<input type="checkbox"/>

6. Have there been any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemical or individual containers stored or used in the area in question?

No

7. Are there drums, sacks, cartons, or other containers of chemicals located on the property?

No

8. Was or is the property used for any waste generation? In which areas of the property were wastes generated? Were any areas of the property used for waste disposal activities?

No

9. Was, or is, the property used as a firing or bombing range, or both?

No

10. Have there been or are there storage tanks containing hazardous substances or petroleum products located on the property?

No

11. Have spills, leaks, or other releases of hazardous substances or petroleum products occurred to the best of your knowledge? According to our maintenance contractor records, in 2016 there was a hydraulic spill caused by some heavy equipment.

The contaminated soil was placed into drums and removed from Crab Island.

Another spill event happened around the same time when one of the Marine Humvee leaked oil. The contaminated dirt was placed into drums and removed from Crab Island.

12. Have unidentified waste materials, tires, automotive or industrial batteries, ordnance or any other waste materials been dumped, buried, or burned, or a combination thereof, on the property?

No

13. What units currently occupy the facility and approximately how many full-time personnel are associated with each of those units?

Crab Island is continuously occupied by US Marine Corps Security Force Battalion. The exact number of personnel on the island at any given time is unknown.

14. What typical types of operations are performed at the facility (i.e., administrative, logistics, classroom exercises, maintenance, etc.)?

Crab Island is exclusively used as a dredge placement area. Because the island is part of a high security area, it is continuously patrolled by security.

15. What are the historic uses of the facility/property?

Crab Island was developed for use as an upland dredge placement area. Prior to that, it was undisturbed marsh and forest land.

**ATTACHMENT 2**

**CORRESPONDENCE WITH US COAST GUARD**

From: Burke, Derek A II LTJG USCG MSU SAVANNAH (USA) <Derek.A.Burke@uscg.mil>  
Sent: Wednesday, May 11, 2022 1:48 PM  
To: Gregory, Alexander B CIV USARMY CESAS (USA)  
Cc: Hill, Suzanne CIV USARMY CESAS (USA)  
Subject: RE: MISLE data for AIWW  
Attachments: MSU Sav Pollution Incidents.xlsx; MSUSavPollutionIncidents2.jpg

Good Afternoon Mr. Gregory,

I apologize for the long wait on this. We've completed the data pull for our entire AOR (all of GA to 12NM offshore) dating back to 2005. Not too many cases to report; please see the attached Excel spreadsheet and graphic. The only case noted on the graphic and not on the spreadsheet is the Golden Ray (Saint Simons Sound Incident). We don't have all of the metrics on that one yet, but know for sure over 100G was discharged.

Please let me know if you need anything else. Once again, I apologize for the long wait.

Respectfully,

Derek A. Burke, LTJG  
U.S. Coast Guard | MSU Savannah  
Chief, Incident Management Division  
100 W Oglethorpe Ave  
Savannah, GA 31401  
(912) 652-4353 x259

From: Gregory, Alexander B CIV USARMY CESAS (USA) <Alexander.B.Gregory@usace.army.mil>  
Sent: Tuesday, April 26, 2022 1:53 PM  
To: Burke, Derek A II LTJG USCG MSU SAVANNAH (USA) <Derek.A.Burke@uscg.mil>  
Cc: Hill, Suzanne CIV USARMY CESAS (USA) <Suzanne.Hill@usace.army.mil>  
Subject: [WARNING: UNSCANNABLE EXTRACTION FAILED]RE: MISLE data for AIWW

Good afternoon sir,

I am just following up on the MISLE database inquiry for the Cumberland Sound. Please let me know if I can provide any additional information that may be needed to pull the data.

Thank you,

Alexander Gregory  
Biologist, Planning Branch  
US Army Corps of Engineers  
Savannah District  
912-515-5148

From: Gregory, Alexander B SAS  
Sent: Tuesday, March 15, 2022 10:37 AM  
To: Burke, Derek A II LTJG USCG MSU SAVANNAH (USA) <Derek.A.Burke@uscg.mil>  
Subject: RE: MISLE data for AIWW

Good morning sir,

It appears that we are dredging in the Cumberland Sound first in regard to full AIWW, so if we could prioritize that area, that would be great. I've attached an image and a KMZ file to assist with identifying the exact areas in the sound that we are dredging. We are interested in any reported incidents in this dredging area that resulted in discharge of 100 gallons or more within the last 10 years (March 2011 – March 2021).

Let me know if I can provide any additional information.

Thank you,

Alexander Gregory  
Biologist, Planning Branch  
US Army Corps of Engineers  
Savannah District  
912-515-5148

From: Burke, Derek A II LTJG USCG MSU SAVANNAH (USA) <Derek.A.Burke@uscg.mil>  
Sent: Thursday, March 10, 2022 3:25 PM  
To: Gregory, Alexander B SAS <Alexander.B.Gregory@usace.army.mil>  
Subject: RE: MISLE data for AIWW

We can help with this, it may take a several weeks. A few follow-on questions:

1. How would you like us to categorize the results?
2. Is there any specific criteria we can search by?
3. Is there a category or size of discharge that you're looking for (25+ Gallon, etc)?
4. Which section will you need first?
5. What is the desired date range?

MISLE pulls for us only search by category: oil or hazmat, dates, and port/unit group. Meaning when we conduct the pull, we'll get a bunch of data but from all over our AOR. We can provide a lat/long for each entry. Thanks and we'll get working on this hopefully by the end of next week.

Respectfully,  
LTJG Burke

From: Gregory, Alexander B SAS <Alexander.B.Gregory@usace.army.mil>  
Sent: Thursday, March 10, 2022 1:57 PM  
To: Burke, Derek A II LTJG USCG MSU SAVANNAH (USA) <Derek.A.Burke@uscg.mil>  
Subject: RE: MISLE data for AIWW

Understood and thank you for that information. I would like to go ahead and request that for our stretch of the AIWW. What can I provide to assist with the process. I realize that's a large area to pull data for so anything I can do to help I'm glad to do.

Thank you,

Alexander Gregory

Biologist, Planning Branch  
US Army Corps of Engineers  
Savannah District  
912-515-5148

From: Burke, Derek A II LTJG USCG MSU SAVANNAH (USA) <Derek.A.Burke@uscg.mil>  
Sent: Thursday, March 10, 2022 1:08 PM  
To: Gregory, Alexander B SAS <Alexander.B.Gregory@usace.army.mil>  
Subject: RE: MISLE data for AIWW

Good Afternoon Mr. Gregory,

Whichever is fine with us. Whenever a request comes in, just provide us a few weeks to get the results back to you. I wish there was an easier way for us to pull the data, but MISLE is pretty old and has limited data pull functionality.

Respectfully,  
LTJG Burke

From: Gregory, Alexander B SAS <Alexander.B.Gregory@usace.army.mil>  
Sent: Tuesday, March 1, 2022 11:33 AM  
To: Burke, Derek A II LTJG USCG MSU SAVANNAH (USA) <Derek.A.Burke@uscg.mil>; Huggins, Brandy L PO1 USCG MSU SAVANNAH (USA) <Brandy.L.Huggins@uscg.mil>  
Subject: MISLE data for AIWW

Good morning,

I am currently working on a Dredged Material Management Plan for the dredging the Corps is performing in the Atlantic Intracoastal Waterway (AIWW). The stretch that the Savannah District maintains is between river mile 552 to 710 (roughly between Port Royal Sound in SC down to Cumberland Sound in Georgia). Each year we will be dredging different reaches, often simultaneously, and I wasn't sure how we could make the process of performing a Tier 1 Analysis the most efficient for everyone involved. Would it be more efficient for us to make multiple MISLE data requests for several reaches (each approximately 10-20 river miles) each year or for us to request MISLE data on the entire stretch of AIWW that we maintain (approximately 158 river miles) each year. The data we are seeking would be reported spills or other incidents resulting in release of hazardous materials within the AIWW. I've attached a KMZ for this stretch and below is an image of this area as well.

I appreciate any insight or direction you could provide on this matter.

Thank you,

Alexander Gregory  
Biologist, Planning Branch  
US Army Corps of Engineers  
Savannah District  
912-515-5148

**Atlantic Intracoastal Waterway Federal Navigation Channel  
Cumberland Dividings Maintenance Dredging  
Camden County, Georgia  
Draft Environmental Assessment and FONSI**

**E.3**

**Clean Water Act 404(b)1 Evaluation**

**U.S. ARMY CORPS OF ENGINEERS  
SAVANNAH DISTRICT  
100 WEST OGLETHORPE AVENUE  
SAVANNAH, GEORGIA 31401  
January 2023**



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## **1. Introduction**

The following evaluation is prepared in accordance with Section 404(b)(1) of the Clean Water Act of 1977 to evaluate the environmental effects of the proposed dredging activity in the Atlantic Intracoastal Waterway (AIWW) and the placement of dredged material in waters of the United States associated with AIWW Cumberland Dividings Operations and Maintenance Dredging. Specific portions of the regulations (Title 40, Part 230 of the Code of Federal Regulations) are cited, and an explanation of the regulation is given as it pertains to the project.

## **2. Regulatory Framework of Section 404(b)(1) Evaluation**

Under the Clean Water Act (CWA), pollutants are prohibited from being discharged into any waters of the U.S. except in compliance with several statutory provisions (33 United States Code [U.S.C.] § 1311; see 33 U.S.C. § 136). Under Section 404 of the CWA, the Corps has the authority to permit discharges of dredged and fill materials into waters of the U.S. (33 U.S.C. § 1342, 1344; 33, Code of Federal Regulation [C.F.R.] §§ 322.5, 323.6). A Section 404 permit is required prior to discharging dredged or fill material into waters of the United States.

Section 404(b)(1) provides that the Corps must issue such permits through the application of guidelines developed by the United States Environmental Protection Agency (USEPA) (33 C.F.R. §§ 320.2(f), 320.4(a)(1), 320.4(b)(4), 323.6(a)), which were issued in 1980 (40 C.F.R. Part 230). These guidelines, referred to as Section 404(b)(1) Guidelines, establish various criteria to be considered by the Corps in evaluating permit applications, one of which calls for evaluation of alternatives to the proposed discharge. For proposed actions to be undertaken by the Corps, the agency does not issue itself a permit but includes an evaluation designed to demonstrate compliance with the 404(b)(1) Guidelines in the National Environmental Policy Act (NEPA) document prepared for the action.

To satisfy the requirements of CWA 404(b)(1), this evaluation is being included as an appendix to the EA that has been prepared for the subject project.

## **3. Project Description**

### **3.1. Location**

#### **3.1.1. Location Description**

The Cumberland Dividings is a network of rivers and estuaries-within the AIWW between the Satilla River and St. Mary's River (Figure 1). This project area occurs entirely within the Dividings, between Cumberland Island to the east and mainland coastal marshes and residential and municipal properties to the west. Protected and natural lands within the project area fall under different Federal, state, local and private jurisdiction/ownership, such as the U.S. Navy, U.S. Fish and Wildlife Service (USFWS)

U.S. Department of Interior, National Park Service (NPS), The Nature Conservancy of Georgia (TNC), and the Georgia Department of Natural Resources (GADNR).

### 3.1.2. Project Vicinity Map



Figure 1. Cumberland Dividings Proposed Dredging Locations.

## 3.2. Authority and Purpose

### 3.2.1. Overall Project Purpose

The purpose and need for the operation and maintenance (O&M) of the AIWW is to continue to provide a safe, reliable, efficient, and environmentally sustainable navigation channel in accordance with Congressional authorizations. The Corps has identified critically shoaled locations within the Cumberland Dividings and proposes to dredge

these reaches and place material in an environmentally and economically acceptable manner..

The Corps has prepared an environmental assessment (EA) which provides an analysis of the other environmental issues associated with the project (USACE, 2023).

### 3.2.2. Proposed Federal Action

The proposed action involves dredging located in the Cumberland Dividings within the Atlantic Intracoastal Waterway (AIWW), river miles 704.2-709.5, in Camden County, GA (Figure 1). This section of the AIWW has not been dredged since 2001, and based on a June 2022 bathymetric survey, approximately 316,000 cy of material has accumulated above the channel’s authorized depth of -12 ft. Hydraulic cutterhead dredges have historically performed the dredging work in the AIWW, and the Corps would continue to use this method of dredging for the proposed action. This dredge type is most efficient for placing material in upland, saltmarsh, or open water placement sites. Typically, material is pumped through a 16-inch pipeline to the placement site. There is no constraint on time of year to perform the work.

The Corps conducted an evaluation of various placement sites, including upland placement and for beneficial use (BU) (Sites BU-A, BU-B, BU-C, BU-D, BU-E, and BU-F). Agencies and stakeholders were involved in the selection of the potential BU placement site. The proposed locations were chosen with considerations toward cultural, environmental, economic, and recreational resources. Based on best and most recent available data, the Corps has eliminated placement sites BU-A, BU-B, BU-C, BU-D, BU-F, as well as the upland placement alternatives as they are not feasible or other constraints prohibit placement at these sites.

Dredged material placement at BU-E is being carried forward as the Preferred Alternative as it meets the navigation mission and need for dredging (Table 1). BU-E is the least environmentally damaging practicable alternative and this will be the receiver of dredged material. In consideration of applicable factors listed in 33 CFR section 320.4, the Corps has determined this proposed plan is not contrary to public interest and is therefore, carried forward as the Preferred Alternative..

**Table 1. Placement Sites and Location.**

BU Placement Site	Channel Location (Source Material)	Deci-degree Location
BU-E (Habitat Restoration)	704.2-709.5 River Miles	30.885314°N -81.512761°W

### **3.2.3. Authority**

Construction and maintenance of the AIWW between Savannah, Georgia, and Fernandina, Florida, was initially authorized by the River and Harbor Act of August 2, 1882, House Document 19, 46th Congress, which provided modifications in portions of the waterway. Additional sections of the AIWW that were not included in the 1882 Act were incorporated into the project in 1892. The River and Harbor Act of 13 July 1892, House Document 41, 52nd Congress, 1st Session, authorized a 7-foot navigation channel between Savannah and Fernandina. After authorization and construction, several other Acts modified the route of the waterway to abandon old sections and include new ones which were either more convenient to traffic or easier to maintain. In 1936, the authorized navigation project consisted of a channel 7 feet deep at Mean Low Water (MLW) with a width of 150-feet between Savannah, Georgia, and Fernandina, Florida.

The first piece of legislation that created the waterway with the dimensions authorized today was passed in 1937. On 20 June 1938, a 12-foot channel was authorized between Savannah, Georgia, and Fernandina, Florida. The authorization included various cut-offs, and an anchorage basin at Thunderbolt, Georgia (House Doc. No. 6liB, 75th Congress, 3rd Sess.). The widths of the AIWW were authorized as 90 feet in land cuts and narrow streams and 150 feet in open waters. Dredging of the 12-foot channel between Beaufort, South Carolina, and Fernandina, Florida, was initiated in 1940 with the excavation of 507,275 cubic yards (cy) and it was completed in 1941 with the removal of 6,168,556 cy.

In addition to providing for the 12-foot-deep channel between Beaufort, South Carolina, and Fernandina, Florida, the River and Harbor Acts of 1937 and 1938 mandated all lands, easements, rights-of-way, and spoil placement areas needed for the project be furnished free of cost to the Federal Government. Titles to all lands and easements needed for the 7-foot protected route around St. Andrews Sound were accepted as satisfactory by the Chief of Engineers on March 28, 1939. Rights-of-way and placement areas needed for initial work and for subsequent maintenance of the 12-foot channel between Savannah, Georgia, and Fernandina, Florida, were approved by the Chief of Engineers on April 4, 1940.

Section 125 of the WRDA of 2020 requires the Assistant Secretary of the Army, Civil Works (ASA(CW)) to maximize the Beneficial Use of Dredged Material (BUDM) obtained from construction or O&M of the USACE's water resource development projects.

## **4. Project Alternatives**

### **4.1. No Action Alternative**

The No Action Alternative is to perform no maintenance dredging of the Cumberland Dividings reach of the federal navigation channel. This alternative would also result in no placement of material within the placement area identified in the Action Alternative

section below. Additionally, over time the channel would continue to shoal, thus reducing the ability to navigate through the area. Current shoaled conditions, surveyed in 2022, show shoaled material covering more than half the channel width and several feet above the authorized depth, creating an impediment to navigation.

## **4.2. Action Alternative**

### **4.2.1 BU-E Bird Habitat Restoration**

The proposed action is to conduct maintenance dredging of shoaled areas within the Cumberland Dividings of the AIWW river mile 704.5-709.5 and place dredged material at BU-E (Figure 1). Approximately 316,000 cy of material has accumulated within the channel's authorized depth of 12-foot MLW. Within this reach there are three sections being dredged: AIWW miles 704.5-706.5, 707.25-708, and 709.25-709.5. Hydraulic cutterhead dredges have historically performed the dredging work on the AIWW and the Corps would continue to use this method of dredging. This dredge type is most efficient for placing material in upland, saltmarsh, or riverine placement sites. There is no constraint on time of year to perform the work.

**BU-E** is the least environmentally damaging practicable alternative and this will be the receiver of dredged material. The purpose of direct placement is to renourish areas that have lost sediment from coastal storm events, tidal extremes, wave energy, and sea level change. Returning sediment into previously degraded subtidal to intertidal zones will restore historic footprints and provide protection from wave energy to provide more nesting/foraging habitat for birds. Material will be pumped out from a cutterhead dredge. The dredge pipe will be moved around to spread placement and material will be pushed with heavy equipment. The material will be placed in shallow areas that previously existed but lost elevation due to erosion or upland acreage due to sea level change.



**Figure 2. BU-E Bird Habitat Restoration Placement Location.**

**4.2.1.1 General Description and Quantities of the Placement Material**

**1) *General Characteristics of Material***

The source material that would be placed in the proposed BU-E location would be material from the proposed dredging reaches of the AIWW of the Cumberland Dividings.

Sediment sampling and analysis were conducted in July 2021 using vibracore techniques to characterize the dredged material.

Samples were collected at three locations within the project area. The sediment consists largely of coarse sandy material with very little fines and organics (80% sand or greater).

## 2) *Quantity of Material*

Approximately 316,000 cy of material will be placed in the bird habitat restoration template.

## 3) *Source of Material*

The dredged material used for placement will be sourced from the Cumberland Dividings within the AIWW (river miles 704.2-709.5).

## 4) *Impacts to Aquatic Environment*

Direct placement of dredged material onto the proposed BU-E bird habitat restoration site will temporarily cover soft substrate/intertidal non-vegetated flats, burying some organisms while others more motile will likely avoid and survive the dispersal event. These impacts are expected to be minor in nature and are expected to quickly dissipate once construction is completed. It is expected that during construction activities mobile aquatic species would move out of the way and find other suitable areas until construction activities are completed. Due to abundant adjacent benthic habitat, it is expected that the site would recolonize rapidly, providing prey species for aquatic and bird species.

## 5. Evaluation for compliance with the 404(b)(1) guidelines

### 5.1. Restrictions on Discharge - (Section 230.10)

***"(a) except as provided under Section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practical alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."***

The 404(b)(1) guidelines consider an alternative practicable "if it's available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." The following alternatives were thoroughly reviewed in the EA: the No Action Alternative and the Action Alternative, which includes the BU placement site and the dredging of the channel. The Action Alternative is the only other action being considered apart from the No Action Alternative. The No Action Alternative is not a practicable alternative, as it would not meet the project purpose and the navigation channel would continue to shoal. As indicated in Section 3.2.2, other placement sites were evaluated and not found practicable due to constraints (e.g. shellfish leases or real estate considerations) or not technically feasible (distance).

**"(b) Discharge of dredged material shall not be permitted if it;"**

**"(1) Causes or contributes, after consideration of disposal dilution and dispersions, to violations of any applicable state water quality standard;"**

**"(2) Violates any applicable toxic effluent standard or prohibition under Section 307 of the Clean Water Act."**

BU placement activities will result in the temporary discharge of dredged material into the AIWW riverine system. The increase in turbidity as a result of the temporary placement actions will be temporary in nature and is expected to dissipate quickly.

Based on sediment testing completed in July 2021 by GHD Inc. and other available data that was included in the Tier 1 Analysis for the proposed action, the Corps has determined that the sediment testing and analysis performed in 2021 provides a sufficient basis for making a decision about whether the maintenance dredged material is suitable for beneficial use. The three borings collected from the Cumberland Dividings by GHD Inc. determined that the source material is majority sand (Table 2; Figure 4). Additional historical information in the Tier 1 also indicates that contamination is highly unlikely. Therefore, the Corps has determined that the Tier I Analysis of area sediments for confirmation of the suitability of the dredged material for these placement options is sufficient and additional sampling and Tier II analysis are not necessary.

Effluent will be generated from the BU placement activities, but it will not cause any violations to the Georgia water quality standards or violate any applicable toxic effluent standard under Section 307 of the CWA. The dredged material has been tested and determined to be "clean." Any turbidity generated from the placement is expected to settle quickly and not cause any considerable effects due to the existing turbid conditions in the channel. Placement will only occur in the proposed placement location BU-E.

Based on the above determinations, there is no indication that placement of sediment from the Cumberland Dividings for BU purposes will violate any state water quality standard, or any applicable toxic effluent standard established under Section 370 of the Clean Water Act. The Corps received concurrence on this determination from GADNR-EPD Watershed Unit on December 21, 2022.

**Table 2. Grain Size Distribution Collected from three borings by GHD Inc.**

<b>Sample Number</b>	<b>Gravel (%)</b>	<b>Sand (%)</b>	<b>Silt (%)</b>	<b>Clay (%)</b>
<b>32</b>	<b>0.00</b>	<b>99.80</b>	<b>0.20</b>	<b>0.00</b>
<b>33</b>	<b>0.00</b>	<b>78.30</b>	<b>17.10</b>	<b>4.60</b>
<b>34</b>	<b>0.00</b>	<b>99.80</b>	<b>0.20</b>	<b>0.00</b>



Figure 3. Proposed dredge areas (orange bars) and locations of GHD sampling stations (yellow pins) in Cumberland Dividings.

***"(3) Jeopardizes the continued existence of species listed as endangered and threatened under the Endangered Species Act of 1973, as amended, or results in likelihood of the destruction or adverse modification of a habitat which is determined by the Secretary of Interior or Commerce, as appropriate, to be a critical habitat under the Endangered Species Act of 1973, as amended."***

The proposed action would not jeopardize the continued existence of any ESA-listed species. A full evaluation of effects to ESA-listed species can be found in Section 3.6 of the EA. A summary of section 7 consultation under ESA can also be found in Section 5 of the EA.

***"(4) Violates any requirements imposed by the Secretary of Commerce to protect any marine sanctuary designated under Title III of the Marine Protection Research and Sanctuaries Act of 1972."***

No marine sanctuaries would be affected by the proposed action.

***"(c) Except as provided under Section 404(b)(2), no discharge of dredged or fill material shall be permitted which will cause or contribute to significant***

***degradation of the waters of the United States. Findings of significant degradation related to the proposed discharge shall be based upon appropriate factual determinations, evaluations, and tests required by Subparts B and G of the consideration of Subparts C-F with special emphasis on the persistence and permanence of the effects contributing to significant degradation considered individually or collectively include:"***

***"(1) Significantly adverse effects of the discharge of pollutants on human health or welfare including, but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites."***

The proposed action will not result in significant adverse effects on human health or welfare. All appropriate measures will be implemented to avoid and minimize adverse effects to the environment. The proposed BU of dredged material is expected to result in an overall benefit to wildlife, specifically migratory birds.

Special aquatic sites include wetlands. No placement will be occurring on wetlands, but in the intertidal and subtidal zones.

Fish and shellfish may experience temporary impacts as a result of placement in the benthic environments. Bird island restoration placement and nearshore linear berm placement may adversely affect bottom-dwelling organisms at the site by smothering immobile organisms or forcing mobile organisms to migrate from the area. It is expected that this direct impact will be temporary.

## **5.2. Factual Determination. - (Section 230.11)**

### **5.2.1 Physical Substrate Determinations**

**Consideration shall be given to the similarity in particle size, shape, and degree of compaction of the material proposed for discharge and the material constituting the substrate at the disposal site and any potential changes in substrate elevation and bottom contours.**

#### ***1) Substrate Elevation and Slope***

The proposed beneficial use action will include placement of dredged material that will alter existing contours and elevations at the placement location; however, alteration of existing contours and elevations are necessary to restore bird habitat.. Placement of the dredged sediment will be designed to mimic the natural slope and elevation.

#### ***2) Sediment Type***

The sediment being placed in the BU-E template will be 80% sand or greater. The dredged material is similar to the sediment at the BU locations in size and shape as well.

#### ***3) Dredged/Fill Material Movement***

The placement material will be mainly subjected to the riverine flows of the AIWW. Influences from semidiurnal tides may also have influence on the movement of the placement material.

#### 4) *Physical Effects on Benthos*

Existing benthic organisms will be adversely affected in the immediate areas of the placement; however, benthic organisms are expected to quickly rebound from the short-term impacts of material placement at the BU-E site.

### 5.2.2. Water Circulation, Fluctuation, and Salinity Determinations

**Determine the nature and degree of effect that the proposed discharge will have individually and cumulatively on water, current patterns, circulation including downstream flows, and normal water fluctuation.**

#### 1) *Water Column*

- a. **Salinity:** There are no anticipated impacts expected to salinity as a result of any of BU placement activities and dredging.
- b. **Water Chemistry:** There are no anticipated impacts expected to water chemistry as a result of BU placement activities and dredging.
- c. **Clarity and Color:** There may be local and temporary increase in turbidity during placement and dredging activities; however, the turbidity plumes will dissipate quickly.
- d. **Odor:** Placement and dredging activities are not expected to have any effects on odor in the action areas.
- e. **Taste:** Not applicable. Water in the proposed placement and dredging areas is not used as a drinking water source.
- f. **Dissolved Gas Levels:** Dissolved oxygen levels may be temporarily lowered during the dredge activities, but is expected to quickly recover to levels that are normal to the existing conditions of the channel.
- g. **Nutrients:** There are no anticipated impacts expected to nutrients.

#### 2) *Current Patterns and Circulation*

- a. **Current Patterns and Flow.** Currents in the project area are riverine and receive minor influence from semidiurnal tides. Placement for bird habitat restoration will cause effects to flow in the general location of the placement site. River flows will be more confined to the cut bend (outside meander) of the meandering portion, and the point bar (inside meander) will be receiving the dredged material, so flow will increase through the cut bend.
- b. **Velocity:** Effects on water velocity would be minimal to non-existent for the placement site. A slight increase in velocity may occur in the outside meander of bird habitat restoration site due to the point bar area increasing in elevation.

- c. **Stratification:** No change in stratification is anticipated.
- d. **Hydrologic Regime:** The hydrologic regime in this area is influenced by rainfall inputs, tidal inputs, and streamflow outputs. Therefore, the hydrologic regime would not be affected. Variable river patterns will remain the same.

3) *Normal Water Level Fluctuations and Salinity Gradients*

The BU placement and dredging activities will have no adverse impact to these characteristics and would not affect salinity gradients in the area.

### 5.2.3. Suspended Particulate/Turbidity Determinations

1) *Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Disposal Site*

There will be temporary increases in turbidity levels in the dredging locations and the placement area during placement activities. However, turbidity will be temporary and localized, and no significant adverse effects are expected.

2) *Effects (degree and duration) on Chemical and Physical Properties of the Water Column*

- a. **Light Penetration:** Light penetration will decrease temporarily during placement in the immediate area where dredged material is being deposited. This will be temporary and have no impact on the environment. Dredging activities may cause a slight temporary decrease in light penetration.
- b. **Dissolved Oxygen:** Dissolved oxygen levels will not be altered by BU placement. Dissolved oxygen may be temporarily lowered during dredging activities but is expected to recover quickly to the normal existing conditions of the channel. No anoxic layers of sediment will be exposed or placed.
- c. **Toxic Metals, Organics, and Pathogens:** No toxic metals, organics, or pathogens will be released or placed as a result of the placement and dredging activities. Clean dredged material is expected to be used.
- d. **Aesthetics:** Aesthetic quality of the specified portion of the Cumberland Dividings will be temporarily reduced due to placement and dredging activities while the work is occurring. However, the area is remote and would only be visible to boaters passing by. There will be no effect to the aesthetic quality of the river water column.

3) *Effects on Biota*

- a. **Primary Production and Photosynthesis:** In the portion of the Cumberland Dividings where placement is proposed, riverine and tidal flows most likely carry photosynthetic organisms across the river. No significant

effects greater than those experienced under other O&M dredging project conditions in the area are anticipated.

- b. Suspension/Filter Feeders:** Placement of dredged material in certain areas may contribute to the clogging of siphons or filter-feeders. This is expected to be a temporary condition. Conditions for existing filter-feeders should return to normal once as placement activities in the area are complete.
- c. Sight Feeders:** Elevated turbidity levels will have a short-term adverse effect on sight feeder organisms. However, these organisms are highly mobile and can migrate to more favorable areas to fulfill their nutritional requirements during the short-term.

#### **5.2.4. Contaminant Determinations**

Deposited dredged material into the BU placement site will be similar to the surrounding area and would not introduce, relocate, or increase contaminants in the proposed BU location. The Corps has prepared a Tier 1 evaluation for the dredged material and did not identify any potential contamination issues. The Corps received concurrence on this determination from GADNR-EPD Watershed Unit on December 21, 2022.

#### **5.2.5. Aquatic Ecosystem and Organism Determinations**

##### *1) Effects on Plankton*

Decreased light transmission caused by suspended dredged material may have a temporary adverse effect on plankton; however, due to the existing turbid conditions, this effect is expected to be minor and temporary.

##### *2) Effects on Benthos*

Existing benthic organisms may be permanently lost in the bird restoration location. Elevation of the restored bird habitat will be above the mean highwater (MHW) mark; therefore, repopulation of benthic organisms will not occur in the areas above the MHW mark. However, repopulation of benthic organisms will occur below the MHW mark once as placement activities have ceased due to their high fecundity and turnover rate.

##### *3) Effects on Nekton*

Direct impacts to mobile organisms will be minor due to their ability to avoid adverse conditions. Some larval fishes may be impacted by placement. Impacts will be temporary and minor and would not significantly affect the local fish stocks.

##### *4) Effect on Aquatic Food Web*

- a. Sanctuaries and Refuges:** Not applicable. There are no special aquatic sites in the proposed placement and dredge locations.

- b. **Wetlands:** Wetlands exist both around the proposed BU location. Wetlands are expected to be benefitted in the long-term as a result of shoreline stabilization from the habitat restoration placement. Placement of dredged material will not be occurring on any wetlands.
- c. **Mud Flats:** No mudflats will be impacted as a result of BU placement and dredge activities.
- d. **Vegetated Shallows:** Not applicable; there are no species of submerged aquatic vegetation in the placement areas.
- e. **Coral Reefs:** Not applicable; there are no coral reefs in the action area.
- f. **Riffle and Pool Complexes:** Not applicable; not found in the action area.

#### 5) *Threatened and Endangered Species*

The proposed action would not jeopardize the continued existence of any ESA-listed species. A full evaluation of effects to ESA-listed species can be found in Section 3.6 of the EA. A summary of section 7 consultation under ESA can also be found in Section 5 of the EA.

#### 6) *Other Wildlife*

Placement of dredged material and dredging operations are not expected to have long-term adverse impacts on wading birds or terrestrial foraging animals.

Restoration of the bird habitat is expected to have long-term benefits to shorebirds and seabirds.

### 5.2.6. Proposed Disposal Site Determinations

#### 1) *Mixing Zone Determination*

Dredged material placement and dredging of the proposed areas will not cause unacceptable changes in the mixing zone specific in the Water Quality Certificate in relation to depth, current, velocity, direction and variability, degree of turbulence, stratification, or ambient concentrations of constituents.

#### 2) *Determination of Compliance with Applicable Water Quality Standards*

The project would comply with all applicable water quality standards. The Corps received concurrence on this determination from GADNR-EPD Watershed Unit on December 21, 2022.

#### 3) *Potential Effects on Human Use Characteristics*

- a. **Municipal and Private Water Supply:** Not applicable; municipal drinking water is not supplied within the action area, and the Corps is not aware of any private water supplies.
- b. **Recreational and Commercial Fisheries:** Recreational and commercial fisheries may be temporarily impacted by the placement of material and dredging during placement activities and dredging operations. Boaters may

have to avoid the dredging vessels and the placement locations but will still be able to maneuver around the vessels and placement areas.

- c. Water Related Recreation:** The AIWW is used for recreational boating. During dredging and placement activities, recreational boaters may have to avoid dredge vessels and placement areas, but this will be temporary and overall, the proposed action will improve recreational boating by removing critical shoals.
- d. Aesthetics:** No long-term loss to visual aesthetics will occur; however, during construction equipment will be visible. This would be considered only a temporary and insignificant impact to aesthetics.
- e. Parks, National and Historic Monuments, National Seashores Wilderness Areas, Research Sites, and Similar Preserves:** No parks, monuments, wilderness areas, research sites, or similar preserves exist within the proposed dredging and placement site location.

#### **5.2.7. Determination of Secondary and Cumulative Effects on the Aquatic Ecosystem**

The proposed placement of dredged material and dredging operations would have no adverse impacts that would result in degradation of the natural, cultural, or recreational resources of the project area. The project would have no incremental impacts that, when considered with past, present, and reasonably foreseeable future project, would result in major cumulative impairment of water resources, or interfere with the productivity and water quality of the existing aquatic ecosystem. All proposed BU placement activities are temporary in nature.

### **5.3. Actions to Minimize Adverse Effects**

In efforts to avoid environmental adverse effects, a number of measures will be taken. Placement for the bird habitat restoration site will not occur on active oyster-beds. The oyster-bed areas have been identified for the AIWW, and none are within the proposed placement location. Placement for the bird habitat restoration will also not be occurring on any vegetation or wetlands.

The bird habitat restoration template will be designed to meet the appropriate elevation needed to provide bird habitat. Location was selected to provide habitat restoration. By locating the project such that it is restoration we are further minimizing the adverse impacts.

## 5.4. Findings of Compliance or Non-Compliance with the Restrictions on Discharge (Section 230.12)

- A. No significant adaptation of the Section 404(b) guidelines was made relative to this evaluation.
- B. There are no practicable alternatives to the proposed beneficial use placement site that would have less adverse impact on the aquatic ecosystem.
- C. The proposed actions described in this evaluation would not cause or contribute to violations of any known applicable state water quality standards.
- D. The proposed action would not jeopardize the continued existence of any ESA-listed species. A full evaluation of effects to ESA-listed species can be found in Section 3.6 of the EA. A summary of section 7 consultation under ESA can also be found in Section 5 of the EA and Appendix H.
- E. The proposed BU action and dredging operations will not result in significant adverse effects on human health and welfare, recreational and commercial fishing, plankton, fish, shellfish, wildlife, special aquatic sites, or overall ecosystem diversity, productivity, and stability.
- F. The composition of the dredged material would not contribute organics or pollutants to the aquatic environment. An HTRW Tier 1 analysis has been conducted by the Corps. All responsible precautions will be taken to prevent hazardous materials discharge from all activity or equipment.
- G. Appropriate steps to minimize potential adverse impacts from the proposed action will be implemented.
- H. On the Basis of the Guidelines, the Proposed Disposal Site(s) for the Discharge of Fill Material is specified as complying with the requirements of the Clean Water Act Section 404(b)(1) guidelines, with the inclusion of appropriate and practical conditions to minimize adverse effects on the aquatic ecosystem.

Table 3 below is a summary of the effects on public interest factors under the CWA. The Corps concludes that the proposed BU placement types and dredging operations are in the public interest.

**Table 3. Analysis of Public Interest Factors Under the CWA.**

Table 3: Public Interest Factors	Effects					
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
1. Conservation: The study area largely consists of open water that receive semidiurnal tidal flushing. No sanctuaries or refuges are located within the study area. Therefore, the Corps has determined that the proposed action would have no effect on conservation.	X					

Table 3: Public Interest Factors	Effects					
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
2. Economics: The evaluation of impacts and benefits of the proposed action on economics has been dismissed from further analysis in the EA (Section 3.1). It has been determined that the proposed dredging operations and the BU placement will have no effect on economics.	X					
3. Aesthetics: The evaluation of impacts of the proposed action on aesthetics has been dismissed from further analysis in the EA (Section 3.1). During construction, equipment used for dredging and placement will be visible, resulting in a temporary change in the visual aesthetics. Placement within the BU sites would mimic natural habitats in the project area. Therefore, the project would have a temporary minor effect on aesthetics.				X		
4. General Environmental Concerns: The environmental concerns for the proposed action focuses on the potential impacts on climate change, topography and soils, essential fish habitat, aquatic resources, vegetation, cultural resources, fish, wildlife, and food chain organisms. Each of these concerns was discussed in Section 3 of the EA and further described herein. No other adverse environmental impacts are anticipated. Therefore, the Corps has determined that the net effect of this action on the environmental factors, which were evaluated in the previously enumerated public interest factors, would be negligible.				X		
5. Wetlands: The evaluation of impacts of the proposed action on wetlands has been analyzed in Section 3.4, Wetlands, in the EA and here this 404(b)(1) Evaluation. The Corps has determined that the proposed action would have a negligible effect on wetlands.	X					
6. Historic Properties: The evaluation of impacts of the proposed action on historic properties has been analyzed in Section 3.10, Cultural Resources, in the EA. The Corps has determined that the proposed project would have a neutral (mitigated) effect on cultural resources in accordance with the Programmatic Agreement executed between the Corps and the GA HPD (Appendix H).	X					

Table 3: Public Interest Factors	Effects					
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
7. Fish and Wildlife Values: The evaluation of impacts of the proposed action on fish and wildlife values has been analyzed in Section 3.7, Protected Species and Section 3.8, Essential Fish Habitat in the EA and Appendix I, 404(b)(1) Evaluation. The Corps has determined that the proposed action would have a negligible effect on fish and wildlife values. There will be an overall benefit to birds due to the restoration of the bird habitat.				X		
8. Flood Hazards: The Corps has determined that the proposed action would have no effect on flood hazards.	X					
9. Floodplain Values: The Corps has determined that the proposed action would have no effect on floodplain values.	X					
10. Land Use: The study area is subject to recreational boaters, fisheries, and consists largely of riverine habitat. The proposed action would not change the present land use in the study area. Therefore, the Corps has determined that the proposed project would have no effect on land use.	X					
11. Navigation: The proposed beneficial use action would have no effect to navigation. Boaters will still be able to navigate around the restored bird habitat and the nearshore linear berm. Navigation is expected to be benefited through the proposed deepened portions of the river. Navigation is included in Section 3.1, Resources Dismissed from Detailed Analysis in the EA. The Corps has determined that the proposed action would have no effect on navigation.					X	
12. Shoreline Erosion and Accretion: The proposed beneficial use area is exposed to riverine activity. Erosion has occurred along the shoreline areas of the proposed restored bird habitat location. Placement in this location is expected to improve shoreline erosion. The Corps has determined that the proposed action would have a beneficial effect on shoreline erosion.					X	

Table 3: Public Interest Factors	Effects					
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
13. Recreation: The evaluation of impacts of the proposed action on recreation has been analyzed in Section 3.10, Recreation, in the EA. Recreational boaters mainly use the Cumberland Dividings. It is expected that boaters will be able to navigate around dredging vessels and the placement location. The Corps has determined that the proposed action would have a long-term minor beneficial effect to recreation in the proposed action area, as it would remove shoaling from the AIWW which is used by recreational boaters..					X	
14. Water Supply and Conservation: The primary raw water source for communities located within and adjacent to the Savannah Harbor is the is the Upper Floridan Aquifer, a limestone formation that runs under the entirety of Camden County, GA. The Corps has determined that the proposed action would have no effect on water supply and conservation.	X					
15. Water Quality: The evaluation of impacts of the proposed action on water quality has been analyzed in Section 3.2, Water Quality, in the EA and in this 404 (b)(1) Evaluation. The Corps has determined that the proposed action would have a negligible effect on water quality.				X		
16. Energy Needs: Energy in the form of electricity, petroleum fuels, natural gas, etc. would be used during the construction phases of the proposed action. These energy sources are readily available and are expected to be available in the future. Therefore, the Corps has determined that the proposed action would have no effect on energy needs.	X					
17. Safety: The Corps has determined that the proposed action would have no effect on safety.	X					
18. Food and Fiber Production: The proposed action area is subject to the recreational boating. The proposed action would provide no opportunity for food or fiber production. Therefore, the Corps has determined that there would be no effect to food or fiber production.	X					
19. Mineral Needs: Construction materials associated with the disposal of sediment would be used during the construction phase of the proposed action. These materials	X					

Table 3: Public Interest Factors	Effects					
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
are readily available and are expected to be available in the future. Therefore, the Corps has determined that construction of this project would have no effect on mineral needs concerns.						
20. Consideration of Property Ownership: Property ownership has been evaluated in Section 3.11, Real Estate Considerations, in the EA. The Corps has determined that the proposed action would have no effect on considerations of property ownership.	X					
21. Needs and Welfare of the People: The Corps has determined that the proposed action would have no effect on needs and welfare of the people.	X					

## 5.5. Conclusions

At this time and based on the foregoing analysis, the proposed action alternative is consistent with applicable 404(b)(1) Guidelines and state water quality standards. The Corps received concurrence on this determination from GADNR-EPD Watershed Unit on December 21, 2022. The proposed discharge activities and dredging operations would not cause or contribute to significant degradation of the waters of the United States. 

## **6. References**

USACE. 2023. Atlantic Intracoastal Waterway Cumberland Dividings Operations and Maintenance Dredging Environmental Assessment.

GHD. Atlantic Intracoastal Waterway Sediment Sampling and Analysis. W912HN21F2011-Final Report. (2021).