

**SITE PLAN FOR THE  
HURRICANE ISLAND REACH**

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**DREDGED MATERIAL MANAGEMENT PLAN  
WITH INTEGRATED ENVIRONMENTAL ASSESSMENT**

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**POOL 11  
DUBUQUE COUNTY, IA AND GRANT COUNTY, WI  
UPPER MISSISSIPPI RIVER, RIVER MILES 591-608**

**FINAL**

**APPENDIX D**

**CORRESPONDENCE**



**UPPER MISSISSIPPI RIVER  
DREDGED MATERIAL MANAGEMENT PLAN  
WITH INTEGRATED ENVIRONMENTAL ASSESSMENT**

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**SITE PLAN FOR THE  
HURRICANE ISLAND REACH**

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**POOL 11  
DUBUQUE COUNTY, IA AND GRANT COUNTY, WI  
UPPER MISSISSIPPI RIVER, RIVER MILES 591-608**

**FINAL**

**APPENDIX D-1**

**ENDANGERED SPECIES ACT COORDINATION**





REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**CORPS OF ENGINEERS, ROCK ISLAND DISTRICT**  
**CLOCK TOWER BUILDING - PO BOX 2004**  
**ROCK ISLAND, ILLINOIS 61204-2004**

March 9, 2017

Regional Planning and Environmental  
Division North (RPEDN)

Ecological Services Field Office  
U.S. Fish and Wildlife Service  
1511 47th Avenue  
Moline, IL 61265

ATTN: Kraig McPeek and Sara Schmuecker

Dear Kraig and Sara:

The U.S. Army Corps of Engineer (Corps), Rock Island District (District), has identified the need for a new placement site for the long-term Dredged Material Management Program (DMMP) at the Hurricane Island Reach (Project) in Pool 11 of the Upper Mississippi River (UMR). The Hurricane Island Dredge Cut and Finley's Dredge Cut are located within the navigation channel between river miles (RM) 599 and 591, Dubuque County, IA, and Grant County, WI (Encl 1). With the receipt of this letter, the District is requesting the initiation of Endangered Species Act Section 7 Consultation between the District and U.S. Fish and Wildlife Service (USFWS) on this Project. The District obtained a list, on January 19, 2017, of federally endangered and threatened species with preferred habitat types using the USFWS Information for Planning and Conservation website and USFWS species fact sheets. The District concludes the Project is not likely to adversely affect any of those listed species (Table 1).

Currently, historic bankline placement sites are the only sites available when dredging at the Hurricane Island Dredge Cut. On the right descending bank, a historic bankline placement site at Finley's Landing (RM 596R) has been frequently used and is at full capacity. The District has identified approximately 11 acres at an existing island as the preferred placement area (RM 594L). This site will be designed as a temporary "bathtub" with the inner circle filled as the cut is dredged and placed to hold approximately 200,000 cubic yards of dredged material (Encl 2). Once this bathtub is near full capacity (estimated at year 20), the District will remove the material and relocate to a permanent location on a nearby farm field/quarry site at RM 592L (Encl 1). Wetland impacts are anticipated from the bathtub construction and will require compensatory mitigation, as required under the Clean Water Act, Section 404.

In response to coordination with the On-Site Inspection Team (OSIT), their preferred wetland mitigation options are currently being considered to fulfill wetland mitigation requirements (Encl 3, dated March 1, 2017). According to the 2008 Compensatory Mitigation for Losses of Aquatic Resources (Mitigation Rule), proposed activities are evaluated to determine a net improvement of the function of the site. This is further defined as restoration (re-establishment or rehabilitation), enhancement, establishment (creation), buffer, or preservation

([http://www.sac.usace.army.mil/Portals/43/docs/regulatory/Guidelines\\_for\\_Preparing\\_a\\_Compensatory\\_Mitigation\\_Planf.pdf](http://www.sac.usace.army.mil/Portals/43/docs/regulatory/Guidelines_for_Preparing_a_Compensatory_Mitigation_Planf.pdf)). Preservation is defined as “removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanism. Preservation does NOT result in a gain of aquatic resource area or functions.” Since the OSIT Option 1, *Lower Hurricane Island Rip-Rap* and 2, *Rosebrook Island Rip-Rap*, include rock placement for “bankline stabilization and protection of interior wetlands”, this only demonstrates preservation and does not provide the net improvement under the 2008 Mitigation Rule. Therefore, preference was given to the OSIT Option 3, *Bathtub Mudflat*.

In coordination with District’s Regulatory office, this option is currently being evaluated for the onsite mitigation option [Encl 4, Hydraulic Long-Term Resource Monitoring (LTRM) data was used in planning efforts to define mitigation actions as creation or enhancement]. It is important to note that an official wetland delineation has not been conducted for the bathtub and mitigation sites. In order to analyze these areas in more detail to fulfill Section 404 requirements, the District’s Regulatory staff has required a delineation once growing season is underway. Any significant changes to the proposed plan would be coordinated at that time.

**Table 1.** List of Federally-endangered and -threatened Species with Preferred Habitat Types Which Have the Potential To Occur Within Dubuque County, IA and Grant County, WI

Species	Scientific Name	Status	Habitat Types
Northern Long-Eared Bat	<i>Myotis septentrionalis</i>	Threatened	During the winter, caves and mines and during the summer, underneath flaky bark, in cavities or in crevices of both live trees and snags (dead trees).
Higgins Eye Pearlymussel	<i>Lampsilis higginsii</i>	Endangered	Larger rivers with deep water and moderate currents
Spectaclecase	<i>Cumberlandia monodonta</i>	Endangered	Large rivers where they live in areas sheltered from the main force of the river current, such as beneath rock slabs, between boulders and even under tree roots.
Mead's Milkweed	<i>Asclepias meadii</i>	Threatened	Moderately wet (mesic) to moderately dry (dry mesic) upland tallgrass prairie or glade/barren habitat characterized by vegetation adapted for drought and fire.
Northern Wild Monkshood	<i>Aconitum noveboracense</i>	Threatened	Shaded to partially shaded cliffs, algific talus slopes, or on cool, streamside sites.
Prairie Bush Clover	<i>Lespedeza leptostachya</i>	Threatened	Found only in the tallgrass prairie region
Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	Threatened	Occur most often in mesic to wet unplowed tallgrass prairies and meadows but have been found in old fields and roadside ditches.
Iowa Pleistocene Snail	<i>Discus macclintocki</i>	Endangered	Leaf litter of special cool and moist hillsides or algific talus slopes.
Hine's Emerald Dragonfly	<i>Somatochlora hineana</i>	Endangered	Spring-fed marshes and sedge meadows overlaying dolomite bedrock.
Rusty Patched Bumble Bee	<i>Bombus affinis</i>	Endangered	Grasslands and tallgrass prairies of the Upper Midwest and Northeast. Need areas that provide nectar and pollen from flowers, nesting sites (underground and abandoned rodent cavities or clumps of grasses), and overwintering sites for hibernating queens (undisturbed soil).

## DESCRIPTION OF THE PROPOSED ACTIONS

The District is preparing a DMMP Report with Integrated Environmental Assessment for implementation of the Hurricane Island Project. The report will describe the existing conditions, future without project conditions, alternative evaluation, and effects of the preferred alternative. The following sections from the draft report provide information regarding the potential steps of dredging operation, mitigation and bathtub construction, and placement of material.

***Step 1 - Gain Access to Bathtub:*** The first step for construction of the bathtub would be to gain access to the site. While the site is relatively close to the channel, some dredging will be required to allow access to dredge and construction equipment. The proposed access channel is 60 feet wide by up to 6 feet deep. This is to be performed using mechanical dredging equipment. A typical mechanical dredging operation involves a crane with a clamshell bucket loading material onto a deck barge. Once the barge has been filled, it is transported to the offload site. The deck barge is pushed as close to the offload site as possible to minimize encroachment of material. The front-end loader on board pushes the material off the deck barge, creating a pile of material. Equipment sitting at the offload site will then begin to move the material. An excavator is sometimes required to reach out and grab the material. At other times, the excavator is not needed, and the dozers are able to push the material (Photographs 1, 2, and 3). Excavated dredged material from the bathtub access would be stored at the proposed bathtub site or another existing approved placement site.



**Photograph 1.** Mechanical Dredge Placing Material on Deck Barge





**Photograph 2.** Typical Mechanical Dredging Offload



**Photograph 3.** Mechanical Placement of Fine Materials With Sand Berms at the Edges to Contain the Fines While They Decant

***Step 2 – Build Initial Work Pad:*** The second step would be construction of a work pad as a base to support heavy equipment in such highly saturated conditions. Dredged material brought over from the approach channel, Finley’s Landing, and/or the dredge cut would be used to create a work pad.

**Step 3 – Initial Working of the Material into Berms:** Once enough material has been placed for a work pad, equipment could be offloaded at the bathtub. The equipment could start construction of two of the containment berms (building an “L” shape). This enables the berms and work pads to be used for transportation of equipment to further work material.

**Step 4 - Continue to Expand Work Pads and Berms:** As more material is brought to the site, equipment would continue to expand the work pad and push up berms. Since having the berms and the work pad in place would allow more control for hydraulic dredging, either mechanical or hydraulic dredging equipment could be used to bring additional material to the site at this point.

**Step 5 - Material to the Mitigation Area:** Material is placed within the mitigation area boundaries and worked to get to the preferred wetland elevation. Once that elevation is reached, capping with fine material is needed for vegetation to reestablish. Dredging of fines would likely be performed mechanically. Dredged fine materials tend to have a high water content. To achieve the desired shape and thickness, the fine material would likely need time to decant at an existing approved placement site. Once the fine material is dried enough to use, the area will be capped and allowed to revegetate. If vegetation cannot establish on its own, a seeding mix will be applied. After the mitigation area is constructed, monitoring will be conducted over 5 years to determine success.

**Step 6 – Complete and Capping of Berms:** After enough material has been transported to the site the remaining berms could be constructed. The berms will be capped with decanted fine material and allowed to revegetate. If vegetation cannot establish on its own, a seeding mix will be applied.

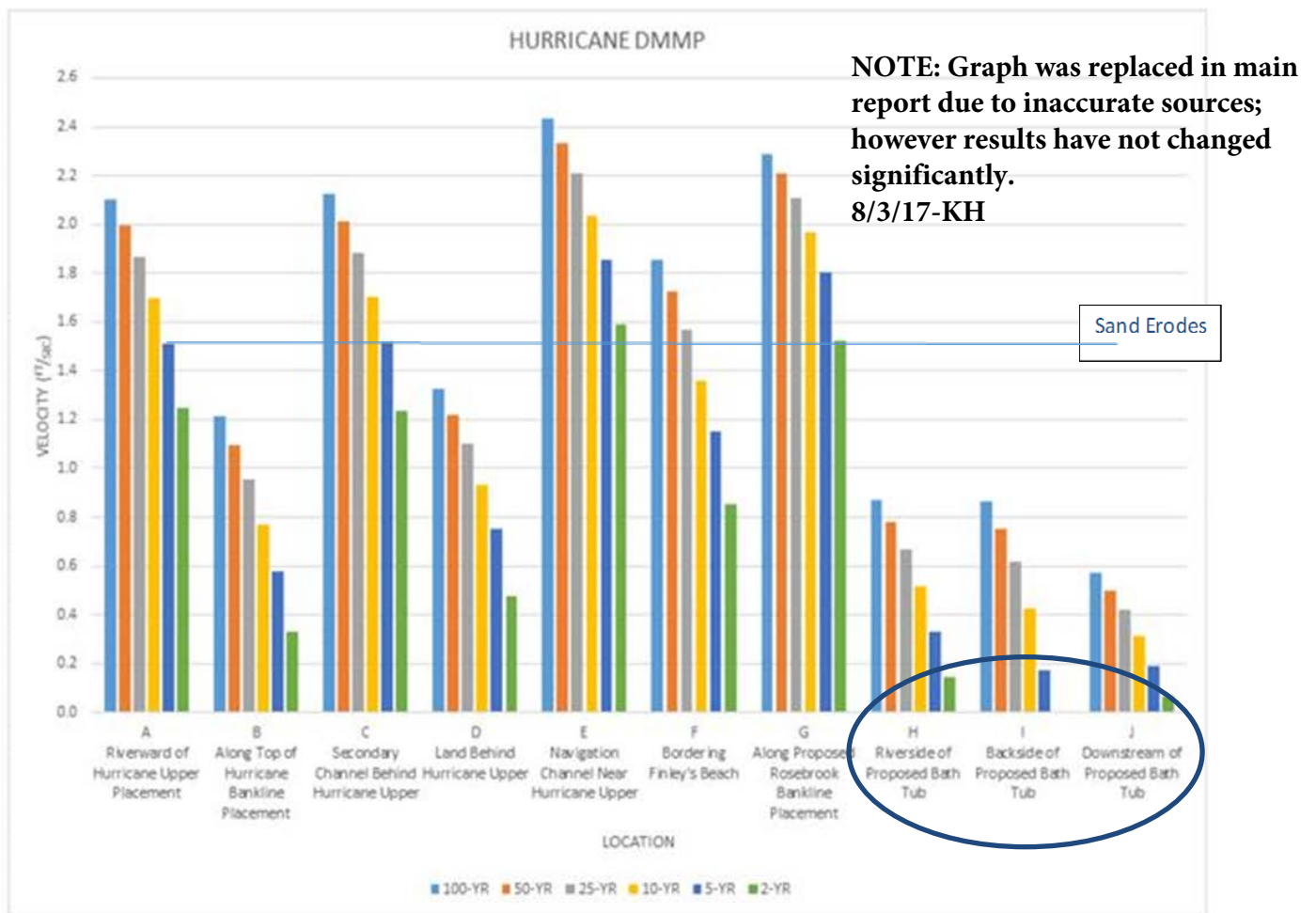
There are other possible alternatives in which each element of the plan could potentially be implemented. Other possible scenarios may occur based on any newly available information. For example, offloading to farm field/quarry site is not included, since this is anticipated at year 20 once the bathtub is near full capacity and new information is likely at that time.

### **SPECIES STATUS IN THE ACTION AREA - *Higgins Eye Pearlymussel***

Due to the presence of potential Higgins Eye’s habitat adjacent to the proposed bathtub site, the District retained Ecological Specialists, Inc. (ESI) to conduct a mussel survey. As required under this contract, field investigations focused in the waters surrounding the bathtub site as well as waters adjacent to the Hurricane Island placement site (Encl 5, Mussel Survey Sample Sites). The survey included quantitative and qualitative sampling procedures per the 2013 US Fish and Wildlife Service’s Upper Mississippi River Mussel Sampling Guidelines. ESI conducted the survey October 11–14, 2016, resulting in the capture of 20 mussel species, including Higgins-eye pearly mussel (*Lampsilis higginsii*). The survey collected four individual *L. higginsii*, at four separate sample sites. These sample sites ranged from 950 feet (downstream of approach channel) to over 2,000 feet (downstream of mitigation area boundary) (Encl 6a and 6b)

### EFFECTS OF THE PROPOSED ACTIONS

Historic hydraulic data was analyzed to determine the flow velocities and elevations necessary to prevent erosion and sand migration. The District determined a berm height of elevation 608 mean sea level (msl) is necessary to reduce erosion during high water for this particular area of the UMR. In addition, maximum flow velocities for sand movement at the bathtub is 1.5 ft/sec (Figure 1, Sites H-J) which means sand at the bathtub will not migrate at the 0.85 ft/sec of a 100 year event.



**Figure 1.** Flow Velocities for Hurricane Island DMMP

The maximum flow velocities for clay at the bathtub is 3ft/sec, which means the berms will erode only at well above a 100-year flood event. With these low rates, erosion of dredged material from flow velocity is not anticipated at the bathtub site. However, erosion of the dredged material is possible from wind wave forces for river stages exceeding the berm height and for high wind conditions. If these conditions occur when the bath tub is partially full, eroded sand should remain within the bath tub contained by the berm. If these conditions occur when the bathtub is full, the material should be trapped in the vegetated berm. Additionally, the proposed wetland mitigation area will also capture any drifted sediment.

## **EFFECTS DETERMINATION AND CONSERVATION MEASURES**

According to the *Evaluating Environmental Effects of Dredged Material Management Alternatives-A Technical Framework*, United States Environmental Protection Agency (USEPA) and Corps, May 2004, any discharge from mechanical dredging has been determined to be minimal. Utilizing mechanical dredging for the bathtub approach reduces impacts to the local water column and its associated aquatic communities. Placement on an existing island utilizes the higher land reduces impacts to the aquatic community. In designing the bathtub and approach channel, care was taken to avoid and minimize impacts to mussels in the area. The approach channel was decreased in size and moved to an area with few to no mussels based on the 2016 survey results (Encl 6a). Berms will be constructed to contain the material as the interior is filled. The berms have been designed at an elevation high enough (608 ft msl) to reduce erosion during high water. The berms will then be capped with fine materials (silt and clay) and allowed to vegetate to ensure stabilization. The proposed wetland mitigation area includes a 50-foot buffer between the edge of mitigation area and the existing mussels to further reduce any impacts to nearby mussel communities.

In planning and coordination efforts, the District has taken the aforementioned conservation measures to minimize and avoid impacts to listed species for the Hurricane Island DMMP. It is determined the proposed Project is not likely to adversely affect any threatened or endangered species or their critical habitat (Table 2). Therefore, the District is requesting USFWS to provide any additional recommendations that should be implemented in order to proceed with the Project. This coordination is in compliance with the legal requirements set forth under Section 7 of the Endangered Species Act (15 U.S.C. 1536 (c)) and applicable guidance documents.

**Table 2.** Determination of Impacts From Proposed Action to Federally-endangered and -threatened Species

Species	Scientific Name	Status	Determination of Impacts
Northern Long-Eared Bat	<i>Myotis septentrionalis</i>	Threatened	No Effect
Higgins Eye Pearlymussel	<i>Lampsilis higginsii</i>	Endangered	Not Likely to Adversely Affect
Spectaclecase	<i>Cumberlandia monodonta</i>	Endangered	No Effect
Mead's Milkweed	<i>Asclepias meadii</i>	Threatened	No Effect
Northern Wild Monkshood	<i>Aconitum noveboracense</i>	Threatened	No Effect
Prairie Bush Clover	<i>Lespedeza leptostachya</i>	Threatened	No Effect
Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	Threatened	No Effect
Iowa Pleistocene Snail	<i>Discus macclintocki</i>	Endangered	No Effect
Hine's Emerald Dragonfly	<i>Somatochlora hineana</i>	Endangered	No Effect
Rusty Patched Bumble Bee	<i>Bombus affinis</i>	Endangered	No Effect

Please provide any other comments, concerns, or questions you may have regarding this Project within 30 days of receipt of this letter. Address your responses to Mrs. Kat Herzog of our Environmental Planning Branch by telephone (309) 794-5231, in writing to our address above, ATTN: Environmental Planning Branch (Herzog), or email: [kathryn.herzog@usace.army.mil](mailto:kathryn.herzog@usace.army.mil).

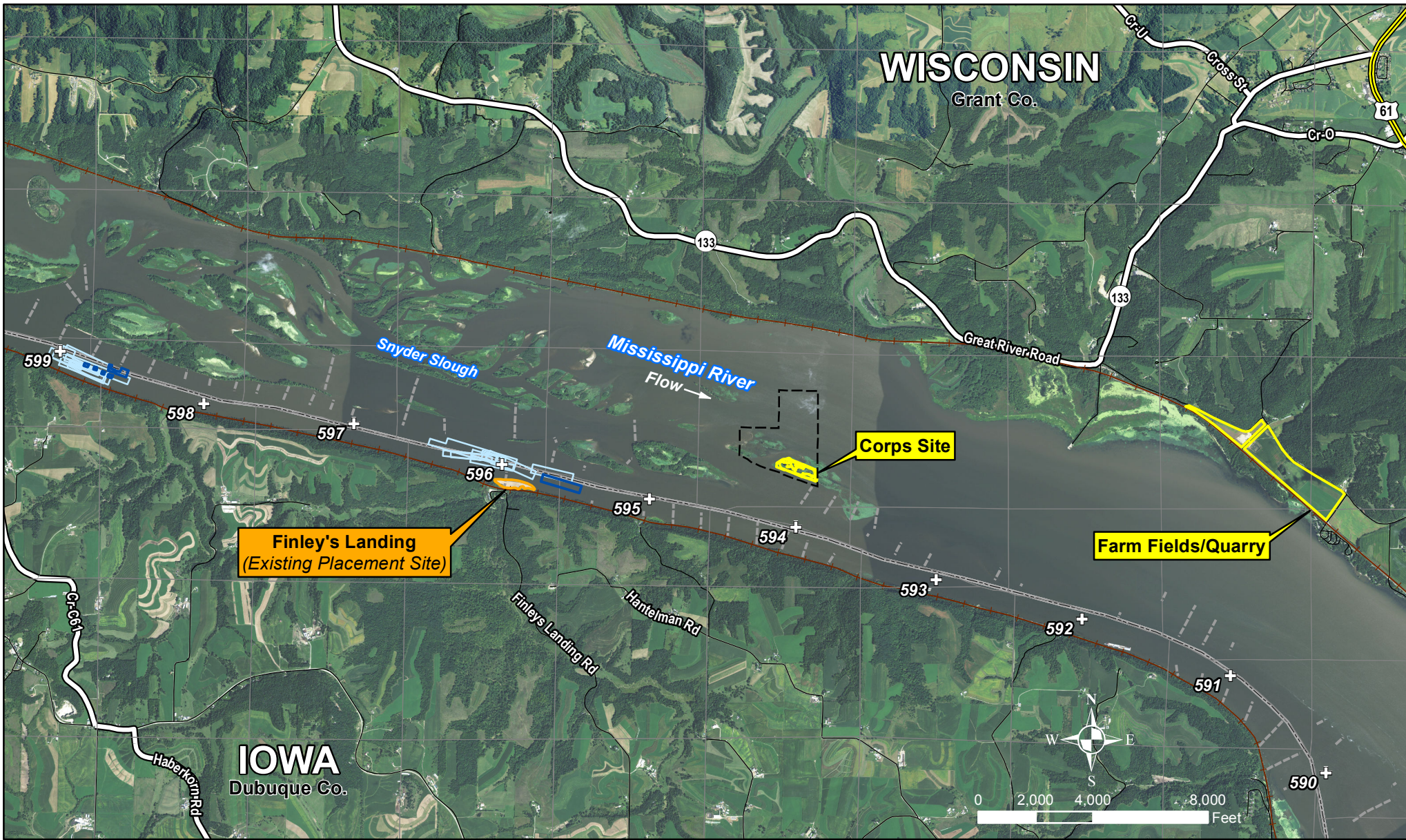
Sincerely,



James A. Ross  
Acting Chief  
Environmental Planning Branch (RPEDN)

Encls (7)



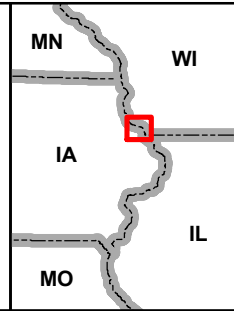


**Legend**

- |                          |                          |                          |             |             |
|--------------------------|--------------------------|--------------------------|-------------|-------------|
| Potential Placement Site | Corps Property Boundary  | Dredging Event 2001-2016 | US Highways | Railroads   |
| Section Lines            | Dredging Event 1968-2000 | Major Roads              | Streets     | Wingdams    |
|                          |                          |                          |             | River Miles |



Imagery Source: USDA NAIP (2014)  
Map Production Date: January 11, 2017

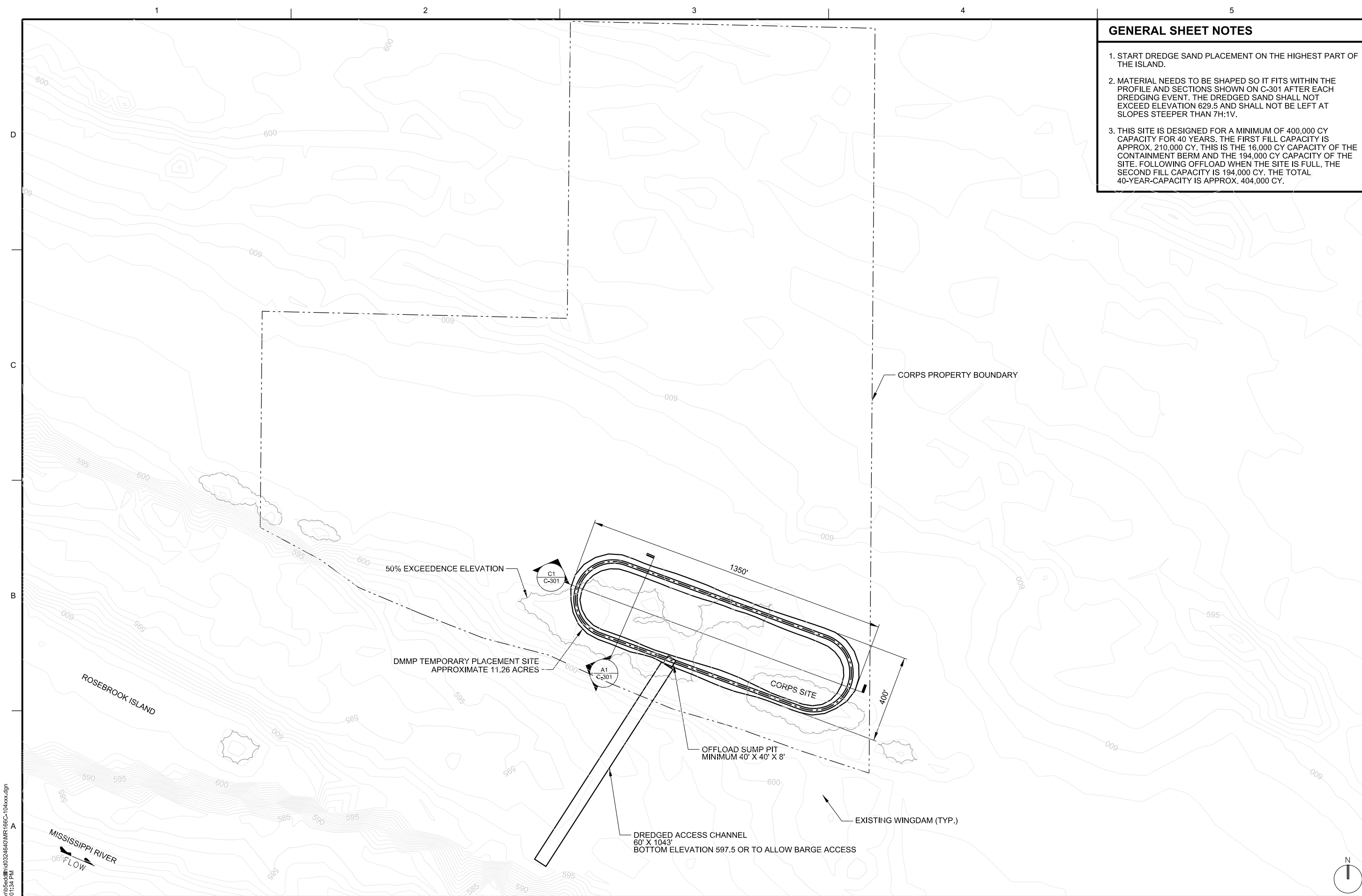


**Overview**

*Feasibility - Site Plan*  
**UMR - Pool 11  
Hurricane Isl. &  
Finley's Landing DMMP**







**GENERAL SHEET NOTES**

1. START DREDGE SAND PLACEMENT ON THE HIGHEST PART OF THE ISLAND.
2. MATERIAL NEEDS TO BE SHAPED SO IT FITS WITHIN THE PROFILE AND SECTIONS SHOWN ON C-301 AFTER EACH DREDGING EVENT. THE DREDGED SAND SHALL NOT EXCEED ELEVATION 629.5 AND SHALL NOT BE LEFT AT SLOPES STEEPER THAN 7H:1V.
3. THIS SITE IS DESIGNED FOR A MINIMUM OF 400,000 CY CAPACITY FOR 40 YEARS. THE FIRST FILL CAPACITY IS APPROX. 210,000 CY. THIS IS THE 16,000 CY CAPACITY OF THE CONTAINMENT BERM AND THE 194,000 CY CAPACITY OF THE SITE. FOLLOWING OFFLOAD WHEN THE SITE IS FULL, THE SECOND FILL CAPACITY IS 194,000 CY. THE TOTAL 40-YEAR-CAPACITY IS APPROX. 404,000 CY.



MARK	DESCRIPTION

DESIGNED BY:	DATE:	SOLICITATION NO.:
ELS		

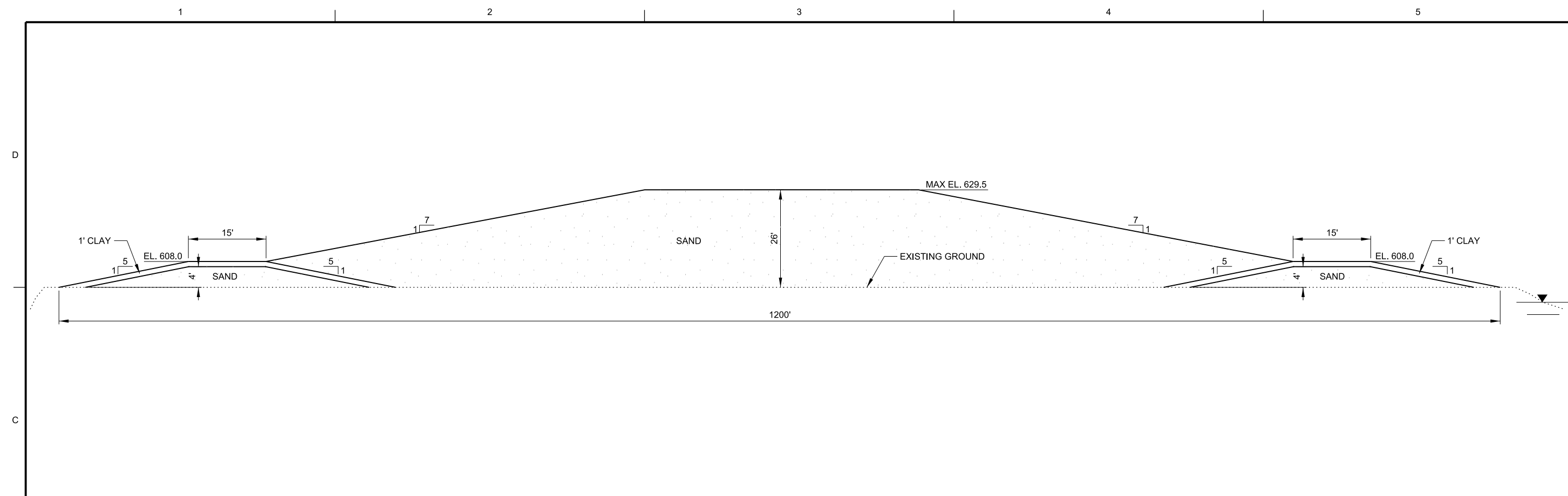
MISSISSIPPI RIVER  
DUBUQUE COUNTY, IA AND GRANT COUNTY, WI  
HURRICANE ISLAND DAMP FEASIBILITY  
CORPUS SITE PLAN

Sheet ID  
**C-104**

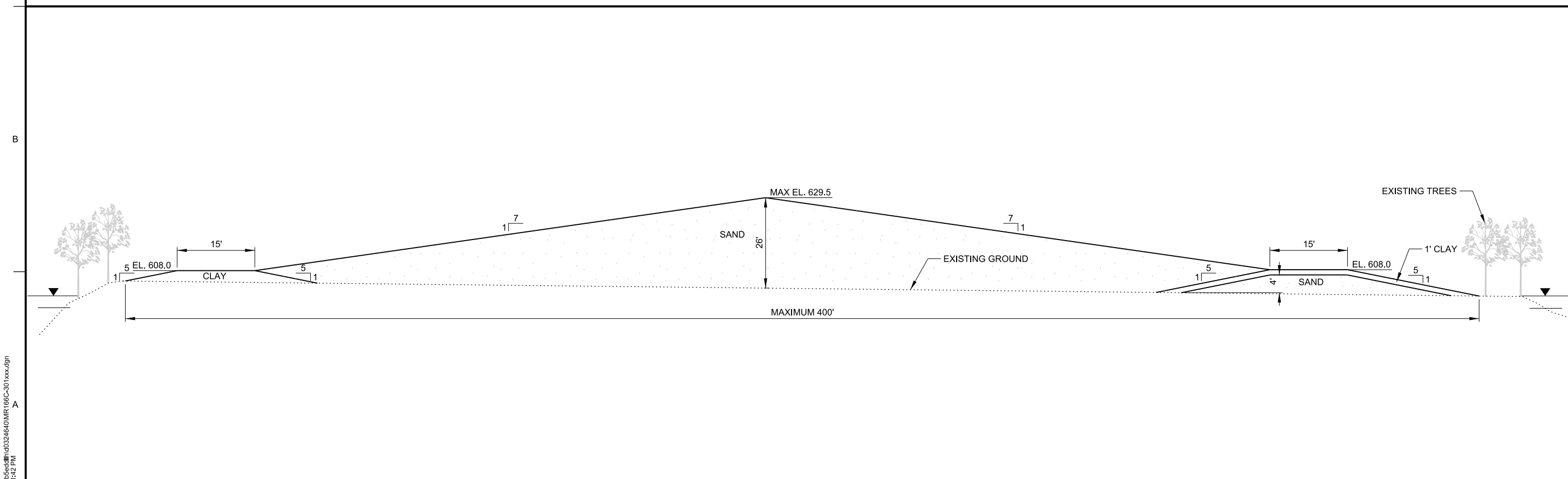
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BDEDLH

**A1 CORPUS SITE PLAN**  
SCALE: 1"=200'-0"  
0 200' 400'





**C1** CORPS ISLAND TYPICAL CROSS SECTION  
SCALE : NO SCALE



**A1** CORPS ISLAND TYPICAL CROSS SECTION  
SCALE : NO SCALE

APPR.	
DATE	
DESCRIPTION	
MARK	

DESIGNED BY:	DATE:	SOLICITATION NO.:
DRAWN BY:	CHK BY:	CONTRACT NO.:
SUBMITTED BY:	H/A:	PROJECT CODE:
PLOT SCALE:	PLOT DATE:	MR186
AS SHOWN	FILE NAME:	
SIZE:	ANSI D	MR186C-301xxx.dgn

MISSISSIPPI RIVER  
DUBUQUE COUNTY LA AND GRANT COUNTY WI  
HURRICANE ISLAND DAMP FEASIBILITY  
TYPICAL SECTIONS

Sheet ID  
**C-301**

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# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Rock Island Field Office  
1511 47<sup>th</sup> Avenue  
Moline, Illinois 61265  
Phone: (309) 757-5800 Fax: (309) 757-5807

IN REPLY REFER  
TO:

FWS/IL-IA FO

March 1, 2017

Colonel Craig Baumgartner  
Attn: Kathryn Herzog, Environmental Planning  
U.S. Army Corps of Engineers  
Rock Island District  
Clock Tower Building, P.O. Box 2004  
Rock Island, Illinois 61204-2004

Dear Col. Baumgartner:

Thank you for coordinating the Hurricane Island Dredged Material Management Plan (DMMP) with the On-Site Inspection Team (OSIT). The U.S. Army Corps of Engineers (USACE) draft DMMP document identifies temporary and permanent dredge material placement sites for the material generated from the Hurricane Island Reach of the navigation channel. The Hurricane Island dredge cut is located within Pool 11 of the Upper Mississippi River between River Miles (RM) 599 to 591, Dubuque County, Iowa and Grant County, Wisconsin. The preferred alternative consists of dredge material placement on approximately 11 acres at an existing island, designated the "bathtub" site, within Corps property boundary (RM 594L). Placement at the bathtub site will result in impacts to approximately 11 acres of shallow/deep marsh and sedge meadow wetlands.

The OSIT convened on February 14, 2017, to discuss potential compensatory mitigation options for the wetland impacts from the construction of the temporary dredge material placement site (bathtub). These discussions included mitigation banks, in-lieu fee programs, and permittee responsible options. As a result of this discussion, the OSIT recommends the following permittee-responsible options for further consideration:

1. **Lower Hurricane Island Rip Rap (RM 597-589.1)** includes the placement of approximately 2,000 linear feet of rock along the lower portion of Hurricane Island, bordering the navigation channel. Rock placement at this location would provide bankline stabilization and protection of interior wetlands. Additionally, this option has the potential to result in navigation channel maintenance benefit through the reduction of eroded material being deposited within the channel.
2. **Rosebrook Island Rip Rap (RM 594.6-595.2)** includes the placement of approximately 3,000 linear feet of rock around the head of the island and extending along the right

descending bankline. This option also includes sand placement behind the rock along the right descending bankline of the island. Placement in these locations would provide bankline stabilization and protection of the interior wetlands. Additionally, pockets may be made between the rock/sand placement and the existing island to create isolated wetlands for amphibian and reptile benefits.


3. **Bathtub Mudflat (RM 593.8-594.0)** includes an extension of the downstream end of the proposed bathtub placement site. The extension would be constructed of rock and sand to mimic the structure and function of the wetland area lost within the placement footprint in an immediately adjacent location.

A depiction of these proposed mitigation sites are attached.

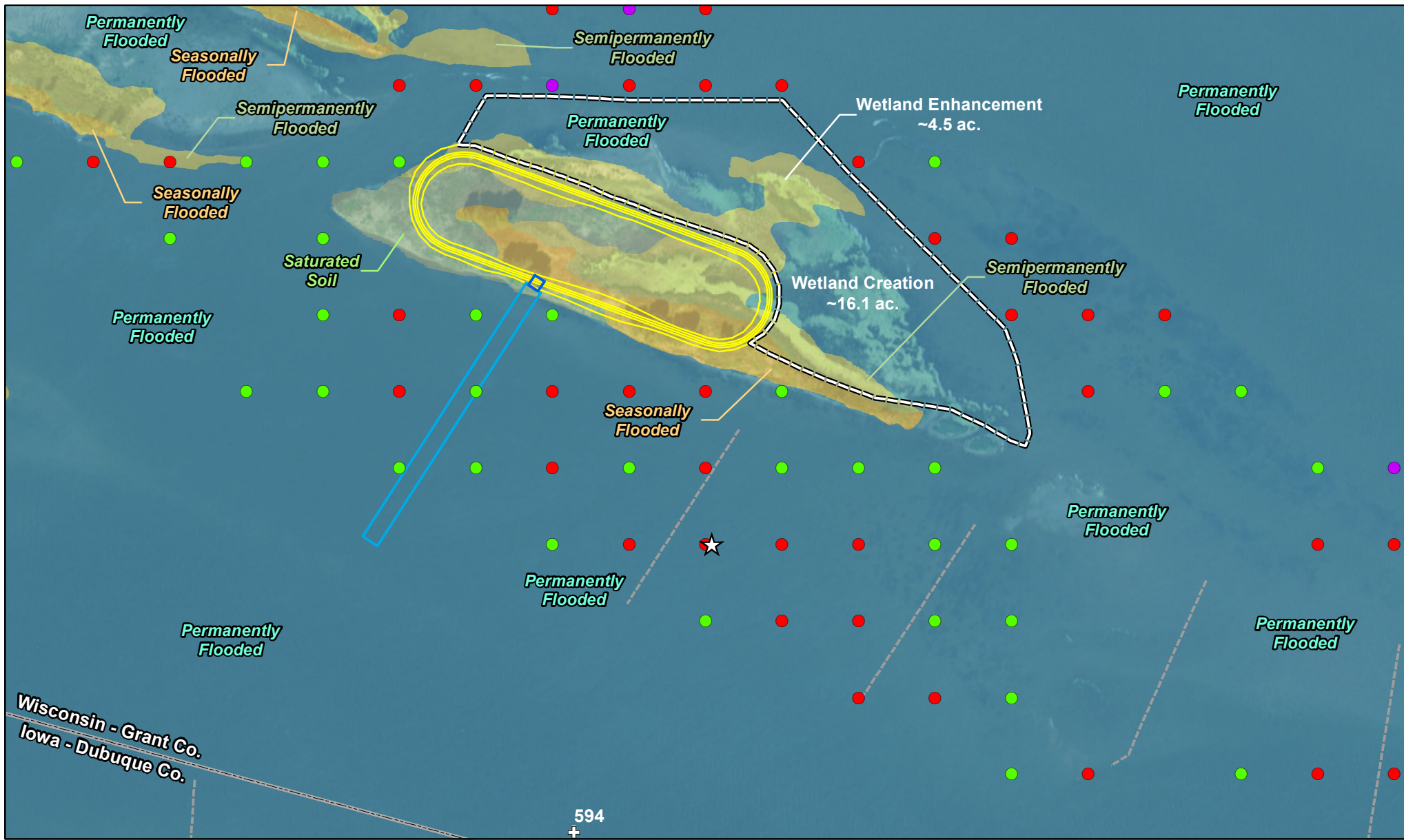
A freshwater mussel survey conducted by Ecological Specialists, Inc. in 2016, identified mussel resources, including the federally endangered Higgins eye pearl mussel (*Lampsilis higginsii*), as occurring within the project area. The OSIT recognizes that the recommended mitigation options may have the potential to affect mussel resources. As a result, OSIT will commit to assessing the mussel resources from the recommended mitigation locations, as needed, to facilitate selection of the mitigation sites discussed above. If federal or state-listed mussel resources are identified, consultation with the appropriate agencies and/or relocation may be warranted.

The OSIT appreciates the continued coordination of the DMMP provided by the USACE on the Upper Mississippi River. If you have any questions concerning our comments, please contact me at (309) 757-5800, extension 203.

Sincerely,

  
For Sara Schmuecker  
OSIT Chair

cc: IADNR (Griffin, Hansen, Gritters)  
WIDNR (Janvrin, Rasmussen, Fischer, Kelly)  
USFWS (McPeck, Baylor, Jones, Woyczik)  
USACE (Afflerbaugh)



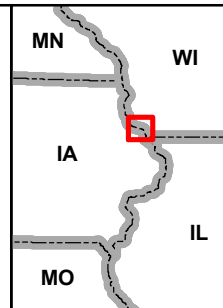
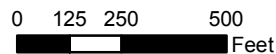
**Legend**

- Potential Placement Site
- Mitigation Area
- Dredged Access Channel
- Offload Sump Pit
- State Boundary
- Wing Dams
- River Miles

**Mussel Survey**

- Live Mussels (No)
- Live Mussels (Yes)
- Live Mussels (Yes, 10+)
- Higgins Eye (1x)

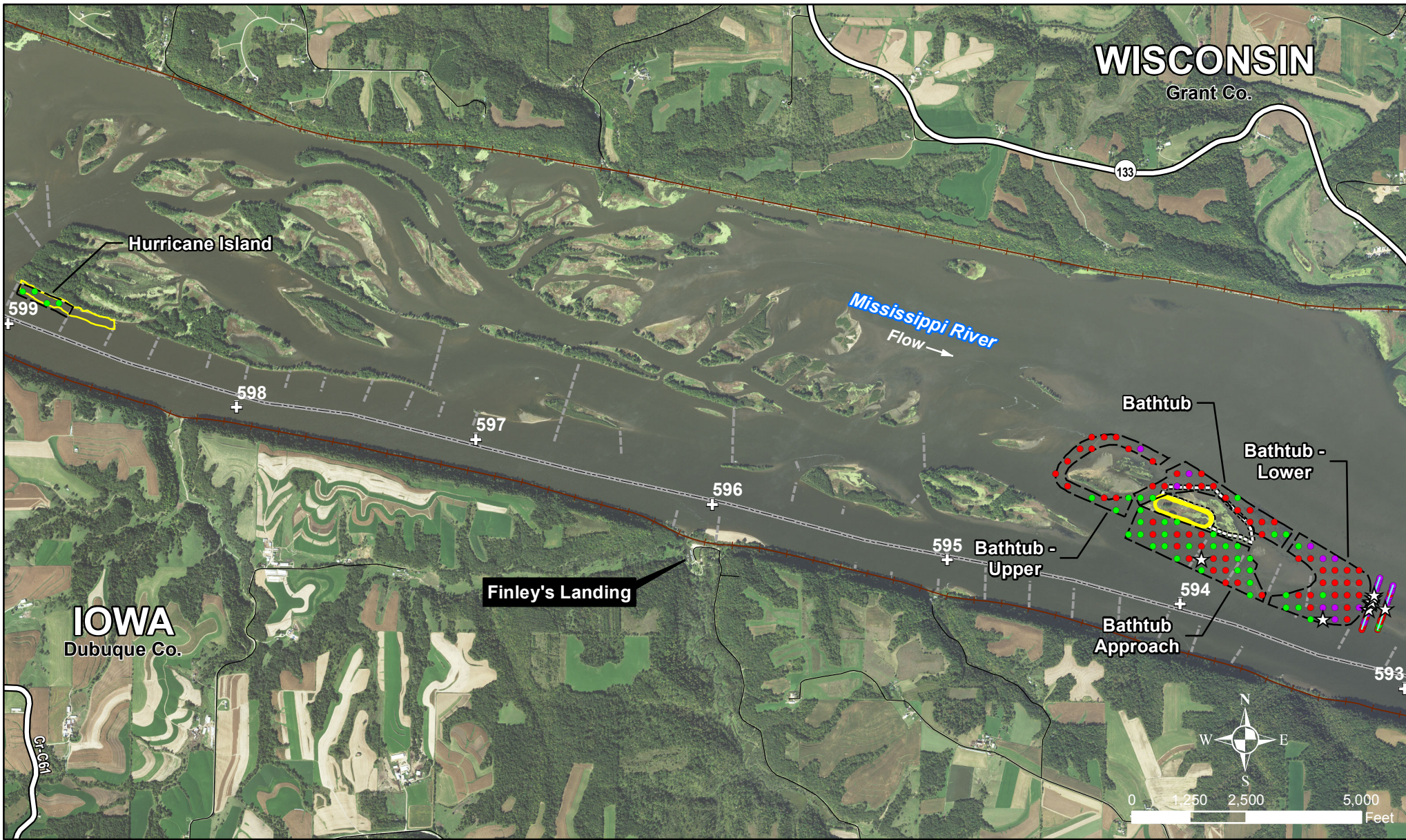
Imagery Source: USDA NAIP (2015)



**Bathtub Approach**  
 Mussel Survey  
 UMR - Pool 11  
 Hurricane Isl. &  
 Finley's Landing DMMP







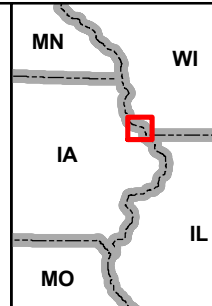
### Legend

- Potential Placement Sites
- Mitigation Area
- State Boundary
- Wing Dams
- River Miles

### Mussel Survey

- Mussel Survey Area
- Transects
- Live Mussels (No)
- Live Mussels (Yes)
- Live Mussels (Yes, 10+)
- Higgins Eye (12x)

Imagery Source:  
USDA NAIP (2015)

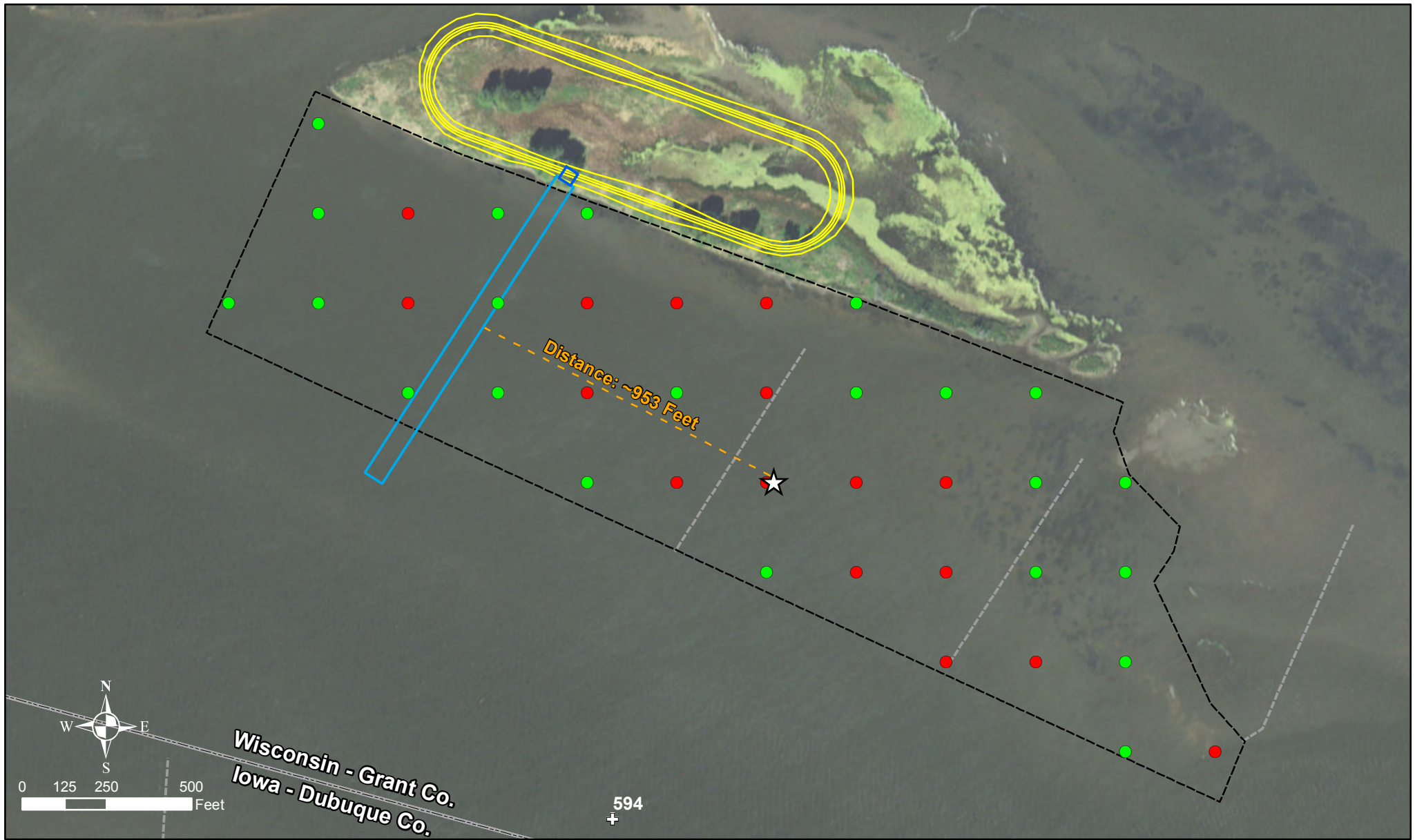


### Overview

Mussel Survey  
**UMR - Pool 11**  
**Hurricane Isl. & Finley's Landing DMMP**







**Legend**

- Potential Placement Site
- Dredged Access Channel
- Offload Sump Pit
- State Boundary
- Wing Dams
- + River Miles

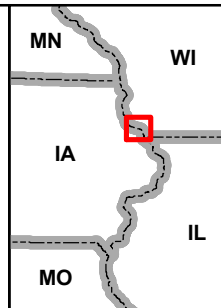


US Army Corps of Engineers  
Rock Island District

Imagery Source: USDA NAIP (2015)

Mussel Survey

- Mussel Survey Area
- Live Mussels (No)
- Live Mussels (Yes)
- Live Mussels (Yes, 10+)
- ☆ Higgins Eye (1x)

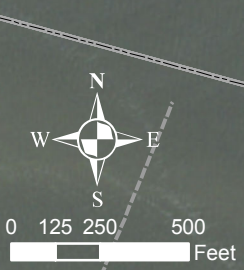
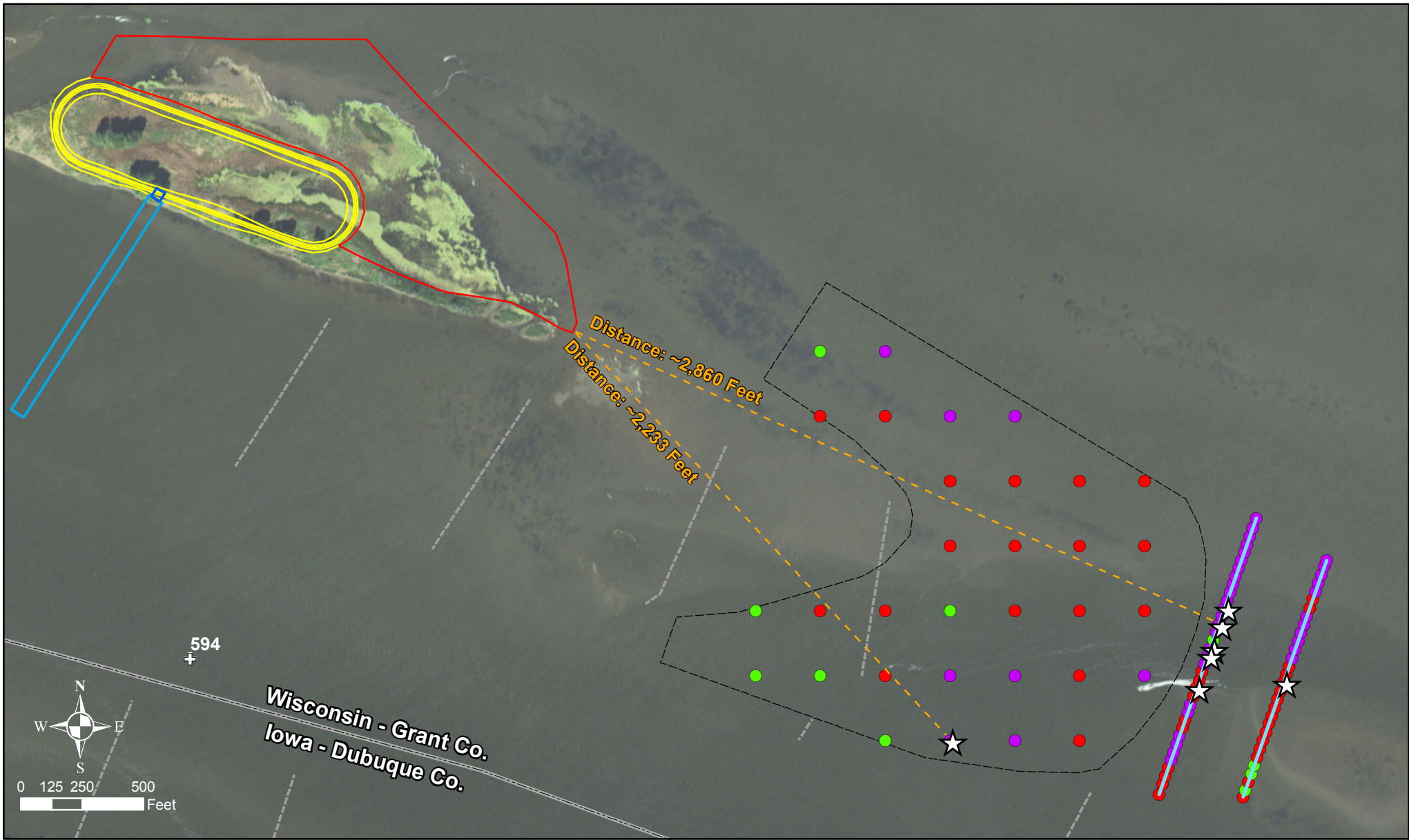


**Bathtub Approach**

*Mussel Survey*

**UMR - Pool 11  
Hurricane Isl. &  
Finley's Landing DMMP**





Wisconsin - Grant Co.  
Iowa - Dubuque Co.

### Legend

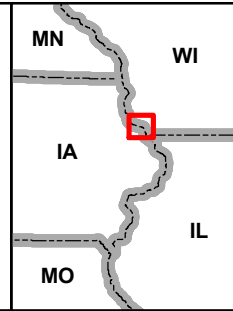
- Potential Placement Site
- Mitigation Area
- Dredged Access Channel
- Offload Sump Pit
- State Boundary
- Wing Dams
- + River Miles



Imagery Source: USDA NAIP (2015)

### Mussel Survey

- Mussel Survey Area
- Transects
- Live Mussels (No)
- Live Mussels (Yes)
- Live Mussels (Yes, 10+)
- ☆ Higgins Eye (11x)



**Bathtub - Lower**  
*Mussel Survey*  
**UMR - Pool 11**  
**Hurricane Isl. & Finley's Landing DMMP**





# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Rock Island Field Office  
1511 47<sup>th</sup> Avenue  
Moline, Illinois 61265  
Phone: (309) 757-5800 Fax: (309) 757-5807

IN REPLY REFER

TO:

FWS/IL-LA FO

March 23, 2017

James Ross, Acting Chief, Environmental Planning Branch  
Attn: Kathryn Herzog, Environmental Planning Branch  
U.S. Army Corps of Engineers  
Rock Island District  
Clock Tower Building, P.O. Box 2004  
Rock Island, Illinois 61204-2004

Dear Mr. Ross:

Thank you for the opportunity to review your 2017 draft Upper Mississippi River Dredged Material Management Program with Integrated Environmental Assessment for the Hurricane Island Reach (draft DMMP) and your March 9, 2017, letter requesting initiation of Section 7 consultation. The U.S. Army Corps of Engineers (USACE) is currently proposing the long-term placement of dredged material from the Hurricane Island Reach dredge cut of the navigation channel. The Hurricane Island dredge cut is located within Pool 11 of the Upper Mississippi River between River Miles (RM) 591 to 599, Dubuque County, Iowa, and Grant County, Wisconsin. The preferred alternative consists of dredged material placement on approximately 11 acres at an existing island, designated the "bathtub" site, within Corps property boundary (RM 594L).

In your consultation letter of March 9, 2017, ten federally threatened or endangered species were identified as potentially occurring within the project area. Determinations of no effect were made for the northern long-eared bat (*Myotis septentrionalis*), spectaclecase mussel (*Cumberlandia monodonta*), Mead's milkweed (*Asclepias meadii*), northern wild monkshood (*Aconitum noveboracense*), prairie bush clover (*Lespedeza leptostachya*), western prairie fringed orchid (*Platanthera praeclara*), Iowa Pleistocene snail (*Discus macclintocki*), Hine's emerald dragonfly (*Somatochlora hineana*), and the rusty patched bumble bee (*Bombus affinis*); therefore, these nine species will not be discussed further. It was determined that the project, as proposed, may affect, but is not likely to adversely affect the federally endangered Higgins eye pearl mussel (*Lampsilis higginsii*).

A freshwater mussel survey of the project area was conducted by Ecological Specialists, Inc. in October 2016. The survey resulted in the identification of 20 mussel species, including four Higgins eye pearl mussel individuals. The Higgins eye pearl mussel individuals were collected between 950 to 3,000 feet downstream of the proposed bathtub placement site. The footprint of

the bathtub disposal site has since been configured to avoid potential impacts to locations of identified Higgins eye pearlymussel resources. Additionally, an access channel will be mechanically dredged to allow barge access to the disposal site. The 60 feet wide by 6 feet deep access channel has been designed to avoid potential impacts to listed mussel resources.

In order to provide protection from sediment erosion and deposition to mussel resources identified downstream of the bathtub site, containment berms will be constructed around a portion of the bathtub site prior to dredged material placement. Dredged material placement inside the berms will begin at the upstream end, moving downstream as the site fills. Per our telephone conversation with Kat Herzog of USACE on March 15, 2017, a series of weirs will also be constructed within the bathtub placement site to further reduce erosion of placed material. As material is available, the containment berms will be completed, closing off the bathtub to the river. At this time, the berms will be capped with fines and allowed to revegetate to further prevent sediments from being transported downstream. If vegetation cannot establish on its own, a seeding mix will be applied. The USACE has conducted high water and flow velocity modeling to demonstrate and support berm construction to an elevation necessary to reduce erosion during high water events and the likelihood of downstream material migration. Further, modeling indicates that any sand erosion resulting from river stages exceeding the berm height when the bathtub is partially full should remain within the bathtub contained by the berm. Collectively, these efforts will reduce potential impacts to downstream mussel resources. Therefore, we concur that the project, as proposed, may affect, but is not likely to adversely affect, the Higgins eye pearlymussel.

Once the bathtub placement site has reached full capacity, the USACE proposes to remove the material and relocate it to a permanent location on a nearby upland farm field/quarry site at RM 592L. Movement of the dredged material to the upland disposal site is not anticipated until the year 2027. As a result, potential impacts to freshwater mussel resources for this action will not be assessed at this time. If potential impacts to federally listed mussel species are identified prior to this action, consultation should be initiated.

As a result of wetland impacts from the proposed dredged material placement site, compensatory mitigation is required to fulfill the 2008 Compensatory Mitigation for Losses of Aquatic Resources rule and Section 404 requirements. The On-Site Inspection Team (OSIT) issued a letter on March 1, 2017, recommending consideration of three on-site mitigation projects. The USACE has given preference to Option 3, Bathtub Mudflat, which includes an extension of the downstream end of the proposed bathtub placement site. The downstream extension would be constructed of rock and sand to mimic the structure and function of the wetland area lost within the placement footprint in an immediately adjacent location. The footprint of this mitigation area was not surveyed during the October 2016 mussel survey due to shallow water conditions. The proposed wetland mitigation area includes a 50-foot buffer between the edge of the mitigation area and the existing mussel resources to reduce potential impacts. The Bathtub Mudflat in addition to other mitigation options are currently being reviewed by the USACE. Consultation should be initiated if the selected mitigation plan results in potential impacts to federally listed species.

Additionally, the U.S. Fish and Wildlife Service Refuges and Ecological Services recommend



the following draft DMMP changes:

- Page 1, Section 1.4 Authorization: Update Illinois Waterway to Upper Mississippi River.
- Page 1, Section 1.4 Authorizations: Please consider a statement identifying management of the project area by the Upper Mississippi River National Wildlife Refuge.
- Page 7, Section 1.11 Objectives and Constraints: Under the Constraints section, please consider updating the text of “Many sites near the Hurricane Island Dredge Cut include impacts to federally-listed species and cannot be disturbed” to “Many sites near the Hurricane Island Dredge Cut were identified to have listed species concerns, resulting in efforts to avoid and minimize impacts.”
- Page 11, Section 2.2.4 Biota: Update county names.
- Pages 14 – 19, Alternative Plans: Please consider references to FWS fee-titled land, as appropriate.
- Pages 16 - 19, Section 3.2 Evaluation of Alternative Plans: Please include updated mitigation discussions and options throughout the report, as presented in the OSIT’s letter of March 1, 2017.
- Page 31, Section 5.5, Step 5 – Complete and Capping of Berms: Please include a discussion regarding where the dredged fines will be obtained.
- Page 34, Sections 6.1.2 and 6.1.3: Consider adding reference to USFWS Regional Historic Preservation Officer coordination for alternatives on FWS fee-titled land, as appropriate.

This letter provides comments under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); and the Endangered Species Act of 1973, as amended.

Should the project be modified or new information indicate federally listed species may be affected, consultation should be initiated. Thank you for the opportunity to provide comments. If you have any questions concerning our comments, please contact Sara Schmuecker of my staff at (309) 757-5800, extension 203.

Sincerely,



Kraig McPeck  
Illinois-Iowa Field Office Supervisor



**From:** [Schmuecker, Sara](#)  
**To:** [Herzog, Kathryn M CIV USARMY CEMVR \(US\)](#)  
**Subject:** [Non-DoD Source] Re: Slight change to HI  
**Date:** Tuesday, March 28, 2017 12:50:59 PM

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Kat,

We concur that the proposed 100 ft wide approach channel to the bathtub placement site may affect, but is not likely to adversely affect the Higgins eye pearlymussel (*Lampsilis higginsii*). NLAA concurrence for the 60 ft access channel was originally provided in our consultation letter for the UMR Hurricane Island DMMP, dated March 23, 2017.

Regards,

Sara Schmuecker  
U.S. Fish and Wildlife Service  
Illinois - Iowa Field Office  
1511 47th Avenue, Moline, IL 61265  
309-757-5800 x203

On Tue, Mar 28, 2017 at 7:17 AM, Herzog, Kathryn M CIV USARMY CEMVR (US) <Kathryn.Herzog@usace.army.mil <<mailto:Kathryn.Herzog@usace.army.mil>> > wrote:

Good morning Sara,

We are finalizing the report for Hurricane Island and have a slight revision to the approach channel for the bathtub. In communicating with OD-Goetz crew, they require a wider channel than the proposed 60 ft. They requested 100ft, which was changed to the attached figure. You can note that the channel still stays in the "green" zone where no mussels were found. It's not a significant change, but can you send me your concurrence for documentation purposes? Feel free to call me if you have any questions.

Thanks,  
Kat

Kat Herzog-Biologist  
309-794-5231 (w)  
United States Army Corps of Engineers  
Environmental Planning Section  
St. Paul District at Rock Island  
Clock Tower Building  
P.O. Box 2004  
Rock Island, IL 61204-2004



**UPPER MISSISSIPPI RIVER  
DREDGED MATERIAL MANAGEMENT PLAN  
WITH INTEGRATED ENVIRONMENTAL ASSESSMENT**

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**SITE PLAN FOR THE  
HURRICANE ISLAND REACH**

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**POOL 11  
DUBUQUE COUNTY, IA AND GRANT COUNTY, WI  
UPPER MISSISSIPPI RIVER, RIVER MILES 591-608**

**FINAL**

**APPENDIX D-2**

**NATIONAL HISTORIC PRESERVATION ACT  
COORDINATION**





REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS - ROCK ISLAND DISTRICT  
CLOCK TOWER BUILDING - PO BOX 2004  
ROCK ISLAND, ILLINOIS 61204-2004

January 31, 2017

Regional Planning and Environmental  
Division North (RPEDN)

SEE DISTRIBUTION LIST

The U.S. Army Corps of Engineers, Rock Island District (District), has identified the need for a new dredged material placement (DMP) site for the long-term Dredged Material Management Program (DMMP) at the Hurricane Island Reach (Project). This reach extends between river mile (RM) 591 and RM599 in Pool 11 of the Upper Mississippi River (UMR). One existing Project DMP site, at Finley's Landing near RM596R, is at full capacity, and the other Project DMP site, at Hurricane Island near RM599L, is nearing capacity. The newly proposed temporary DMP site and associated dredge cuts lie between RM594.0 and RM599.1, in Grant County, Wisconsin, and Dubuque County, Iowa.

The District is preparing a DMMP Report with Integrated Environmental Assessment (EA) for implementation of the Hurricane Island DMMP over at least a 20-year period, and ideally, covering 40 years or longer. The EA will describe the existing conditions, future without project conditions, alternative evaluation, and effects of the preferred alternative. The present letter provides information regarding the potential activity areas associated with dredging operation and placement of material. However, there are other possible alternatives in which each element of the plan could potentially be implemented. For example, equipment staging areas may be defined, or a permanent DMP site may be chosen. Other possible scenarios may occur based on any newly available information.

**Existing Programmatic Agreement (PA)**

Mississippi River channel maintenance dredging is required to provide a safe and adequate channel for navigation. DMPP plans for various river reaches often span a long (20+ years) period, with exact project specifications uncertain or subject to change over time. Because of these sometimes ambiguous parameters, the District sought to satisfy its responsibilities under Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108; NHPA) and its implementing regulations (36 CFR Part 800) by authoring a long-term DMMP Programmatic Agreement (PA) in consultation with the Advisory Council on Historic Preservation (ACHP) and the affected State Historic Preservation Officers (SHPO).

On December 7, 1995, the District signed the *Programmatic Agreement among the Rock Island District of the U.S. Army Corps of Engineers, the Advisory Council on Historic Preservation, and the Illinois State Historic Preservation Officer, the Iowa State Historic Preservation Officer, the Missouri State Historic Preservation Officer, and the Wisconsin State Historic Preservation Officer regarding implementation of the Long-Term Management Strategy for Dredged Material Placement*. The PA's other signatories signed between January 3 and April 29, 1996. The PA provides for the protection of known and unknown historic properties

throughout DMMP project planning, assessment, and implementation and covers the Illinois Waterway RM 80.0 to 327.0 and Mississippi RM 300.0 to 614.0.

By letter dated October 7, 1999, the District notified about 70 tribes that the District, the ACHP, and the Illinois, Iowa, Missouri, and Wisconsin SHPOs signed a PA regarding implementation of the long-term management strategy for the DMMP. The Tribes were asked to provide comment on the PA. The Menominee Indian Tribe of Wisconsin at Keshena, Wisconsin; the Citizen Potawatomi Nation at Shawnee, Oklahoma; and the Delaware Tribe of Western Oklahoma at Anadarko, Oklahoma, provided comments to the District. In addition, the tribes and the PA-signatory SHPOs were asked to review a tribal distribution list for corrections and/or additions.

Because the District has not fully determined the Project's scope of activity and because plans are subject to change over the 20+ year span of the Project, the terms and stipulations of the existing DMMP PA will be utilized to satisfy the District's Section 106 responsibilities for all future individual actions associated with the Project.

### Federal Undertaking

Pursuant to the NHPA of 1966, as amended, and its implementing regulations, 36 CFR Part 800, the District has determined that this Undertaking has potential to cause effects to archeological historic properties [36 CFR 800.3(a)(1)] and as a consequence will require a determination of effect within the Area of Potential Effect (APE).

### Area of Potential Effect

The APE (Enclosure 1) is defined as a 137.3-acre area containing proposed dredge cuts within existing channels and a temporary DMP stockpile (called the bathtub, in reference to its basin shape); 92 percent or more of the total acreage is underwater. The bathtub is meant to reach full capacity in 20 years, after which a permanent DMP stockpile location, not yet fully identified, will be utilized. The APE may be refined as the Project progresses, with any alterations coordinated per the terms of the PA. Note that the "dredging" numerical and cardinal direction designators in Table 1 are included solely for SHPO reviewers to easily ascertain which activities lie within their states; these designators will not be utilized in the EA.

Table 1. Project's Proposed Activity Locations and Extent

Proposed Activity	Acres		State	RM	Sec.	Twp-Rg
	Total	Submerged				
Dredging 1 south	39.8	39.8	IA	598.5-599.1	28, 29	T91N-R1E
Dredging 1 north	9.9	9.9	WI	598.5-599.1	8, 9	T2N-R4W
Dredging 2 south	43.6	43.6	IA	595.4-596.5	35, 36	T91N-R1E
Dredging 2 north	30.9	30.9	WI	595.4-596.4	11, 12	T2N-R4W
Dredging 3	1.7	1.7	WI	594.2	7	T2N-R3W
Bathtub (temporary DMP)	11.3	Seasonally variable	WI	594.0-594.3	7	T2N-R3W



## **Consulting Parties**

The District finds the organizations identified on the Distribution List (Enclosure 2) are entitled to be consulting parties, as set out in 36 CFR 800.2, and invites them by copy of this letter to participate in the Section 106 process. Inclusion on the Distribution List allows agencies, tribes, individuals, organizations, and other interested parties an opportunity to provide views on any effects of this undertaking on historic properties resulting from the Project and to participate in the review of the EA. The District complies with any requests to be removed from, or provide additions to, the Distribution List.

## **State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officer (THPO) Invitations**

The District invites the SHPOs/THPOs to:

- identify any other consulting parties as per 36 CFR 800.3(f);
- comment as per 36 CFR 800.2(d)(3) on the District's plan to involve the public by utilizing the District's normal procedures for public involvement under the National Environmental Policy Act; and,
- comment on or contribute to identification efforts including definition of the APE, all as per 36 CFR 800.4(a-b).

## **Identification of Historic Properties**

**Review of Existing Information:** The District conducted an archival search for historic properties following the Policy and Procedures for the Conduct of Underwater Historic Resource Surveys for Maintenance Dredging and Corps Activities (DGL-89-01, March 1989). The District queried the Iowa Geographic Information Systems site file database and the Wisconsin Historic Preservation Database and reviewed the report entitled *An Investigation of the Submerged Historic Properties in the Upper Mississippi River and Illinois Waterway*, dated October 1997, for historic properties potentially affected by the Project. The APE contains no recorded archeological sites or architectural properties and there are no prior archeological surveys that overlap the APE.

One documented shipwreck occurred within the Hurricane Island Reach (Enclosure 1). The wooden-hulled packet, *Gen. J. M. Harrison*, was lost in 1872 at Sprecht's Ferry near RM592. It is unknown whether any traces of this wreck remain. This location is 1.7 miles from the APE.

The Project's Landform Sediment Assemblages are limited to "channel" at the dredging locales, and "Early-Middle Holocene channel belt" at the bathtub. Mapped soil at 6.7 acres of the bathtub is Aquents, sandy, poorly drained; the remaining 40 percent is mapped as Water, with historic aerial photographs indicating seasonal inundation. Landform Sediment Assemblages designations are based on the report entitled *Landform Sediment Assemblage (LSA)*

*Units in the Upper Mississippi River Valley, United States Army Corps of Engineers, Rock Island District, Vol. 1 and 2, dated 1996.*

The review demonstrates no potential for historic properties within the dredging locales. District records indicate all proposed dredging areas except Dredging 3 have been subjected to historic dredging activities. The bathtub has low archeological potential due to its seasonally inundated ridge-and-swale topography.

***Level of Future Identification Efforts:*** The District proposes no archeological investigations at the proposed dredging locales: there are no known submerged resources nearby and, with the exception of the Dredging 3 locale, these areas have been subjected to historic dredging. No archeological investigations are proposed at the temporary bathtub DMP stockpile due to its low archeological potential.

Presently, the District is assessing permanent DMP locations for use 20 years in the future and these locales are not included in the present APE due to the uncertainty of their use. One possible DMP is a 97-acre location called the "farm field/quarry DMP" identified in Sec. 10-11, and 14, T2N-R3W, Grant County, Wisconsin. This possible permanent stockpile location contains five recorded sites (47GT0269, 47GT0272, 47GT0273, 47GT0459; 47GT0769; respectively, four prehistoric campsites/villages and one, an isolated chert flake find), none of which have been received NRHP eligibility determinations. Prior Phase II testing indicates at least two (47GT0273, 47GT0459) are likely NRHP-eligible, due to the presence of intact prehistoric features. In addition, this farm field/quarry DMP may have visual effects on nearby historic properties (all prehistoric campsites/villages; 47GT0200, 47GT0270; 47GT0274; 47GT0024) and mounds/mound groups (47GT0095, 47GT0218). The mounds may be contributing elements to the NRHP Multiple Property Listing *Prehistoric Mounds of the Quad-State Region of the Upper Mississippi River Valley*, accepted as a multiple property cover by the National Park Service in 1990. All these factors indicate the farm field/quarry site require detailed consultation with the SHPO/THPOs and other interested parties. As plans for the permanent DMP and other Project activities are refined, the DMMP PA will be utilized to meet the District's Section 106 responsibilities.

### **Determination of Effect**

The APE contains no recorded historic properties and the District has evaluated the APE as having low potential for intact cultural resources. It is the District's opinion that the present undertaking will have No Effect on historic properties within the APE due to low archeological potential in accordance with 36 CFR 800.4(d)(1).

Because the plans pertaining to a permanent DMP stockpile or other Project-related activities are unrefined and will not be implemented for 20 years in the future, any investigations necessary to identify historic properties at these yet-undefined Project locales will be completed in compliance with the DMMP PA. The EA will contain a copy of the DMMP PA for the

protection of known and unknown historic properties throughout the Project planning, assessment, and implementation.

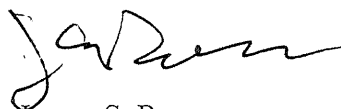
### **Request for Information from Consulting Parties**

The District is seeking information from all consulting parties regarding their concerns with issues relating to the potential effects of this undertaking on historic properties and, particularly, the tribes' concerns with identifying properties that may be of religious and cultural significance to them and may be eligible for the NRHP [36 CFR 800.4(a)(3-4)]. Concerns about confidentiality [36 CFR 800.11(c)] regarding locations of properties can be addressed under Section 304 of the NHPA which provides withholding from public disclosure the location of properties under several circumstances, including in cases where it would cause a significant invasion of privacy, impede the use of a traditional religious site by practitioners, endanger the site, etc.

The District requests your written comments on this project within 30 days, pursuant to 36 CFR 800.3(c)(4). Results of all consultation and determination shall be included in the EA for additional public review this year.

If you have any questions regarding this matter, please call Ms. Cindy Peterson of our Environmental Compliance Branch, (309) 794-5396, by e-mail: [cynthia.l.peterson@usace.army.mil](mailto:cynthia.l.peterson@usace.army.mil) , or write to our address above, ATTN: Environmental Compliance Branch (Cynthia Peterson).

Sincerely,



James S. Ross  
Acting Chief,  
Environmental Planning Branch, RPEDN

Enclosures (2)

REQUEST FOR SHPO COMMENT AND CONSULTATION ON A FEDERAL UNDERTAKING

Submit one copy with each undertaking for which our comment is requested. Please print or type. Return to:

Wisconsin Historical Society, Division of Historic Preservation, Office of Preservation Planning, 816 State Street, Madison, WI 53706

Please Check All Boxes and Include All of the Following Information, as Applicable:

I. GENERAL INFORMATION

- Checkboxes for new submittal, supplemental information, and project agreement. Includes title of agreement: DMMP PA: Programmatic Agreement among the Rock Island District of the US Army Corps ...Long-Term Management Strategy for Dredged Material Placement

- a. Federal Agency Jurisdiction: U.S. Army Corps of Engineers
b. Federal Agency Contact Person: Cindy Peterson, Phone: 309-794-5396
c. Project Contact Person: Cindy Peterson, Phone: 309-794-5396
d. Return Address: 1500 Rock Island Dr., Clock Tower Bldg, Rock Island, IL, Zip Code: 61204
e. Email Address: cynthia.l.peterson@usace.army.mil
f. Project Name: Hurricane Island Reach Dredged Material Management Program new dredged material placement site
g. Project Street Address: (Mississippi River channel and island; no street address)
h. County: Grant, City: n/a, Zip Code: n/a
i. Project Location: Township 2N, Range 3W;4W, E/W (circle one), Section 8,9,11,12;7, Quarter Sections
j. Project Narrative Description—Attach Information as Necessary.
k. Area of Potential Effect (APE). Attach Copy of U.S.G.S. 7.5 Minute Topographic Quadrangle Showing APE.

II. IDENTIFICATION OF HISTORIC PROPERTIES

- Checkboxes for historic properties located within or not located within the project APE per 36 CFR 800.4. Attach supporting materials.

III. FINDINGS

- Checkboxes for findings: No historic properties will be affected, proposed undertaking will have no adverse effect, or proposed undertaking will result in an adverse effect to one or more historic properties.

Authorized Signature: [Signature] Date: January 31, 2017
Type or print name: James S. Ross

IV. STATE HISTORIC PRESERVATION OFFICE COMMENTS

- Checkboxes for comments: Agree with the finding, Object to the finding, or Cannot review until information is sent as follows.

Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# STATE HISTORIC PRESERVATION OFFICE OF IOWA

IOWA DEPARTMENT OF CULTURAL AFFAIRS

Your request for comment by the State Historic Preservation Officer has been received.

Date Received: **2/2/2017**

Projected end of Review Period based on date received: **3/4/2017**

Agency: **COE**

SHPO Review & Compliance Number (R&C#): **170231011**

## **COE - DUBUQUE COUNTY - PROPOSING NEW DREDGE MATERIAL PLACEMENT (DMP) SITE FOR LONG-TERM DREDGE MATERIAL MANAGEMENT PROGRAM (DMMP) AT THE HURRICANE ISLAND REACH - PREPARING AN EA - EXISTING DMMP PA TO BE UTILIZED**

In accordance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations, 36 CFR Part 800 (revised, effective August 5, 2004), the 30-day comment period under a formal review begins when the SHPO has received a submittal containing full documentation in support of an agency's finding and determination of effect.

The SHPO is under no time restraints but will provide a technical assistance response when:

- A.  The SHPO concludes that the documentation provided does not support the agency's definition of the Area of Potential Effects (APE) for the undertaking OR
- B.  The SHPO concludes that the project documentation provided does not support the agency's determination of a property's eligibility for listing in the National Register of Historic Places OR
- C.  The SHPO concludes that the documentation provided does not support the agency's finding of an undertaking's effects on a historic property OR
- D.  The agency has determined that the undertaking will have "Adverse Effects" on historic properties and is actively consulting with SHPO on resolution of those effects.

If the documentation submitted to the SHPO for review meets the basic standards set forth at 36 CFR Part 800.11 and the SHPO fails to respond within 30 days, then the SHPO has waived its opportunity to comment and the agency may either (1) proceed to the next step in the process based upon the agency's finding and determination, or (2) consult directly with the Advisory Council on Historic Preservation. In order to determine the next step in the process, we advise the agency to review the applicable sections of 36 CFR Part 800 or the programmatic agreement under which your undertaking is being reviewed.

Be advised that the successful conclusion of consultation with the SHPO does not fulfill the agency's responsibility to consult with other parties who may have an interest in properties that may be affected by an undertaking. Nor does it override the sovereign status of federally recognized American Indian Tribes in the Section 106 consultation process.

We have made these comments and recommendations according to our responsibilities defined by Federal law pertaining to the Section 106 process. The responsible federal agency does not have to follow our comments and recommendations to comply with the Section 106 process. It also remains the responsible federal agency's decision on how to proceed from this point for this undertaking.

Should you have any questions please contact me at the email below, referencing the R&C# above.

SHPO Review & Compliance Coordinator  
SHPO106@iowa.gov



# Stockbridge-Munsee Tribal Historic Preservation Office

Sherry White - Tribal Historic Preservation Officer

W13447 Camp 14 Road

P.O. Box 70

Bowler, WI 54416

Date 02-06-17  
Project Number \_\_\_\_\_  
TCNS-Number Dredging Hurricane Island Reach proj.  
Company Name Mo w site - Grant Co. WI & Dubuque Co. IA  
Dept. of the ARMY

We have received your letter for the above listed project. Before we can process the request we need more information. The additional items needed are checked below.

### Additional Information Required:

- Site visit by Tribal Historic Preservation Officer
- Archeological survey, Phase 1
- Colored maps
- Pictures of the site
- Any reports the State Historic Preservation Office may have
- Review fee of \$500.00 must be included with letter
- Has site been previously disturbed, please explain what the use was and when it was disturbed

### After reviewing your letter:

- We are in the process of gathering more information on this site and will respond to your project request once all information has been gathered.
- This project has the potential to affect a Mohican cultural site, please contact us
- This project is not within Mohican area of interest
- This project is within Mohican territory, but we are not aware of any cultural site within the project area.

Additional comments \_\_\_\_\_

Should this project inadvertently uncover a Native American site, we require you to halt all construction and notify the Stockbridge-Munsee Tribe immediately.

Please do not resubmit projects for changes that are not ground disturbance

*Sherry White* /gs  
Sherry White, Tribal Historic Preservation Officer





**From:** [Diane Hunter](#)  
**To:** [Peterson, Cynthia L CIV \(US\)](#)  
**Subject:** [EXTERNAL] Dredged Material Placement at Hurricane Island Reach  
**Date:** Friday, February 10, 2017 3:05:19 PM

---

Dear Ms. Peterson:

Aya, kikwehsitoole – I show you respect. My name is Diane Hunter, and I am the Tribal Historic Preservation Officer for the Federally Recognized Miami Tribe of Oklahoma. In this capacity, I am the Miami Tribe's point of contact for all Section 106 issues.

The Miami Tribe requests to serve as a consulting party to the above-mentioned project. I am the point of contact for consultation.

The Miami Tribe offers no objection to the proposed project at this time, as we are not currently aware of existing documentation directly linking a specific Miami cultural or historic site to the project site. However, as this site is within the aboriginal homelands of the Miami Tribe and due to the site's location near an existing historically important site, we request a copy of the SHPOs' reports and any archaeological surveys performed as the project moves forward. Please mail all documentation to the address listed below or email to [dhunter@miamination.com](mailto:dhunter@miamination.com).

If any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery. In such a case, please contact me at 918-541-8966 or by email at [dhunter@miamination.com](mailto:dhunter@miamination.com).

Respectfully,

Diane Hunter  
Tribal Historic Preservation Officer  
Miami Tribe of Oklahoma  
P.O. Box 1326  
Miami, OK 74355



17-0092/GT

REQUEST FOR SHPO COMMENT AND CONSULTATION ON A FEDERAL UNDERTAKING

Submit one copy with each undertaking for which our comment is requested. Please print or type. Return to:

Wisconsin Historical Society, Division of Historic Preservation, Office of Preservation Planning, 816 State Street, Madison, WI 53706

Please Check All Boxes and Include All of the Following Information, as Applicable:

RECEIVED  
FEB 02 2017

I. GENERAL INFORMATION

- This is a new submittal.
- This is supplemental information relating to Case #: \_\_\_\_\_ and title: \_\_\_\_\_ BY: \_\_\_\_\_
- This project is being undertaken pursuant to the terms and conditions of a programmatic or other interagency agreement. The title of the agreement is DMMP PA: Programmatic Agreement among the Rock Island District of the US Army Corps ...Long-Term Management Strategy for Dredged Material Placement

- a. Federal Agency Jurisdiction (Agency providing funds, assistance, license, permit): U.S. Army Corps of Engineers
- b. Federal Agency Contact Person: Cindy Peterson Phone: 309-794-5396
- c. Project Contact Person: Cindy Peterson Phone: 309-794-5396
- d. Return Address: 1500 Rock Island Dr., Clock Tower Bldg, Rock Island, IL Zip Code: 61204
- e. Email Address: cynthia.l.peterson@usace.army.mil
- f. Project Name: Hurricane Island Reach Dredged Material Management Program new dredged material placement site
- g. Project Street Address: (Mississippi River channel and island; no street address)
- h. County: Grant City: n/a Zip Code: n/a
- i. Project Location: Township 2N, Range 3W;4W, E/W (circle one), Section 8, 9, 11, 12; 7, Quarter Sections \_\_\_\_\_
- j. Project Narrative Description—Attach Information as Necessary.
- k. Area of Potential Effect (APE). Attach Copy of U.S.G.S. 7.5 Minute Topographic Quadrangle Showing APE.

II. IDENTIFICATION OF HISTORIC PROPERTIES

- Historic Properties are located within the project APE per 36 CFR 800.4. Attach supporting materials.
- Historic Properties are not located within the project APE per 36 CFR 800.4. Attach supporting materials.

III. FINDINGS

- No historic properties will be affected (i.e., none is present or there are historic properties present but the project will have no effect upon them). Attach necessary documentation, as described at 36 CFR 800.11.
- The proposed undertaking will have no adverse effect on one or more historic properties located within the project APE under 36 CFR 800.5. Attach necessary documentation, as described at 36 CFR 800.11.
- The proposed undertaking will result in an adverse effect to one or more historic properties and the applicant, or other federally authorized representative, will consult with the SHPO and other consulting parties to resolve the adverse effect per 36 CFR 800.6. Attach necessary documentation, as described at 36 CFR 800.11, with a proposed plan to resolve adverse effect(s).

Authorized Signature: [Signature] Date: January 31, 2017

Type or print name: James S. Ross

IV. STATE HISTORIC PRESERVATION OFFICE COMMENTS

- Agree with the finding in section III above.
- Object to the finding for reasons indicated in attached letter.
- Cannot review until information is sent as follows: \_\_\_\_\_

Authorized Signature: [Signature] Date: 2-21-17





REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS - ROCK ISLAND DISTRICT  
CLOCK TOWER BUILDING - PO BOX 2004  
ROCK ISLAND, ILLINOIS 61204-2004

March 29, 2017

Regional Planning and Environmental  
Division North (RPEDN)

Diane Hunter, THPO  
Miami Tribe of Oklahoma  
PO Box 1326  
Miami, OK 74354

Dear Ms. Hunter:

On January 31, 2017, the U.S. Army Corps of Engineers, Rock Island District (District), remitted a letter to you pertaining to the need for a new dredged material placement (DMP) site for the long-term Dredged Material Management Program (DMMP) at the Hurricane Island Reach (Project). This reach extends between river miles (RM) 591 and 599 in Pool 11 of the Upper Mississippi River. The newly proposed temporary DMP site, associated dredge cuts and other associated activities lie between RM594.0 and RM599.1, in Grant County, WI, and Dubuque County, IA.

The District is preparing a DMMP Report with Integrated Environmental Assessment (EA) for implementation of the Hurricane Island DMMP over at least a 20-year period, and ideally, covering 40 years or longer. The EA will describe the existing conditions, future without project conditions, alternative evaluation, and effects of the preferred alternative. Due to the many uncertainties involved in the far-future project design, portions of the project which are not yet partially designed will be coordinated utilizing the existing December 7, 1995, *Programmatic Agreement among the Rock Island District of the U.S. Army Corps of Engineers, the Advisory Council on Historic Preservation, and the Illinois State Historic Preservation Officer, the Iowa State Historic Preservation Officer, the Missouri State Historic Preservation Officer, and the Wisconsin State Historic Preservation Officer regarding implementation of the Long-Term Management Strategy for Dredged Material Placement.*

The District made a *No Effect on Historic Properties* determination in the January 31 letter. Responses to the letter have been limited to: Wisconsin SHPO (SHPO Case #17-0092/GT; concurrence with the District's determination); Iowa SHPO (acknowledgement of receipt of letter, but no other response); Miami Tribe of Oklahoma (no objections); and Stockbridge-Munsee Tribe (not within Mohican area of interest).

#### **Area of Potential Effect (APE) Alteration**

The present letter details a minor alteration of the Project's APE, due to the newly included compensatory wetland mitigation area adjacent to the temporary DMP (called the "bathtub") in Sec. 7, T2N-R3W, Grant County, Wisconsin (River Miles 594.0-594.3), bringing the total Project APE to 157.8 acres (Enclosure 1). The compensatory wetland mitigation area

encompasses 20.6 acres, all mapped in the soil survey as "Water." Historic aerial photographs indicate the entire newly added area is mostly permanently inundated, although small portions (less than 2 acres) are only seasonally inundated. The Landform Sediment Assemblage is "Early-Middle Holocene channel belt." Landform Sediment Assemblages designations are based on the report entitled *Landform Sediment Assemblage (LSA) Units in the Upper Mississippi River Valley, United States Army Corps of Engineers, Rock Island District, Vol. 1 and 2*, dated 1996.

There are no prior overlapping archeological surveys, mapped historic properties or suspected submerged resources at this new addition to the APE. The compensatory wetland mitigation area has exceptionally low archeological potential due to its seasonally or permanently inundated ridge-and-swale topography. The District proposes no archeological investigations at the proposed compensatory wetland mitigation area due to this low archeological potential.

#### **Determination of Effect**

The APE contains no recorded historic properties and the District has evaluated the APE as having low potential for intact cultural resources. It is the District's opinion that the present undertaking will have *No Effect on Historic Properties* within the APE due to low archeological potential in accordance with 36 CFR 800.4(d)(1).

Because the plans pertaining to a permanent DMP stockpile or other Project-related activities are unrefined and will not be implemented for 20 years in the future, any investigations necessary to identify historic properties at these yet-undefined Project locales will be completed in compliance with the DMMP PA. The EA will contain a copy of the DMMP PA for the protection of known and unknown historic properties throughout the Project planning, assessment, and implementation.

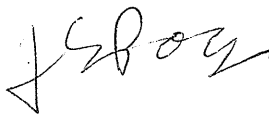
#### **Request for Information from Consulting Parties**

The District is seeking information from all consulting parties regarding their concerns with issues relating to the potential effects of this undertaking on historic properties and, particularly, the tribes' concerns with identifying properties that may be of religious and cultural significance to them and may be eligible for the NRHP [36 CFR 800.4(a)(3-4)]. Concerns about confidentiality [36 CFR 800.11(c)] regarding locations of properties can be addressed under Section 304 of the NHPA which provides withholding from public disclosure the location of properties under several circumstances, including in cases where it would cause a significant invasion of privacy, impede the use of a traditional religious site by practitioners, endanger the site, etc.

The District requests your written comments on this project within 30 days, pursuant to 36 CFR 800.3(c)(4). Results of all consultation and determination shall be included in the EA for additional public review this year.

If you have any questions regarding this matter, please call Ms. Cindy Peterson of our Environmental Compliance Branch, (309) 794-5396, by e-mail: [cynthia.l.peterson@usace.army.mil](mailto:cynthia.l.peterson@usace.army.mil) , or write to our address above, ATTN: Environmental Compliance Branch (Cynthia Peterson).

Sincerely,

A handwritten signature in black ink, appearing to read "J. Ross", written over a horizontal line.

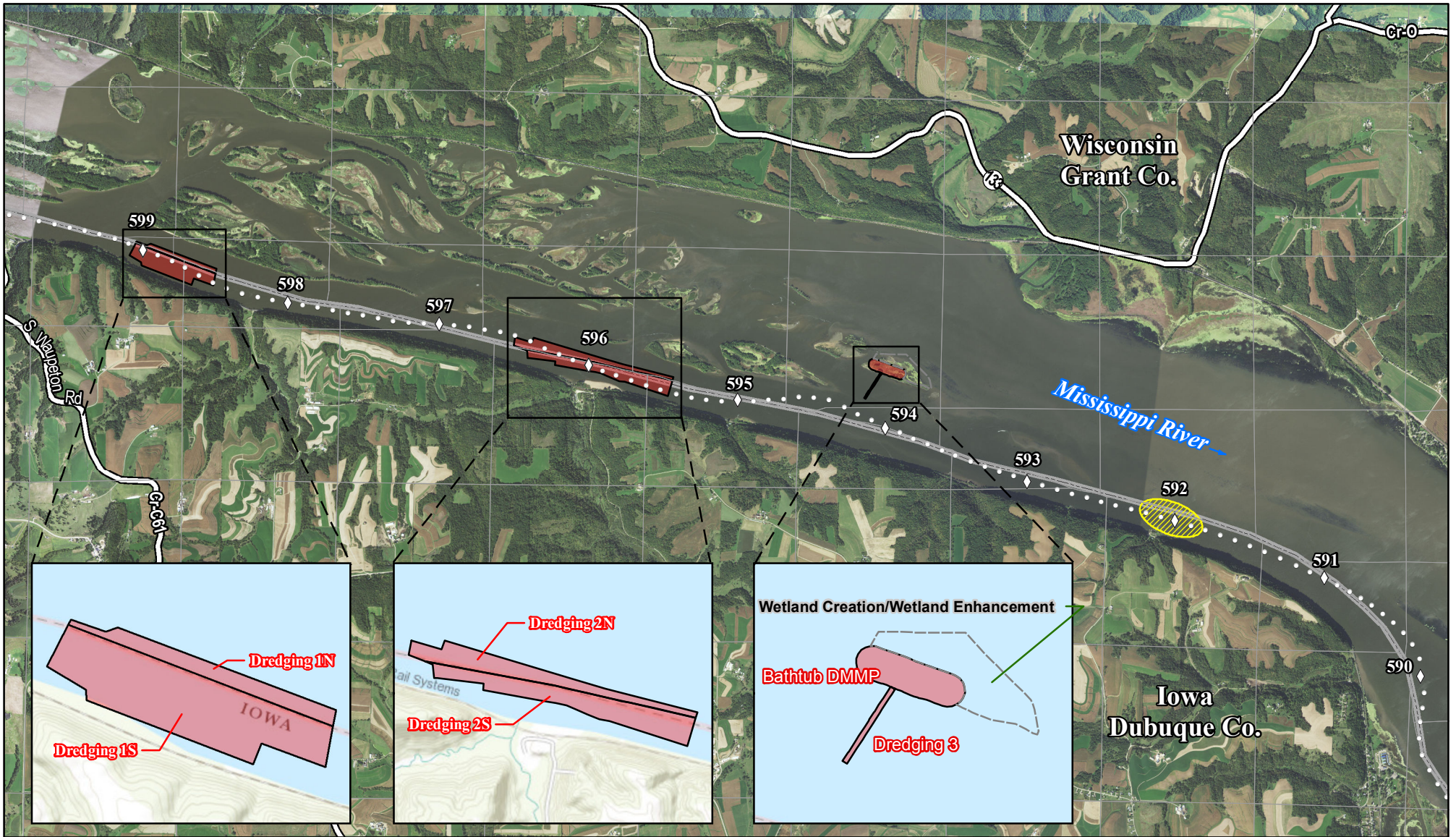
James S. Ross  
Acting Chief,  
Environmental Planning Branch, RPEDN

Enclosure





# Hurricane Island Dredge Cut DMMP : Area of Potential Effects



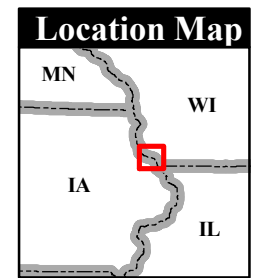
**Legend**

	Area of Potential Effect		State Boundary		River Miles, Tenths
	1872 Shipwreck (General Location)		Major Roads		River Miles
	Wetland Creation/Wetland Enhancement				

Map Production Date: 3/27/2017  
 Data Sources: Imagery - USDA NAIP / Topo: USGS

US Army Corps of Engineers  
 Rock Island District

0 2,000 4,000 8,000 Feet







REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS - ROCK ISLAND DISTRICT  
CLOCK TOWER BUILDING - PO BOX 2004  
ROCK ISLAND, ILLINOIS 61204-2004

March 29, 2017

Regional Planning and Environmental  
Division North (RPEDN)

Daina Penkiunas, Deputy SHPO  
Wisconsin Historical Society  
816 State St.  
Madison, WI 53706

Dear Ms. Penkiunas:

On January 31, 2017, the U.S. Army Corps of Engineers, Rock Island District (District), remitted a letter to you pertaining to the need for a new dredged material placement (DMP) site for the long-term Dredged Material Management Program (DMMP) at the Hurricane Island Reach (Project) (**SHPO Case #17-0092/GT**; Enclosure 1). This reach extends between river miles (RM) 591 and 599 in Pool 11 of the Upper Mississippi River. The newly proposed temporary DMP site, associated dredge cuts and other associated activities lie between RM594.0 and RM599.1, in Grant County, WI, and Dubuque County, IA.

The District is preparing a DMMP Report with Integrated Environmental Assessment (EA) for implementation of the Hurricane Island DMMP over at least a 20-year period, and ideally, covering 40 years or longer. The EA will describe the existing conditions, future without project conditions, alternative evaluation, and effects of the preferred alternative. Due to the many uncertainties involved in the far-future project design, portions of the project which are not yet partially designed will be coordinated utilizing the existing December 7, 1995, *Programmatic Agreement among the Rock Island District of the U.S. Army Corps of Engineers, the Advisory Council on Historic Preservation, and the Illinois State Historic Preservation Officer, the Iowa State Historic Preservation Officer, the Missouri State Historic Preservation Officer, and the Wisconsin State Historic Preservation Officer regarding implementation of the Long-Term Management Strategy for Dredged Material Placement.*

The District made a *No Effect on Historic Properties* determination in the January 31 letter. Responses to the letter have been limited to: Wisconsin SHPO (concurrence with the District's determination); Iowa SHPO (acknowledgement of receipt of letter, but no other response); Miami Tribe of Oklahoma (no objections); and Stockbridge-Munsee Tribe (not within Mohican area of interest).

#### **Area of Potential Effect (APE) Alteration**

The present letter details a minor alteration of the Project's APE, due to the newly included compensatory wetland mitigation area adjacent to the temporary DMP (called the "bathtub") in Sec. 7, T2N-R3W, Grant County, WI (RMs 594.0-594.3), bringing the total Project APE to 157.8 acres (Enclosure 2). The compensatory wetland mitigation area encompasses 20.6 acres,



all mapped in the soil survey as “Water.” Historic aerial photographs indicate the entire newly added area is mostly permanently inundated, although small portions (less than 2 acres) are only seasonally inundated. The Landform Sediment Assemblage is “Early-Middle Holocene channel belt.” Landform Sediment Assemblages designations are based on the report entitled *Landform Sediment Assemblage (LSA) Units in the Upper Mississippi River Valley, United States Army Corps of Engineers, Rock Island District, Vol. 1 and 2*, dated 1996.

There are no prior overlapping archeological surveys, mapped historic properties or suspected submerged resources at this new addition to the APE. The compensatory wetland mitigation area has exceptionally low archeological potential due to its seasonally or permanently inundated ridge-and-swale topography. The District proposes no archeological investigations at the proposed compensatory wetland mitigation area due to this low archeological potential.

#### **Determination of Effect**

The APE contains no recorded historic properties and the District has evaluated the APE as having low potential for intact cultural resources. It is the District’s opinion that the present undertaking will have *No Effect on Historic Properties* within the APE due to low archeological potential in accordance with 36 CFR 800.4(d)(1).

Because the plans pertaining to a permanent DMP stockpile or other Project-related activities are unrefined and will not be implemented for 20 years in the future, any investigations necessary to identify historic properties at these yet-undefined Project locales will be completed in compliance with the DMMP PA. The EA will contain a copy of the DMMP PA for the protection of known and unknown historic properties throughout the Project planning, assessment, and implementation.

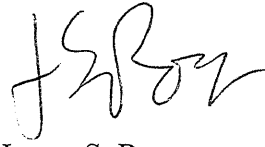
#### **Request for Information from Consulting Parties**

The District is seeking information from all consulting parties regarding their concerns with issues relating to the potential effects of this undertaking on historic properties and, particularly, the tribes’ concerns with identifying properties that may be of religious and cultural significance to them and may be eligible for the NRHP [36 CFR 800.4(a)(3-4)]. Concerns about confidentiality [36 CFR 800.11(c)] regarding locations of properties can be addressed under Section 304 of the NHPA which provides withholding from public disclosure the location of properties under several circumstances, including in cases where it would cause a significant invasion of privacy, impede the use of a traditional religious site by practitioners, endanger the site, etc.

The District requests your written comments on this project within 30 days, pursuant to 36 CFR 800.3(c)(4). Results of all consultation and determination shall be included in the EA for additional public review this year.

If you have any questions regarding this matter, please call Ms. Cindy Peterson of our Environmental Compliance Branch, (309) 794-5396, by e-mail: [cynthia.l.peterson@usace.army.mil](mailto:cynthia.l.peterson@usace.army.mil) , or write to our address above, ATTN: Environmental Compliance Branch (Cynthia Peterson).

Sincerely,

A handwritten signature in black ink, appearing to read "J. S. Ross". The signature is written in a cursive, flowing style.

James S. Ross  
Acting Chief,  
Environmental Planning Branch, RPEDN

Enclosures

**REQUEST FOR SHPO COMMENT AND CONSULTATION ON A FEDERAL UNDERTAKING**

**Submit one copy with each undertaking for which our comment is requested. Please print or type. Return to:**

Wisconsin Historical Society, Division of Historic Preservation, Office of Preservation Planning, 816 State Street, Madison, WI 53706

**Please Check All Boxes and Include All of the Following Information, as Applicable:**

**I. GENERAL INFORMATION**

- This is a new submittal.
- This is supplemental information relating to Case #: \_\_\_\_\_, and title: \_\_\_\_\_
- This project is being undertaken pursuant to the terms and conditions of a programmatic or other interagency agreement. The title of the agreement is \_\_\_\_\_

- a. Federal Agency Jurisdiction (Agency providing funds, assistance, license, permit): \_\_\_\_\_
- b. Federal Agency Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_
- c. Project Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_
- d. Return Address: \_\_\_\_\_ Zip Code: \_\_\_\_\_
- e. Email Address: \_\_\_\_\_
- f. Project Name: \_\_\_\_\_
- g. Project Street Address: \_\_\_\_\_
- h. County: \_\_\_\_\_ City: \_\_\_\_\_ Zip Code: \_\_\_\_\_
- i. Project Location: Township \_\_\_\_\_, Range \_\_\_\_\_, E/W (circle one), Section \_\_\_\_\_, Quarter Sections \_\_\_\_\_
- j. Project Narrative Description—Attach Information as Necessary.
- k. Area of Potential Effect (APE). Attach Copy of U.S.G.S. 7.5 Minute Topographic Quadrangle Showing APE.

**II. IDENTIFICATION OF HISTORIC PROPERTIES**

- Historic Properties are located within the project APE per 36 CFR 800.4. Attach supporting materials.
- Historic Properties are not located within the project APE per 36 CFR 800.4. Attach supporting materials.

**III. FINDINGS**

- No historic properties will be affected (i.e., none is present or there are historic properties present but the project will have no effect upon them). Attach necessary documentation, as described at 36 CFR 800.11.
- The proposed undertaking will have no adverse effect on one or more historic properties located within the project APE under 36 CFR 800.5. Attach necessary documentation, as described at 36 CFR 800.11.
- The proposed undertaking will result in an adverse effect to one or more historic properties and the applicant, or other federally authorized representative, will consult with the SHPO and other consulting parties to resolve the adverse effect per 36 CFR 800.6. Attach necessary documentation, as described at 36 CFR 800.11, with a proposed plan to resolve adverse effect(s).

Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Type or print name: \_\_\_\_\_

**IV. STATE HISTORIC PRESERVATION OFFICE COMMENTS**

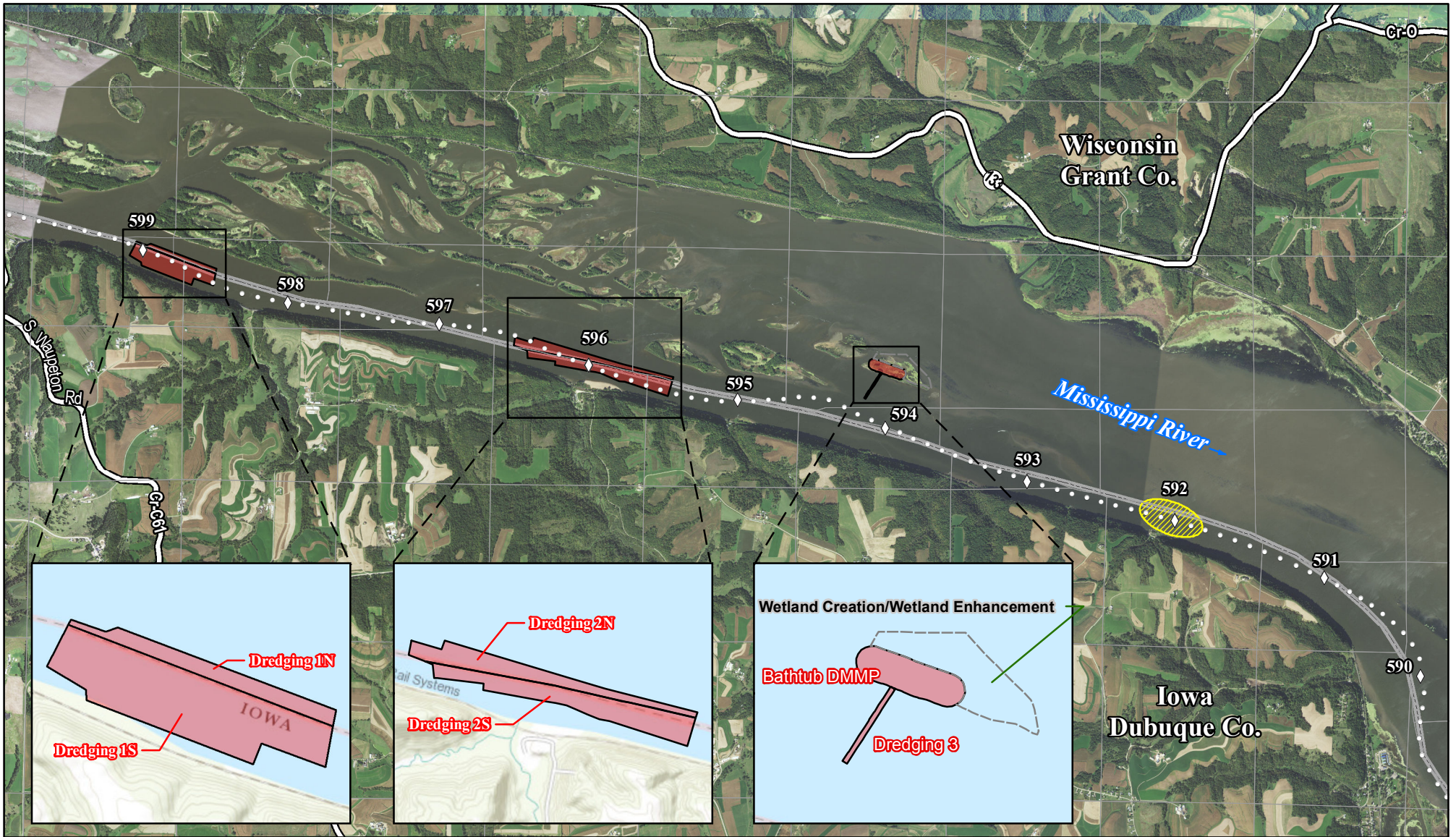
- Agree with the finding in section III above.
- Object to the finding for reasons indicated in attached letter.
- Cannot review until information is sent as follows: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_





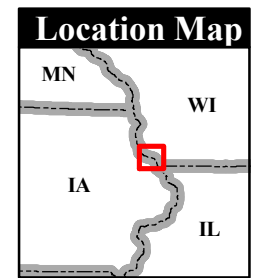
# Hurricane Island Dredge Cut DMMP : Area of Potential Effects



**Legend**

	Area of Potential Effect		State Boundary		River Miles, Tenths
	1872 Shipwreck (General Location)		Major Roads		River Miles
	Wetland Creation/Wetland Enhancement				

Map Production Date: 3/27/2017  
 Data Sources: Imagery - USDA NAIP / Topo: USGS







REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
CORPS OF ENGINEERS - ROCK ISLAND DISTRICT  
CLOCK TOWER BUILDING - PO BOX 2004  
ROCK ISLAND, ILLINOIS 61204-2004

March 30, 2017

Regional Planning and Environmental  
Division North (RPEDN)

James Myster  
Regional Archaeologist/RHPO  
U.S. Fish and Wildlife Service, Midwest Region  
5600 American Blvd. W., Ste. 1049  
Bloomington, MN 55437

Dear Mr. Myster:

The U.S. Army Corps of Engineers, Rock Island District (District), has identified the need for a new dredged material placement (DMP) site for the long-term Dredged Material Management Program (DMMP) at the Hurricane Island Reach (Project). This reach extends between River Miles 591 and 599 in Pool 11 of the Upper Mississippi River. One existing Project DMP site, at Finley's Landing near RM596R, is at full capacity, and the other Project DMP site, at Hurricane Island near RM599L, is nearing capacity. The newly proposed temporary DMP site and associated dredge cuts lie between RM594.0 and RM599.1, in Grant County, WI, and Dubuque County, IA.

The District is preparing a DMMP Report with Integrated Environmental Assessment (EA) for implementation of the Hurricane Island DMMP over at least a 20-year period, and ideally, covering 40 years or longer. The EA will describe the existing conditions, future without project conditions, alternative evaluation, and effects of the preferred alternative. This correspondence provides information regarding the potential activity areas associated with dredging operation and placement of material. However, there are other possible alternatives in which each element of the plan could potentially be implemented. For example, equipment staging areas may be defined, or a permanent DMP site may be chosen. Other possible scenarios may occur based on any newly available information.

### **Existing Programmatic Agreement**

Mississippi River channel maintenance dredging is required to provide a safe and adequate channel for navigation. DMPP plans for various river reaches often span a long (20+ years) period, with exact project specifications uncertain or subject to change over time. Because of these sometimes ambiguous parameters, the District sought to satisfy its responsibilities under Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108; NHPA) and its implementing regulations (36 CFR Part 800) by authoring a long-term DMMP Programmatic Agreement (PA) in consultation with the Advisory Council on Historic Preservation (ACHP) and the affected State Historic Preservation Officers (SHPO).

On December 7, 1995, the District signed the *Programmatic Agreement among the Rock Island District of the U.S. Army Corps of Engineers, the Advisory Council on Historic Preservation, and the Illinois State Historic Preservation Officer, the Iowa State Historic Preservation Officer, the Missouri State Historic Preservation Officer, and the Wisconsin State Historic Preservation Officer regarding implementation of the Long-Term Management Strategy for Dredged Material Placement*. The PA's other signatories signed between January 3 and April 29, 1996. The PA provides for the protection of known and unknown historic properties throughout DMMP project planning, assessment, and implementation and covers the Illinois Waterway RM 80.0 to 327.0 and Mississippi RM 300.0 to 614.0.

By letter dated October 7, 1999, the District notified approximately 70 tribes that the District, the ACHP, and the Illinois, Iowa, Missouri, and Wisconsin SHPOs signed a PA regarding implementation of the long-term management strategy for the DMMP. The Tribes were asked to provide comment on the PA. The Menominee Indian Tribe of Wisconsin at Keshena, WI; the Citizen Potawatomi Nation at Shawnee, OK; and the Delaware Tribe of Western Oklahoma at Anadarko, OK, provided comments to the District. In addition, the tribes and the PA-signatory SHPOs were asked to review a tribal distribution list for corrections and/or additions.

Because the District has not fully determined the Project's scope of activity and because plans are subject to change over the 20+ year span of the Project, the terms and stipulations of the existing DMMP PA will be utilized to satisfy the District's Section 106 responsibilities for all future individual actions associated with the Project.

### **Federal Undertaking**

Pursuant to the NHPA of 1966, as amended, and its implementing regulations, 36 CFR Part 800, the District has determined that this Undertaking has potential to cause effects to archeological historic properties [36 CFR 800.3(a)(1)] and as a consequence will require a determination of effect within the Area of Potential Effect (APE).

### **Area of Potential Effect**

The APE (Enclosure 1) is defined as a 157.8-acre area containing proposed dredge cuts within existing channels, a temporary DMP stockpile (called the bathtub, in reference to its basin shape), and a compensatory wetland mitigation area adjacent to the bathtub. Ninety percent or more of the total acreage is underwater. The bathtub is meant to reach full capacity in 20 years, after which a permanent DMP stockpile location, not yet fully identified, will be utilized. The APE may be refined as the Project progresses, with any alterations coordinated per the terms of the PA. Note that the "dredging" numerical and cardinal direction designators in Table 1 are included solely for SHPO/THPO reviewers to easily ascertain which activities lie within their states; these designators will not be utilized in the EA.

Table 1. Project's Proposed Activity Locations and Extent

ACRES						
Proposed Activity	Total	Submerged	State	RM	Section	Twp-Rg
Dredging 1 South	39.8	39.8	IA	598.5-599.1	28, 29	T91N-R1E
Dredging 1 North	9.9	9.9	WI	598.5-599.1	8, 9	T2N-R4W
Dredging 2 South	43.6	43.6	IA	595.4-596.5	35, 36	T91N-R1E
Dredging 2 North	30.9	30.9	WI	595.4-596.4	11, 12	T2N-R4W
Dredging 3	1.7	1.7	WI	594.2	7	T2N-R3W
Bathtub (temporary DMP)	11.3	seasonally variable	WI	594.0-594.3	7	T2N-R3W
Compensatory wetland mitigation area	20.6	seasonally variable	WI	594.0-594.3	7	T2N-R3W

The compensatory wetland mitigation area will not encompass the entire 20.6 acres depicted on Enclosure 1; plans for the wetland are not finalized.

### Consulting Parties

The District finds the U.S. Fish and Wildlife Service is entitled to be a consulting party, as set out in 36 CFR 800.2, and invites you by copy of this letter to participate in the Section 106 process.

The District invites the RHPO to:

- identify any other consulting parties as per 36 CFR 800.3(f);
- comment as per 36 CFR 800.2(d)(3) on the District's plan to involve the public by utilizing the District's normal procedures for public involvement under the National Environmental Policy Act; and,
- comment on or contribute to identification efforts including definition of the APE, all as per 36 CFR 800.4(a-b).

An invitation letter, nearly identical to the one here, was mailed to SHPOs/THPOs on January 31, 2017 (see Enclosure 2, Distribution List). The U.S. Fish and Wildlife Service was inadvertently omitted from that distribution. Responses from the January 31 letter have been limited to: Wisconsin SHPO (concurrence with the District's *No Effect on Historic Properties* determination); Iowa SHPO (acknowledgement of receipt of letter, but no other response); Miami Tribe of Oklahoma (no objections); and Stockbridge-Munsee Tribe (not within Mohican area of interest).

## Identification of Historic Properties

**Review of Existing Information:** The District conducted an archival search for historic properties following the Policy and Procedures for the Conduct of Underwater Historic Resource Surveys for Maintenance Dredging and Corps Activities (DGL-89-01, March 1989). The District queried the Iowa Geographic Information Systems site file database and the Wisconsin Historic Preservation Database and reviewed the report entitled *An Investigation of the Submerged Historic Properties in the Upper Mississippi River and Illinois Waterway*, dated October 1997, for historic properties potentially affected by the Project. The APE contains no recorded archeological sites or architectural properties and there are no prior archeological surveys that overlap the APE.

One documented shipwreck occurred within the Hurricane Island Reach (Enclosure 1). The wooden-hulled packet, *Gen. J. M. Harrison*, was lost in 1872 at Sprecht's Ferry near RM592. It is unknown whether any traces of this wreck remain. This location is 1.7 miles from the APE.

The Project's Landform Sediment Assemblages are limited to "channel" at the dredging locales, and "Early-Middle Holocene channel belt" at the bathtub and adjacent compensatory wetland mitigation area. Mapped soil at 6.7 acres of the bathtub is Aquents, sandy, poorly drained; the remaining 40 percent is mapped as Water, with historic aerial photographs indicating seasonal or permanent inundation. The entirety of the compensatory wetland mitigation area is mapped in the soil survey as "Water." Landform Sediment Assemblage designations are based on the report entitled *Landform Sediment Assemblage (LSA) Units in the Upper Mississippi River Valley, United States Army Corps of Engineers, Rock Island District, Vol. 1 and 2*, dated 1996.

The review demonstrates no potential for historic properties within the dredging locales. District records indicate all proposed dredging areas except Dredging 3 have been subjected to historic dredging activities. The bathtub and adjacent compensatory wetland mitigation area have low archeological potential due to their seasonally or permanently inundated ridge-and-swale topography.

**Level of Future Identification Efforts:** The District proposes no archeological investigations at the proposed dredging locales: there are no known submerged resources nearby and, with the exception of the Dredging 3 locale, these areas have been subjected to historic dredging. No archeological investigations are proposed at the temporary bathtub DMP stockpile and adjacent compensatory wetland mitigation area due to their low archeological potential.

Presently, the District is assessing permanent DMP locations for use 20 years in the future and these locales are not included in the present APE due to the uncertainty of their use. One possible DMP is a 97-acre location called the "farm field/quarry DMP" identified in Sec. 10-11,

and 14, T2N-R3W, Grant County, WI. This possible permanent stockpile location contains five recorded sites (47GT0269, 47GT0272, 47GT0273, 47GT0459; 47GT0769; respectively, four prehistoric campsites/villages and one, an isolated chert flake find), none of which have been received NRHP eligibility determinations. Prior Phase II testing indicates at least two (47GT0273, 47GT0459) are likely NRHP-eligible, due to the presence of intact prehistoric features. In addition, this farm field/quarry DMP may have visual effects on nearby historic properties (all prehistoric campsites/villages; 47GT0200, 47GT0270; 47GT0274; 47GT0024) and mounds/mound groups (47GT0095, 47GT0218). The mounds may be contributing elements to the NRHP Multiple Property Listing *Prehistoric Mounds of the Quad-State Region of the Upper Mississippi River Valley*, accepted as a multiple property cover by the National Park Service in 1990. All these factors indicate the farm field/quarry site require detailed consultation with the SHPO/THPOs and other interested parties. As plans for the permanent DMP and other Project activities are refined, the DMMP PA will be utilized to meet the District's Section 106 responsibilities.

### **Determination of Effect**

The APE contains no recorded historic properties and the District has evaluated the APE as having low potential for intact cultural resources. It is the District's opinion that the present undertaking will have *No Effect on Historic Properties* within the APE due to low archeological potential in accordance with 36 CFR 800.4(d)(1).

Because the plans pertaining to a permanent DMP stockpile or other Project-related activities are unrefined and will not be implemented for 20 years in the future, any investigations necessary to identify historic properties at these yet-undefined Project locales will be completed in compliance with the DMMP PA. The EA will contain a copy of the DMMP PA for the protection of known and unknown historic properties throughout the Project planning, assessment, and implementation.

### **Request for Information from Consulting Parties**

The District is seeking information from all consulting parties regarding their concerns with issues relating to the potential effects of this undertaking on historic properties and, particularly, the tribes' concerns with identifying properties that may be of religious and cultural significance to them and may be eligible for the NRHP [36 CFR 800.4(a)(3-4)]. Concerns about confidentiality [36 CFR 800.11(c)] regarding locations of properties can be addressed under Section 304 of the NHPA which provides withholding from public disclosure the location of properties under several circumstances, including in cases where it would cause a significant invasion of privacy, impede the use of a traditional religious site by practitioners, endanger the site, etc.

The District requests your written comments on this project within 30 days, pursuant to 36 CFR 800.3(c)(4). Results of all consultation and determination shall be included in the EA for additional public review this year. This request is being remitted to you via postal and email ([james\\_myster@fws.gov](mailto:james_myster@fws.gov)).

If you have any questions regarding this matter, please call Ms. Cindy Peterson of our Environmental Compliance Branch, (309) 794-5396, by e-mail: [cynthia.l.peterson@usace.army.mil](mailto:cynthia.l.peterson@usace.army.mil), or write to our address above, ATTN: Environmental Compliance Branch (Cynthia Peterson).

Sincerely,

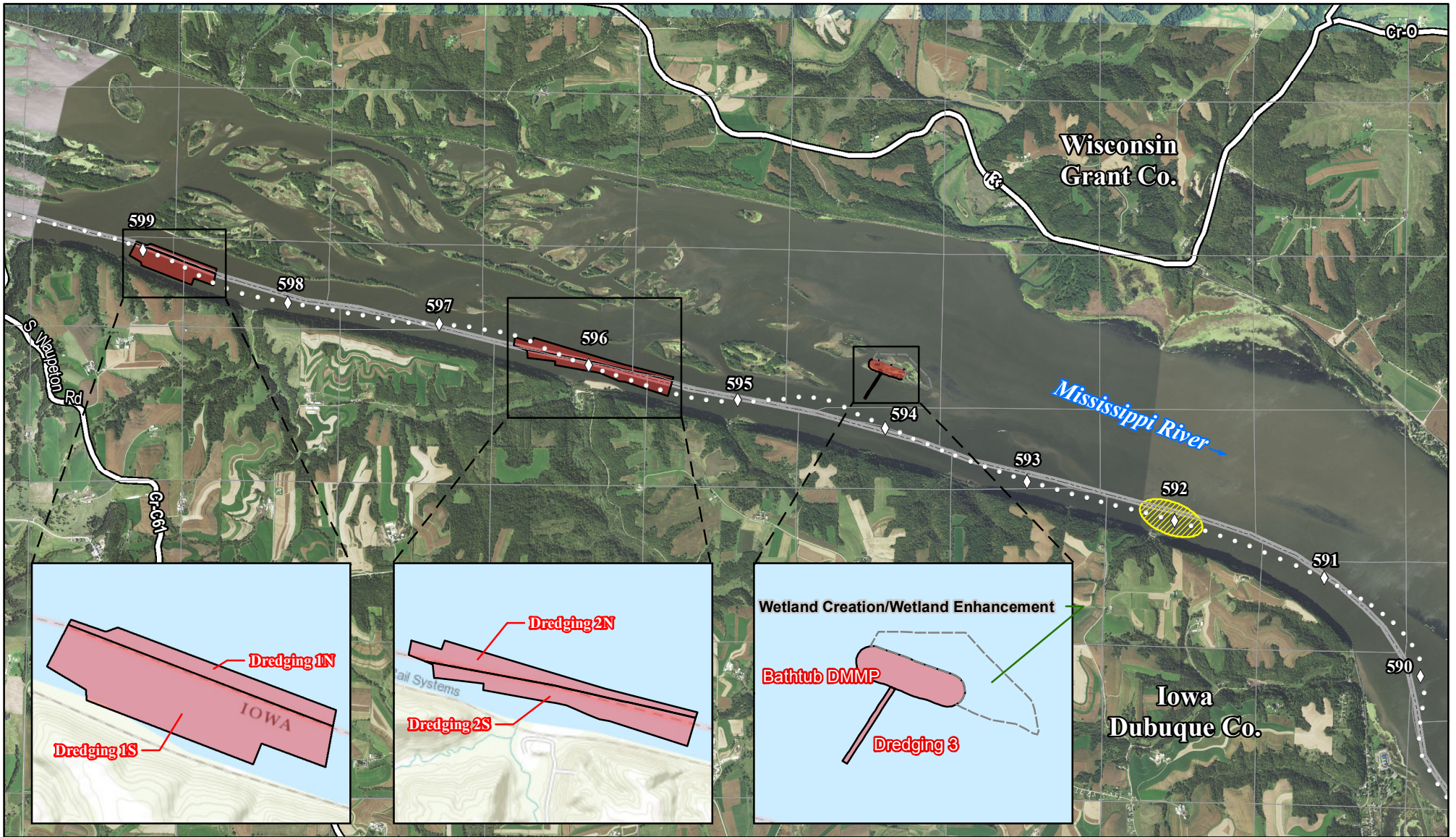
A handwritten signature in black ink, appearing to read "J. Ross", written in a cursive style.

James S. Ross  
Acting Chief,  
Environmental Planning Branch, RPEDN

Enclosures (2)



# Hurricane Island Dredge Cut DMMP : Area of Potential Effects



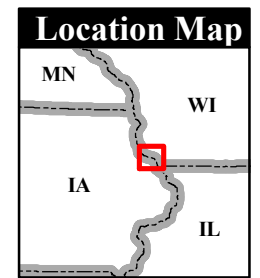
**Legend**

	Area of Potential Effect		State Boundary		River Miles, Tenths
	1872 Shipwreck (General Location)		Major Roads		River Miles
	Wetland Creation/Wetland Enhancement				

Map Production Date: 3/27/2017  
 Data Sources: Imagery - USDA NAIP / Topo: USGS

US Army Corps of Engineers  
 Rock Island District

0 2,000 4,000 8,000 Feet





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Mr. Johnathan Buffalo, Director  
Historic Preservation Department  
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Ms. Bonney Hartley, THPO  
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Mr. Henry Payer, THPO  
Winnebago Tribe of Nebraska  
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Winnebago, NE 68071

Mr. Steve King, Deputy SHPO  
State Historical Society of Iowa  
600 E. Locust  
Des Moines, IA 50319-0290

Ms. Daina Penkiunas, Deputy SHPO  
Wisconsin Historical Society  
816 State St.  
Madison, WI 53706



**From:** [Diane Hunter](#)  
**To:** [Peterson, Cynthia L CIV \(US\)](#)  
**Subject:** [Non-DoD Source] Dredged Material Placement at Hurricane Island Reach  
**Date:** Tuesday, April 11, 2017 11:38:58 AM

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Dear Ms. Peterson:

Aya, kikwehsitoole – I show you respect. My name is Diane Hunter, and I am the Tribal Historic Preservation Officer for the Federally Recognized Miami Tribe of Oklahoma. In this capacity, I am the Miami Tribe's point of contact for all Section 106 issues.

The Miami Tribe initially responded to this project on February 10, 2017. Regarding the alteration of the Project's APE as noted in the Rock Island Army Corps of Engineers letter of March 29, 2017, the Tribe does not object to the expansion of the project area. However, as this site is within the aboriginal homelands of the Miami Tribe and due to the site's location near an existing historically important site, we request a copy of the SHPOs' reports and any further archaeological surveys performed as the project moves forward. Please mail all documentation to the address listed below or email to [dhunter@miamination.com](mailto:dhunter@miamination.com) <<mailto:dhunter@miamination.com>> .

As noted previously, if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery. In such a case, please contact me at 918-541-8966 or by email at [dhunter@miamination.com](mailto:dhunter@miamination.com) <<mailto:dhunter@miamination.com>> .

The Miami Tribe requests to continue to serve as a consulting party to the above-mentioned project. I am the point of contact for consultation.

Respectfully,

Diane Hunter  
Tribal Historic Preservation Officer  
Miami Tribe of Oklahoma  
P.O. Box 1326  
Miami, OK 74355





**From:** [Myster, James](#)  
**To:** [Peterson, Cynthia L CIV \(US\)](#)  
**Subject:** [Non-DoD Source] Re: Hurricane Island Dredged Material Placement Project (Grant Co. WI & Dubuque Co., IA)  
**Date:** Thursday, April 13, 2017 3:55:11 PM

---

Hi Cindy:

I did get the letter. I've read it over and we have no other comments other than to say that we concur with the USACE's determination that the present undertaking, as outlined, will have "No Effect on Historic Properties".

James

On Mon, Apr 3, 2017 at 8:09 AM, Peterson, Cynthia L CIV (US) <[Cynthia.L.Peterson@usace.army.mil](mailto:Cynthia.L.Peterson@usace.army.mil)> <<mailto:Cynthia.L.Peterson@usace.army.mil>> > wrote:

Dear James,

When you and I spoke last week re: the Fox Pond Dredging project, I mentioned that you can expect a coordination letter pertaining to another project along the Mississippi.

Please see the attached letter regarding Hurricane Island, which was mailed in hard copy to you late last week. Please let me know if you have any questions or concerns.

Best wishes,  
Cindy

Cindy Peterson  
Archeologist, MVP@MVR Environmental Compliance Branch  
USACE-RPEDN-Rock Island  
309/794-5396 (office)  
[cynthia.l.peterson@usace.army.mil](mailto:cynthia.l.peterson@usace.army.mil) <<mailto:cynthia.l.peterson@usace.army.mil>>

--

James E. Myster  
Regional Historic Preservation Officer / Archaeologist  
Midwest Region (Region 3)  
U.S. Fish and Wildlife Service  
5600 American Boulevard West, Suite 1049  
Bloomington, Minnesota 55437  
612-713-5439 (phone)



**UPPER MISSISSIPPI RIVER  
DREDGED MATERIAL MANAGEMENT PLAN  
WITH INTEGRATED ENVIRONMENTAL ASSESSMENT**

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**SITE PLAN FOR THE  
HURRICANE ISLAND REACH**

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**POOL 11  
DUBUQUE COUNTY, IA AND GRANT COUNTY, WI  
UPPER MISSISSIPPI RIVER, RIVER MILES 591-608**

**FINAL**

**APPENDIX D-3**

**ON-SITE INSPECTION TEAM COORDINATION**





September 26, 2014

CEMVR-OD-P-2014-1166

Ms. Donna Jones  
Rock Island District ACOE  
Clock Tower Building  
P.O. Box 2004  
Rock Island, IL 61204-2004

RE: Public Notice, 401 Water Quality Certification notification and 404(b)(1) evaluation for Maintenance Dredging of the 9-Foot Channel Navigation Project within Wisconsin waters, approximately RM 580.7 to RM 614.0.

Dear Ms. Jones:

The Wisconsin Department of Natural Resources has received the Rock Island District's Public Notice, 404(b)(1) evaluation, and incorporated notification of request for 401 Water Quality Certification. Unfortunately, the state cannot proceed to Water Quality Certification at this time in the absence of an active Memorandum of Understanding because we cannot demonstrate compliance with our water quality standards. We would welcome the opportunity to meet with you and your staff to discuss a plan and schedule to develop a revised MOU and ensure compliance with state water quality standards.

Background:

The most recent Memorandum of Understanding between the Rock Island District USACE and the Wisconsin Department of Natural Resources expired in July 2013. That instrument was a two-year extension to the 2001-2010 MOU referenced in your 404 application document. At the time of that extension, the Wisconsin Department of Natural Resources reiterated earlier concerns about erosion problems at the Hurricane Island site and included stipulations for subsequent renewals of the MOU. These stipulations addressed fundamental elements necessary for compliance with Wisconsin's water quality standards. First, on-site monitoring at the Hurricane Island site was required to ensure that erosion rates were not exceeding 25% loss of the dredged material placed onsite over 3-4 years. Second, in recognition of the limited long-term capacity at Hurricane Island (and Finley's Landing) and the need to avoid impacts to waterways & wetlands, Wisconsin required the development of alternatives that will meet the long-term (40-yr) needs of both channel maintenance and environmental restoration activities in Pool 11. Since 2011, little progress has been made in the development of a long-term plan for dredged material placement. Wisconsin DNR has been presented with a few informal concepts for placement sites with significant impacts to existing habitats, but we have not seen any information regarding potential alternative sites outside the immediate floodplain, nor have we seen a plan that adequately addresses the capacity needs for the Pool 11 dredge cuts.

In addition to avoidance & minimization of impacts to habitats and water quality of the Mississippi River, alternative sites outside the floodplain offer opportunities for beneficial use of dredged material and are consistent with the Upper Mississippi River partners' expectations for dredged material management stemming from the Channel Maintenance Handbook, GREAT II

Implementation Report, Corps' Mitigation Policy, Dredged Material Disposal Technical Report I (Comp Plan) and Programmatic Environmental Analysis. Moreover, Wisconsin DNR has reason to believe that beneficial uses exist within Pool 11 that have not been evaluated recently. As a result, the next step should be to undertake a DMMP process within Pool 11 that can evaluate beneficial uses and identify a set of alternatives to meet long-term placement needs in order to make significant progress toward reestablishing an MOU between the Rock Island District and Wisconsin DNR.

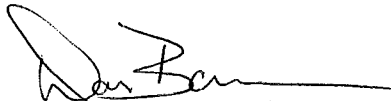
Per your communications with Sara Strassman of Wisconsin DNR on September 18, 2014, in order to comply with our water quality standards, the DMMP effort for Pool 11 should cover:

- Completed application form (application online here: <http://dnr.wi.gov/permits/water/>) or print : <http://dnr.wi.gov/topic/waterways/documents/PermitDocs/IPs/IndividualPermitAll.pdf>
- Practicable alternatives that avoid and minimize impacts to aquatic resources and water quality
- Compensation plan for unavoidable impacts to wetlands and aquatic habitats
- Floodplain information and assessment of impacts to flood conveyance through project actions
- Sediment analysis for dredged material (Tier II)
- Total placement capacity required by dredge cut over the lifespan of the plan
- Beneficial use opportunities and/or market analysis for dredged material
- Sufficiently detailed site plans that include details about the potential placement sites:
  - boundaries and site dimensions (pre-fill and maximum fill elevations)
  - existing habitats and features, including endangered resources & cultural resources
  - access and equipment needs
  - extent and volume of proposed fill, including total site capacity
  - type of disposal site (permanent or transfer)
  - dredge cuts associated with the placement site
  - site preparation needs
  - erosion control measures for the site and stockpile, if applicable
  - topographic maps, bathymetric maps, aerial photos and project site photos

In order to efficiently align our staff and resources to assist in the planning process, we would like to see a timeline for the Corps' DMMP planning process that would identify milestones and decision-points. We were pleased to hear that the Hurricane Island area is identified as the top planning priority on the Upper Mississippi for the Rock Island District as we head into the new federal fiscal year.

If you have any questions, please contact Sara Strassman, Mississippi River Planner, at (608) 785-9003 or [Sara.Strassman@wisconsin.gov](mailto:Sara.Strassman@wisconsin.gov).

Sincerely,



Dan Baumann, P.E.  
Secretary's Director  
Wisconsin DNR

eCC: Jim Fischer, WDNR – La Crosse  
Sara Strassman, WDNR – La Crosse  
David Pericak, WDNR – La Crosse



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

FEB 17 2017

REPLY TO THE ATTENTION OF: E-19J

Joe Jordan  
U.S. Army Corps of Engineers, Rock Island District  
ATTN: CEMVP-PD-P  
Clock Tower Building  
P.O. Box 2004  
Rock Island, Illinois 61204-2004

**RE: EPA's Comments on Hurricane Island Dredged Material Management Plan with Integrated Environmental Assessment for Pool 11 (RM 599-591), Dubuque County, Iowa and Grant County, Wisconsin**

Dear Mr. Jordan:

The U.S. Environmental Protection Agency has reviewed the U.S. Army Corps of Engineers' (USACE) 2017 Environmental Assessment (EA) concerning the above-mentioned project. Our comments in this letter are provided in accordance with our responsibilities under the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

USACE is proposing long-term placement of dredged material for the Hurricane Island Reach (between River Miles 599 to 591) in order to ensure availability of an adequate navigational channel. Historically, the dredged material has been placed on the left descending bank at Hurricane Island (RM 598.8 to RM 599.0L) and at Finley's Landing. While these sites will continue to be used, additional sites are required to accommodate larger estimated dredging needs in a 20-year plan (200,000 cubic yards (CY)) or a 40-year plan (400,000 CY)<sup>1</sup>.

The EA indicates multiple sites were initially evaluated using several factors, including cost effectiveness, environmental acceptability, and operational feasibility. Four alternatives, including a No Action Alternative, were considered to meet the estimated 40-year dredging capacity. Alternative D was selected as the Preferred Alternative for the Hurricane Island Reach DMMP. This alternative consists of placing dredged material on approximately 11 acres at an existing island (RM 594L). According to the EA, the preferred site will be designed as a temporary "bathtub"<sup>2</sup> with the inner circle filled as the cut is dredged, designed to hold approximately 200,000 CY of dredged material. Placement at the island will reduce potential floodplain impacts and utilize the existing higher land as berms to prevent sand movement during and after construction. As the bathtub nears capacity at approximately year 20, the

<sup>1</sup> Historic hydraulic data was analyzed to determine the flow velocities and elevations necessary to prevent erosion and sand migration. The District determined a berm height of elevation 608 mean sea level is necessary to reduce erosion during high water for this particular area of the River.

<sup>2</sup> Because the distance from the cuts to the farm fields/quarry site is approximately 15,000 feet, the temporary "bathtub" stockpile site will be designed with outer berms constructed using the existing sand on Finley's Landing.

USACE will relocate the dredged material to a permanent location on a nearby farm field/quarry site<sup>3</sup> (RM 592L). The proposed process of temporarily placing dredged materials in the bathtub until capacity is reached, at which time they will be relocated to a permanent site<sup>4</sup>, addresses estimated dredging needs for the next 40 years. Wetland impacts of approximately 11 acres are anticipated. USACE has applied for a Wisconsin Department of Natural Resources (WDNR) permit using the in-lieu fee program.

Pursuant to our review of the EA, EPA has the following comments.

### **Project Features**

Figure 1: Potential Placement Sites shows four bathtubs (596.7, FWS; 595.5, FWS; 594.1; and 594). This figure is confusing when compared to the project description, which indicates one island will be used for dredged material placement.

**Recommendations:** EPA recommends the description and/or the legend for Figure 1 be clarified to indicate the number of bathtubs that will be created under the proposed project and the appropriate location(s) in Figure 1. Additionally, the two bathtubs indicated with “(FWS)” should be clearly explained in the EA.

The EA indicates containment berms will be constructed to retain the dredged material, capped and allowed to revegetate. If vegetation cannot establish on its own, a seeding mix will be applied.

**Recommendations:** EPA recommends USACE commit in the FONSI to ensuring native vegetation establishes, with a minimum of non-native, invasive plant species. Also, greater clarification regarding whether resident soil will be used to provide a more suitable growth medium than the dredged material.

### **Wetlands**

The EA indicates Sedge meadow and deep/shallow marsh vegetation were identified as typical wetland communities at the proposed site. Because the bathtub site will have ongoing operational activities of construction and placement, the functionality and sustainability of restoration at that site have a low probability of success. Therefore, mitigation alternatives offsite are proposed for 11 acres of wetland impact. USACE has applied for a permit from WDNR to use the in-lieu fee program to mitigate for wetland impacts at an appropriate ratio set by WDNR.

**Recommendations:** EPA recommends USACE mitigate wetland impacts by replacing the same ecological type as the impacted resource (in-kind mitigation).

### **Beneficial Use**

The EA indicates use of dredged material as a manageable resource suitable for beneficial use (e.g., moist soil unit creation, refuge levee repairs, fish or wildlife restoration and enhancement projects, agricultural fields, etc.) would be pursued under Section 1135, Section 204, section 519 or Section 206 program authorities. The EA also indicates that multiple interests have been

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<sup>3</sup> Currently utilized as agricultural fields and quarry operation. Multiple landowners in this location have voluntarily expressed interest in accepting dredged material.

<sup>4</sup> Because a distance of 15,000 feet from the dredge cuts to the farm fields/quarry site, the bathtub will be used for “temporary” storage until full.



established for beneficial use in the project area, specifically for island creation (e.g., Rosebrook Island and Snyder Slough) and future coordination will be required to implement any ecosystem restoration or other beneficial use projects.

**Recommendations:** EPA recommends the issue of coordinating the beneficial use of dredged material be explained in greater detail. For example, will coordination take place with “multiple interests” before annual dredging commences or might coordination cover a longer duration and several projects (e.g., several island creation projects using the dredged material over a 10- or 20-year span)? How might USACE alert potential users that material is available once it has been permanently placed in the upland site? Lastly, USEPA recommends USACE commit in the Finding of No Significant Impact (FONSI) to actively pursue beneficial use, as appropriate.

### **Air Quality**

EPA acknowledges the air quality analysis found in the EA. In addition to the analysis concerning long-term air quality impacts, diesel emissions and fugitive dust from project construction may pose environmental and human health risks and should be minimized. In 2002, EPA classified diesel emissions as a likely human carcinogen, and in 2012 the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Acute exposures can lead to other health problems, such as eye and nose irritation, headaches, nausea, asthma, and other respiratory system issues. Longer-term exposure may worsen heart and lung disease.<sup>5</sup> EPA recommends that USACE consider the protective measures outlined in the attachment “*Construction Emission Control Checklist*” and commit to applicable measures in any decision documents pertaining to the proposed project.

Please send future NEPA documents pertaining to this project as they become available. Should you have any questions about this letter, please contact me or Kathy Kowal of my staff at (312) 353-5206 or via email at [kowal.kathleen@epa.gov](mailto:kowal.kathleen@epa.gov).

Sincerely,



Kenneth A. Westlake, Chief  
NEPA Implementation Section  
Office of Enforcement and Compliance Assurance

cc: Larry Shephard, USEPA, Region 7

Enclosure: EPA’s Construction Emission Control Checklist

<sup>5</sup> [https://www3.epa.gov/region1/eco/diesel/health\\_effects.html](https://www3.epa.gov/region1/eco/diesel/health_effects.html)

**U.S. Environmental Protection Agency**  
**Construction Emission Control Checklist**

**Mobile and Stationary Source Diesel Controls**

Purchase or solicit bids that require the use of vehicles that are equipped with zero-emission technologies or the most advanced emission control systems available. Commit to the best available emissions control technologies for project equipment in order to meet the following standards.

- On-Highway Vehicles: On-highway vehicles should meet, or exceed, the EPA exhaust emissions standards for model year 2010 and newer heavy-duty, on-highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, shuttle buses, etc.).<sup>1</sup>
- Non-road Vehicles and Equipment: Non-road vehicles and equipment should meet, or exceed, the EPA Tier 4 exhaust emissions standards for heavy-duty, non-road compression-ignition engines (e.g., construction equipment, non-road trucks, etc.).<sup>2</sup>
- Low Emission Equipment Exemptions: The equipment specifications outlined above should be met unless: 1) a piece of specialized equipment is not available for purchase or lease within the United States; or 2) the relevant project contractor has been awarded funds to retrofit existing equipment, or purchase/lease new equipment, but the funds are not yet available.

Consider requiring the following best practices through the construction contracting or oversight process:

- Use onsite renewable electricity generation and/or grid-based electricity rather than diesel-powered generators or other equipment.
- Use ultra-low sulfur diesel fuel (15 ppm maximum) in construction vehicles and equipment.
- Use catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels.
- Use electric starting aids such as block heaters with older vehicles to warm the engine.
- Regularly maintain diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance (e.g., blue/black smoke indicates that an engine requires servicing or tuning).
- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Repower older vehicles and/or equipment with diesel- or alternatively-fueled engines certified to meet newer, more stringent emissions standards (e.g., plug-in hybrid-electric vehicles, battery-electric vehicles, fuel cell electric vehicles, advanced technology locomotives, etc.).
- Retire older vehicles, given the significant contribution of vehicle emissions to the poor air quality conditions. Implement programs to encourage the voluntary removal from use and the marketplace of pre-2010 model year on-highway vehicles (e.g., scrappage rebates) and replace them with newer vehicles that meet or exceed the latest EPA exhaust emissions standards.

**Fugitive Dust Source Controls**

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.

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<sup>1</sup> <http://www.epa.gov/otaq/standards/heavy-duty/hdci-exhaust.htm>

<sup>2</sup> <http://www.epa.gov/otaq/standards/nonroad/nonroadci.htm>

- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

### **Occupational Health**

- Reduce exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel-equipment operators to perform routine inspection, and maintaining filtration devices.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, reducing the fume concentration to which personnel are exposed.
- Use enclosed, climate-controlled cabs pressurized and equipped with high-efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Use respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the type of work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a NIOSH approval number.

### **NEPA Documentation**

- Per Executive Order 13045 on Children's Health, EPA recommends the lead agency and project proponent pay particular attention to worksite proximity to places where children live, learn, and play, such as homes, schools, and playgrounds. Construction emission reduction measures should be strictly implemented near these locations in order to be protective of children's health.
- Specify how impacts to sensitive receptors, such as children, elderly, and the infirm will be minimized. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

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Children may be more highly exposed to contaminants because they generally eat more food, drink more water, and have higher inhalation rates relative to their size. Also, children's normal activities, such as putting their hands in their mouths or playing on the ground, can result in higher exposures to contaminants as compared with adults. Children may be more vulnerable to the toxic effects of contaminants because their bodies and systems are not fully developed and their growing organs are more easily harmed. EPA views childhood as a sequence of life stages, from conception through fetal development, infancy, and adolescence.



***Environmental Protection Agency Letter Dated February 17, 2017:***

**Comment:** The USEPA recommends the description and/or the legend for Figure 1 be clarified to indicate the number of bathtubs that will be created under the proposed project and the appropriate location(s) in Figure 1. Additionally, the two bathtubs indicated with “(FWS)” should be clearly explained in the EA.

**Response:** Table 4 in Section 3.2 has been revised to demonstrate the sites (including FWS bathtubs) that were evaluated and either brought forward or not for future consideration. Section 3.4 explains the preferred alternative as Alternative B with only the bathtub at RM 594.1 to farm fields/quarry.

**Comment:** The USEPA recommends USACE commit in the FONSI to ensuring native vegetation establishes, with a minimum of non-native, invasive plant species. Also, greater clarification regarding whether resident soil will be used to provide a more suitable growth medium than the dredged material.

**Response:** Revised Section 5.7, *Operations and Maintenance Considerations*, to include in the O&M Manual invasive species control at a 25 percent colonization ratio on the berms to native vegetation. Dredging of fines would likely be performed mechanically, using locally obtained fine (silts and clays) material from the bathtub’s interior or from routine lock and dam maintenance. The District anticipates immediate vegetation response from the local seed source. If the natural seeding is not deemed successful by the OSIT, the District will initiate active planting of native species. See Section 5.6, *Construction and Implementation*, Steps 5 and 6, for additional information.

**Comment:** The USEPA recommends USACE mitigation wetland impacts by replacing the same ecological type as the impacted resource (in-kind mitigation).

**Response:** All compensatory mitigation will be in-kind to ensure no net loss of these wetland types. Appendix G-3, *Compensatory Wetland Mitigation Plan*, outlines the baseline conditions appropriate mitigation ratios, and construction limitations to build in-kind wetlands.

**Comment:** The USEPA recommends the issue of coordinating the beneficial use of dredged material be explained in greater detail. For example, will coordination take place with “multiple interest” before annual dredging commences or might coordination cover a longer duration and several projects? How might USACE alert potential users that material is available once it has been permanently placed in the upland site? Lastly, USEPA recommends USACE commit in the FONSI to actively pursue beneficial use, as appropriate.

**Response:** Section 1.11 was revised to include more examples of potential usage of material. Beneficial use is limited to the local interest and ability to transport material. Ongoing efforts are being made by the District to research users (ex: Mackinaw River, Illinois, dredged material to soil for construction purposes).





# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Rock Island Field Office  
1511 47<sup>th</sup> Avenue  
Moline, Illinois 61265  
Phone: (309) 757-5800 Fax: (309) 757-5807

IN REPLY REFER  
TO:

FWS/IL-IA FO

March 1, 2017

Colonel Craig Baumgartner  
Attn: Kathryn Herzog, Environmental Planning  
U.S. Army Corps of Engineers  
Rock Island District  
Clock Tower Building, P.O. Box 2004  
Rock Island, Illinois 61204-2004

Dear Col. Baumgartner:

Thank you for coordinating the Hurricane Island Dredged Material Management Plan (DMMP) with the On-Site Inspection Team (OSIT). The U.S. Army Corps of Engineers (USACE) draft DMMP document identifies temporary and permanent dredge material placement sites for the material generated from the Hurricane Island Reach of the navigation channel. The Hurricane Island dredge cut is located within Pool 11 of the Upper Mississippi River between River Miles (RM) 599 to 591, Dubuque County, Iowa and Grant County, Wisconsin. The preferred alternative consists of dredge material placement on approximately 11 acres at an existing island, designated the "bathtub" site, within Corps property boundary (RM 594L). Placement at the bathtub site will result in impacts to approximately 11 acres of shallow/deep marsh and sedge meadow wetlands.

The OSIT convened on February 14, 2017, to discuss potential compensatory mitigation options for the wetland impacts from the construction of the temporary dredge material placement site (bathtub). These discussions included mitigation banks, in-lieu fee programs, and permittee responsible options. As a result of this discussion, the OSIT recommends the following permittee-responsible options for further consideration:

1. **Lower Hurricane Island Rip Rap (RM 597-589.1)** includes the placement of approximately 2,000 linear feet of rock along the lower portion of Hurricane Island, bordering the navigation channel. Rock placement at this location would provide bankline stabilization and protection of interior wetlands. Additionally, this option has the potential to result in navigation channel maintenance benefit through the reduction of eroded material being deposited within the channel.
2. **Rosebrook Island Rip Rap (RM 594.6-595.2)** includes the placement of approximately 3,000 linear feet of rock around the head of the island and extending along the right

descending bankline. This option also includes sand placement behind the rock along the right descending bankline of the island. Placement in these locations would provide bankline stabilization and protection of the interior wetlands. Additionally, pockets may be made between the rock/sand placement and the existing island to create isolated wetlands for amphibian and reptile benefits.

3. **Bathtub Mudflat (RM 593.8-594.0)** includes an extension of the downstream end of the proposed bathtub placement site. The extension would be constructed of rock and sand to mimic the structure and function of the wetland area lost within the placement footprint in an immediately adjacent location.

A depiction of these proposed mitigation sites are attached.

A freshwater mussel survey conducted by Ecological Specialists, Inc. in 2016, identified mussel resources, including the federally endangered Higgins eye pearl mussel (*Lampsilis higginsii*), as occurring within the project area. The OSIT recognizes that the recommended mitigation options may have the potential to affect mussel resources. As a result, OSIT will commit to assessing the mussel resources from the recommended mitigation locations, as needed, to facilitate selection of the mitigation sites discussed above. If federal or state-listed mussel resources are identified, consultation with the appropriate agencies and/or relocation may be warranted.

The OSIT appreciates the continued coordination of the DMMP provided by the USACE on the Upper Mississippi River. If you have any questions concerning our comments, please contact me at (309) 757-5800, extension 203.

Sincerely,

  
For Sara Schmuecker  
OSIT Chair

cc: IADNR (Griffin, Hansen, Gritters)  
WIDNR (Janvrin, Rasmussen, Fischer, Kelly)  
USFWS (McPeck, Baylor, Jones, Woyczik)  
USACE (Afflerbaugh)



***U.S. Fish and Wildlife Service: Endangered Species Act Concurrence Letter Dated March 23, 2017***

**Comment:** Page 1, Section 1.4 Authorization: Update Illinois Waterway to Upper Mississippi River

**Response:** Concur. This has been revised accordingly.

**Comment:** Page 1, Section 1.4, Authorizations: Please consider a statement identifying management of the project area by the Upper Mississippi River NWR.

**Response:** Concur. Revised Section 1.2, Project Location to identify USFWS Upper Mississippi NWR, as well as Section IV, C of the Mitigation Plan Appendix. .

**Comment:** Page 7, Section 1.11 Objectives and Constraints: Under the Constraints section, please consider updating the text of "Many sites near the Hurricane Island Dredge Cut include impacts to federally-listed species and cannot be disturbed" to "Many sites near the Hurricane Island Dredge Cut were identified to have listed species concerns, resulting in efforts to avoid and minimize impacts."

**Response:** Concur. This has been revised accordingly.

**Comment:** Page 11, Section 2.2.4 Biota: Update county names.

**Response:** Concur. This has been revised accordingly.

**Comment:** Pages 14-19, Alternative Plans: Please consider references to FWS fee-titled land, as appropriate.

**Response:** Concur. Updated table with new sites considered to include fee-title entities, as well as revised Section V in the Mitigation Plan Appendix.

**Comment:** Pages 16- 19, Section 3.2 Evaluation of Alternative Plans: Please include updated mitigation discussions and options throughout the report, as presented in the OSIT's letter of March 1, 2017.

**Response:** Please see Mitigation Plan Appendix that has been added to provide more detail on the mitigation alternatives, with emphasis on the OSIT recommendations.

**Comment:** Page 31, Section 5.5, Step 5- Complete and Capping of Berms: Please include a discussion regarding where the dredged fines will be obtained.

**Response:** Please see revised Section 5.6, Step 5. Dredging of fines would likely be performed mechanically, using locally obtained fine (silts and clays) material from the bathtub's interior or from removing fine material from lock and dam maintenance.

**Comment:** Page 34, Sections 6.1.2 and 6.1.3: Consider adding reference to USFWS Regional Historic Preservation Officer coordination for alternatives on FWS fee-titled land, as appropriate.

**Response:** Concur. Additional coordination was conducted and have been added to Appendix D-2, *Correspondence*. Responses are pending.





March 3, 2017

Adam Ziegler  
Rock Island District ACOE  
Clock Tower Building  
P.O. Box 2004  
Rock Island, IL 61204-2004

**Subject: Comments on the Hurricane Island Reach Dredge Material Management Plan**

Dear Mr. Adam Ziegler,

Thank you for the opportunity to review and comment on the draft Hurricane Island Reach Dredged Material Management Plan (DMMP) with Integrated Environmental Assessment. The Wisconsin Department of Natural Resources (Department) has reviewed the above mentioned document and has the following comments/questions:

**SITE LOCATIONS**

The Hurricane Island Reach DMMP recognizes two new dredge material placement sites as the preferred alternative to meet the future dredging needs identified in lower Pool 11. Those sites are identified as the Bathtub (RM 594.1) and the Farm Field/Quarry (RM 591L). The DMMP also identifies continued placement at the Hurricane Island (RM 598.8) and Finley's Landing (RM 599) beach sites contingent on OSIT approval. A discussion of each of these sites is included below. Several potential capping material borrow sites are discussed in the DMMP, including the LD 11 forebay and the excavation of suitable material from the center of the bathtub.

Overall, the Department expected to see greater assessment of alternatives that would locate permanent placement for the dredged material outside the floodplain and its habitats. Utilization of dredged material for beneficial use such as landfill capping, road sanding, construction fill and similar uses is an option that minimizes wetland impacts while making material available for other economic benefits. This type of beneficial use was not described in the Draft DMMP Section 1.10, presumably due to equipment related constraints raised in Section 1.11. It seems reasonable to the Department that current contractual constraints may be changed in the future, if found to be limiting flexibility and increasing costs in meeting Channel Maintenance objectives.

**Site specific recommendations:**

**Bathtub Site (RM 594.1)** – The Department recommends that footprint of the entire bathtub site be shifted to the east to remove the upstream end of the containment berms from extending into the backwater channel.

It is also recommended that the interior of the bathtub be pre-excavated. This will provide water quality benefits, minimize wetland impacts and increase offload efficiencies, as discussed elsewhere within this document.

**Farm Field/Quarry Site (RM 591L)** – The long-term dredge material placement solution identified in the DMMP is to construct a temporary dredge material placement site (Bathtub) which is to be offloaded to Farm Field/Quarry (RM 591L) in 20 years. However, the MVR has not secured the long-term use for Farm Field/Quarry (RM 591L) site or any other upland placement sites. It is understood that current requirements necessitate that the Dredge Material Management Plan must be completed before land acquisition negotiations can take place. However, waiting 15 years before beginning these negotiations is not an acceptable option. These negotiations need to take place as soon as possible. Acquisition of upland dredge material placement sites on Pool 11 needs to be the top priority for the MVR. The shortage of land acquisition for dredge material has been an historic problem for the Army Corps of Engineers throughout the Upper Mississippi River Basin. Rock Island District's Implementation Report for Great II Study (June 1981) identifies the importance of land acquisition. It ranks the acquisition of disposal sites or the rights for disposal at the earliest date possible as a High Implementation Priority Action. The DMMP should outline the future plan of action and timeline for utilizing these farm field/quarry sites.

**Hurricane Island Beach Site (RM 598.6 LW)** – OSIT approval alone will not be considered adequate to warrant dredge material placement at the Hurricane Island Beach Site. The Pool 11 Dredged material Disposal Plan from March of 1987 indicates that "this historic disposal site is capable of handling a single-event of 30,000 cubic yards. Thereafter, the site only will be available as a beach nourishment site, based upon OSIT inspection and recommendation." However, a total of 98,558 cubic yards were placed (7 events) on Hurricane Island beach since that time. The renewed capacity at this beach site area is the result of excessive erosion rates. Wisconsin has repeatedly requested that the erosion rate be monitored help inform responsible beach enhancement actions. The 2001 – 2010 MOU states "if the erosion rate equals or exceeds 25% loss of dredged material in 3 to 4 years, an alternative placement site must be found". To date, the Department has not received any beach erosion monitoring data from Hurricane Island. The MOU also states that the "Corps will prepare and implement (after Department approval) an erosion control management plan to include planting of rootstock willow trees and appropriate signing. Small rock groins will be installed if the rootstock will trees do not stabilize the site." It appears that all past attempts to stabilize this beach site have failed, therefore this site cannot be considered as a placement alternative without inclusion of appropriate stabilization. The site requirements in the 2001 -2010 MOU also specify that "the dredged material is to be placed in such a manner as to develop and maintain the area as a series of isolated recreational beaches. The USFWS Area Refuge Manager recommended this beach landscape configuration for dredged material placement". Consequently, if the Hurricane Island placement site is going to be utilized in the future, the DMMP needs to include a stabilization plan to address all of these concerns. This plan will need to, at minimum, incorporate the use of rock, fine material, erosion controls and vegetation to stabilize the site. Even if the proper stabilization is installed, this site should still only be considered a one-time placement location of dredge material for recreation purposes. The plans developed within the DMMP, once approved by the Department, will be incorporated into the MOU.

**Capping Material Borrow Sites** – The Department is not looking at the Lock and Dam 11 Forebay clean-out as a part of this project. The fine material required for topsoil should be obtained from the pre-excavation of the center of the bathtub. Borrow sites will require sediment samples to be collected and analyzed for potential contaminants. Please work with WDNR staff to determine the sampling methods and parameters.

**Cassville Power Plants** – The DMMP identifies the Cassville power plants (606 and 608) but states that they were not carried forward for review. Do your previous DMMP documents cover the necessary NEPA requirements in the event an opportunity for dredge material placement arises? The Department will need to incorporate these sites into our next MOU in order for them to be eligible placement sites in the future. We will need basic information on placement location and quantity in order to pre-approve these sites.

## **CONSTRUCTION METHODS AND DESIGN**

**Bathtub Access** – Access dredging will be required to gain entry to the bathtub construction site. Before the dredging begins, sediment samples will need to be collected and analyzed for potential contaminants. Please work with WDNR staff to determine the sampling methods and parameters. The Hurricane DMMP identifies an access channel 60 feet wide, 1,043 feet long and 6 feet deep. Does the 60 foot width represent the top or the bottom of the trapezoid shape channel to be excavated? This channel is anticipated to generate approximately 9,000 cubic yards of material. Work will begin on the channel side and progress towards the island. According to section 5.5.1, sediment is to be excavated and hauled to an existing approved placement site for offload. What offload site is intended to be used? Due to the length of the access channel, WDNR recommends excavating a turning basin for the barges. The DMMP should document these additional details and document any potential impacts. The DMMP should also provide details future maintenance associated with the bathtub access.

**Bathtub Construction** – The Hurricane Island DMMP contains specifications regarding the construction of a new temporary dredge material placement site or bathtub site. This bathtub is proposed to be located on Corps fee title land near river mile 594.1. It is being designed as a containment structure for approximately 20 years of main channel dredge material (200,000 cy) from the Hurricane Island and Finley's Landing dredge cuts. The bathtub is designed to be approximately 1,200 feet long and 400 feet wide. The Department recommends pre-excavating the interior of the bathtub to provide additional capacity, water quality benefits, minimize wetland impacts and increase offload efficiencies, as discussed elsewhere within this document. Before the pre-excavation begins, sediment samples will need to be collected and analyzed for potential contaminants. Please work with WDNR staff to determine the sampling methods and parameters. The Geotechnical Engineering Report states that the berm will be "approximately 5 feet high and constructed with existing clay on the island". However, Section 5.5.1 of the DMMP indicates that the berms are to be constructed using dredge material from Finley's Landing placement site. Please clarify. The design plans indicate that there is to be a one foot cap of clay placed over the entire berm containment structure. The clay cap may not be necessary on the inside slope of the berms. The clay cap should be installed in phases as the berm is constructed. The Hurricane DMMP is inconsistent on the planting requirements for the berm. The berms need to be seeded upon completion of the clay cap. The establishment of woody vegetation will help stabilize the site, provide an aesthetic screen, reduce wind erosion on the site and decrease the possibility for this area turning into a high density recreation area. Section 5.5.3 states "during hydraulic placement operations at the bathtub, a gap would be left to allow the release of water". This is not an adequate outlet for the return water and could result in adverse erosion issues. The bathtub should have a designed outlet or weir capable of providing adequate detention time to assist in the removal of suspended solids. Information on the type of structure and the discharge location should be included in the DMMP. This structure will also allow the interior of the bathtub to be hydraulically connected to Mississippi River, alleviating issues from rapid rise or fall in the water level. The hydraulic modeling for the bathtub site demonstrates stable conditions for the bathtub during high water conditions and resistance to wind and wave action. WDNR recommends that a routine inspection and maintenance plan be developed. This plan should be adaptive in nature with the understanding that riprap or

other erosion control measures may be required in the future. Section 5.7 of the DMMP approximates the cost for the bathtub construction at \$196,466 while the Executive Summary states \$300,000. Please clarify.

**Farm Field/Quarry** – At year 20 the bathtub is to be offloaded to the farm field/quarry near RM 591.5. Section 5.9 of the DMMP states that the “offload action would involve placing a hydraulic pipe up an existing creek channel along the left descending bank, near RM 591.5, and pumping material into an upland site”. The actions described in this section may warrant additional environmental review. Additional details on the future offload plan are recommended.

## **SITE OPERATIONS**

**Dredging Quantities** - The Hurricane Island DMMP identifies the need for dredge material placement locations for the Hurricane Island Reach. The calculated quantities and frequencies of dredging are based on historic information and Corps expertise. Maintenance dredging in this area has been deferred since 2007 at Hurricane. Section 1.7 of the DMMP recognizes the deferred dredging but fails to provide explanation of why the initial “clean out” is extended over 5 years of dredging at 25,000 CY per year and what this quantity represents. Is this the necessary quantity of dredging to restore recommended widths and depths through the area of deferred maintenance broken up over a 5 year implementation? How is the “clean out” dredging functionally changing the deposition rates within this section of channel such that it arrives back at historic frequencies after 5 years? It appears that some of the increased frequency of dredging at Finley’s is a result of reduced dredging at Hurricane, but it is not clear how that shift is accounted for within the plans for the “clean out” and the future estimated quantities. If the channel has been adequately navigated at historic frequencies, what is the benefit of the “clean out” dredging with its associated costs and impacts?

**Aesthetics** – Efforts need to be taken to preserve the natural scenic beauty of the Mississippi River. Section 4.1.2.10 of the Hurricane Island DMMP does not mention the aesthetic impacts of adding a large pile of dredge material in Pool 11. Wisconsin has a Public Trust Doctrine that helps protect Wisconsin citizen’s rights in public waters as well as public safety, by ensuring adequate planning and design of projects affecting fish and wildlife habitat, water quality and natural scenic beauty. The DMMP should specify these issues and clarify steps to be taken to ensure that these placement sites blend into the environment and the scenic beauty of the Mississippi River is maintained.

**Future Offload** – According to the Hurricane Island DMMP, the bathtub is projected to be offloaded two times in the next 40 years. The DMMP does not account for any of the logistics for a future hydraulic or mechanical offload. It is understood that these factors may be subject to change in the future but the DMMP should attempt to anticipate future hydraulic pipeline routes, account for access dredging and mobilization of equipment for both routine placements and offloads and document any potential aquatic resource concerns associated with those operations.

**Water Quality Standards** - Many of the previously discussed design considerations are critical to uphold Wisconsin’s water quality standards during the construction phase of this project, future dredge placement events and future offload events. The Corps, through its 404(b)1 process, is asked to avoid impacts associated with dredged material through careful consideration of alternatives. If a discharge must occur, Subpart H of the 404(b)1 Guidelines (40CFR230) provides specific recommendations to minimize impacts such as:

“locating and confining the discharge to minimize smothering of organisms” (230.70a);

“selecting the disposal site, the discharge point, and the method of discharge to minimize the extent of any plume” (230.70e);

“selecting discharge methods and disposal sites where the potential for erosion, slumping or leaching of materials into the surrounding aquatic ecosystem will be reduced. These sites or methods include using containment levees, sediment basins and cover crops to reduce erosion” (230.71a);

“maintaining and containing discharged material properly to prevent point and nonpoint sources of pollution” (230.72c)

The Department’s earlier comments related to site design facilitate compliance with these recommendations, particularly pre-excavation of the interior of the Bathtub site and the installation and use of discharge pipes to return carriage water to the Mississippi River.

In Section 2.23 Waters/Wetlands, aluminum impairment was reported, but Pool 11 also has impairments for PCBs, mercury and total phosphorus and has fish consumption advisories stemming from PCB contaminated tissue. Sampling in 2016 found total phosphorus levels exceeding listing criteria for Fish and Aquatic Life use.

Wisconsin’s water quality standards are defined in Chapter NR 102 Wisconsin Administrative Code. The most relevant numeric values related to this project occur within Wisconsin’s Carriage and Interstitial Water from Dredging Water General Wastewater Permit (WI-0046558-5-0) that sets effluent discharge limits for dredging operations. Section 3.3 of that permit outlines the monitoring requirements and effluent limitations for surface water discharges. The surface water discharge requirements are determined by information from the Chapter 30 Wisconsin Statute dredging permit application process and sediment characterization data collected in accordance with Chapter NR 347 Wisconsin Administrative Code. Sediment characterization conducted in 2015 found main channel dredged material to be uncontaminated based on Wisconsin’s “Consensus-Based Sediment Quality Guidelines” (CBSQG) Threshold Effect Concentration (TEC), making it compatible with a surface water effluent limitation for total suspended solids of 80 mg/L. This is a daily maximum limit and grab samples must be collected weekly from the outfall discharge point.

Wisconsin’s Runoff Management program (Wisconsin Administrative Code NR 151) outlines Best Management Practices to manage total suspended solids (TSS), nutrients, temperature, pollutants and erosion through the application of erosion prevention measures, infiltrating practices and nutrient management. The bathtub design needs to provide adequate time and area for the total suspended solids in the effluent to drop out of solution before entering the river during construction, dredge placement activities and material offload activities. Extra care must be taken to ensure that the mussel beds thriving near the proposed bathtub area are given an adequate level of protection, particularly as these mussel beds include endangered Higgen’s eye mussels.

The WDNR has established a level of comfort with the design and operation methods that St. Paul District Army Corps of Engineers has established for transfer sites. The transfer sites or “bathtubs” are excavated to allow for mechanical or hydraulic dredge material placement. This also allows them to have the opportunity for future hydraulic offload capabilities which in turn provides cost savings during the offload events. Pre-excavated Bathtub sites facilitate beneficial use and ease of offloading by creating a product that is more uniformly granular in nature. The site also has a greatly reduced risk of encountering fine material deposits when it is pre-excavated. Fine material deposits have the potential to create water quality issues in the return water effluent, the location of which has yet to be determined. Excavating the center of this bathtub provides additional storage to the bathtub area. This has the potential to reduce the bathtub dredge material pile size and height which would reduce wind erosion, minimize the wetland impacts and provide a better blend into

the natural scenic landscape of the Mississippi River. It will also provide additional ponding area for solids to drop out of suspension before the dredge effluent is returned to the river.

At an offload project in the St. Paul District, the Department compiled monitoring results that demonstrate the water quality significance of the interior ponding area. During a hydraulic offload operation, carriage water was routed back to the interior ponding area, where turbidity measurements ranged from 58-222 NTU and TSS measures ranged from 54-223 mg/L. By the time water within the ponding area discharged to the channel, these values were generally reduced by an order of magnitude, to the range of 8-43 NTU and 7-25 mg/L TSS. With recent information about light dynamics in ecological food webs indicating 17 mg/L TSS as an important threshold (Giblin), there is little question as to the value of the ponding area in reducing TSS values to near or below that threshold during the offload. The ponding area provides similar water quality protection when placement activities occur. When there is a high water content in the slurry, even with a long sand slope for infiltration, the ponding area plays an important role in settling out sediments from the water that will be discharged to the main channel.

The Draft Hurricane DMMP (Section 6.1.5) indicates that a 401 Water Quality Certification is pending with the Department and that the Department will enter into the MOU in lieu of issuing a Water Quality Certification. In fact, a Water Quality Certification will be required for this DMMP. New placement sites, expansions of existing sites and new major projects must be reviewed for consistency with Wisconsin's water quality standards. Water Quality Certification is also required for all HREP projects in Wisconsin waters. Before the Water Quality Certification evaluation can begin, construction plans, operational information and mitigation deficiencies within this Draft DMMP will need to be addressed.

**Monitoring Plan** – The Department recommends that the DMMP outline a plan for water quality monitoring during the construction phase of this project. Monitoring should also take place

**Long Term Plan** - The Hurricane Island DMMP does not indicate what will become of the bathtub after year 40 or in the event that the bathtub is no longer needed. The Corps should develop a long range plan for the lifespan of the bathtub that includes anticipated need, renewed capacity and if no longer needed, decommissioning that returns the site to a natural condition. The Rock Island District Corps of Engineers (MVR) should also consider the rising costs of dredging and double-handling of material at Bathtub sites that increasingly poses challenges for the St. Paul District Corps of Engineers (MVP), and that direct placement to upland sites may be a more cost-effective long-term solution. We encourage you to discuss these issues and potential solutions with the MVP.

## **WETLAND MITIGATION**

The Hurricane DMMP identifies 11.1 acres of wetland that will be impacted from the construction of the bathtub placement site. The DMMP identifies the use Wisconsin's In-Lieu Fee program to satisfy the Clean Water Act Section 404 compensatory wetland mitigation requirements. Section 404 requires that steps have been taken to avoid and minimize the impacts to wetlands. After the steps to avoid and minimize impacts have been exhausted, compensation must be provided for all remaining unavoidable impacts.

Pre-excavating the center of the bathtub would provide additional capacity for dredge material and potentially allow for the overall size of the bathtub structure to be reduced. The decrease in structure size would result in a reduction in impacted wetland area. This excavation would also provide ponding area to allow solids to drop out of suspension before the dredge effluent is returned to the river. Beyond that, bathtub excavation has the potential to maximize offload efficiency and minimize future costs. The material



generated from the pre-excavation could potentially be used for the construction of any permittee-responsible compensatory mitigation projects

For the impacts that cannot be minimized, Wisconsin would like to see the compensatory mitigation be completed within Pool 11 of the Mississippi River. The Upper Mississippi River floodplain wetlands are designated Wetlands of International Importance by the Ramsar Convention. Extra efforts should be taken to minimize impacts and promote on-site wetland mitigation. Our local WDNR Natural Heritage Ecologist (Armund Bartz) noted that there has been extreme wetland loss to the areas adjacent to Pool 11 on both sides, even more so than adjacent areas in other pools. For this reason we should move to protect even modest-quality wetland habitats in the Mississippi River floodplain of Pool 11.

Beyond that, the Great II Channel Maintenance Handbook identifies that the Fish and Wildlife Interagency Committee (FWIC) should be involved in the development of the compensatory mitigation requirements for the establishment of new dredge material disposal sites. Chapter IV Section D of the Handbook states the following: “Since the established policy for the Rock Island Engineers District is to use the GREAT II primary sites whenever possible, the OSIT will have to have strong rationale and vote by consensus for recommending the use of new or alternative sites. The procedures and priorities outlined in Section IV. B. above must be used by the OSIT in the selection of any new sites, and site preparation and mitigation recommendations should be in accordance with Section IV. C. and D above and Section IV. E. and G. below.”

Furthermore, Section IV. C. states that the Corps should “prepare a preliminary disposal site plan in coordination with the OSIT for each of the primary sites within 5 years. The site plan should include the mitigation requirements developed by the FWIC. The ORRMT (now RRCT) should approve all site plans.”

Excerpts from Section IV. G. read as follows: “The exact improvement to habitat value from the above measures will be dependent on a site by site basis and will have to be monitored by the FWIC. Based on the above discussion, the GREAT II Team recommends:

1. The RID/COE mitigate all losses due to disposal of dredged material.
2. Each primary site be evaluated by the FWIC to determine the appropriate mitigation measures for the site. This should be developed into a total mitigation plan and submitted to the ORRMT (now RRCT) for approval and incorporation into the Primary Site plans.
3. Mitigation measures be tested and monitored by the RID/COE and the FWIC to determine changes in HU values. The mitigation plan should be reevaluated as appropriate.
4. Additional information be collected (particularly in association with the tracing of “tagged” dredged material) to properly address aquatic habitat impacts. Material would have to be tagged for all types of disposal (i.e., beach, thalweg, double pumping, etc.).
5. The habitat evaluation and mitigation plan be updated for new disposal sites and, as information becomes available, on the impacts of aquatic habitat.
6. The OSIT insure that the recommended mitigation measures are accomplished.”

Based on the information from the Handbook, the FWIC should be involved in the developing the requirements for compensatory wetland mitigation as well as testing and monitoring the wetland mitigation measures.

On February 14, 2017 the OSIT and members of the FWIC met to discuss alternative compensatory wetland mitigation options that were not considered in the draft DMMP document. The partnership outlined and agreed upon three alternative permittee-responsible compensatory mitigation options for further consideration. Those options were described as follows:

1. Lower Hurricane Island Rip Rap (RM 597-589.1) includes the placement of approximately 2,000 linear feet of rock along the lower portion of Hurricane Island, bordering the navigation channel. Rock placement at this location would provide bankline stabilization and protection of interior wetlands. Additionally, this option has the potential to result in navigation channel maintenance benefit through the reduction of eroded material being deposited within the channel.
2. Rosebrook Island Rip Rap (RM 594.6-595.2) includes the placement of approximately 3,000 linear feet of rock around the head of the island and extending along the right descending bankline. This option also includes sand placement behind the rock along the right descending bankline of the island. Placement in these locations would provide bankline stabilization and protection of the interior wetlands. Additionally, pockets may be made between the rock/sand placement and the existing island to create isolated wetlands for amphibian and reptile benefits.
3. Bathtub Mudflat (RM 593.8-594.0) includes an extension of the downstream end of the proposed bathtub placement site. The extension would be constructed of rock (as needed for erosion protection) and sand to mimic the structure and function of the wetland area lost within the placement footprint in an immediately adjacent location.

The WDNR Mississippi River Team recommends that the permittee-responsible options outlined by the UMR Partnership be added to the DMMP for further consideration.

Thank you again the opportunity to comment on the draft DMMP. If you have any questions or need any clarification on the items included in this letter, please contact Kurt Rasmussen, Mississippi River Planner, at (608) 785-9003 or by email at [Kurt.Rasmussen@Wisconsin.gov](mailto:Kurt.Rasmussen@Wisconsin.gov).

Sincerely,

Kurt Rasmussen  
Mississippi River Planner  
Wisconsin Department of Natural Resources  
3550 Mormon Coulee Road  
La Crosse, WI 54601  
Phone: (608) 785-9003  
Fax: (608) 785-9990  
[Kurt.Rasmussen@Wisconsin.gov](mailto:Kurt.Rasmussen@Wisconsin.gov)

***Wisconsin Department of Natural Resources Letter Dated March 3, 2017:***

**Comment:** Overall, the Department expected to see greater assessment of alternatives that would locate permanent placement for the dredged material outside the floodplain and its habitats.

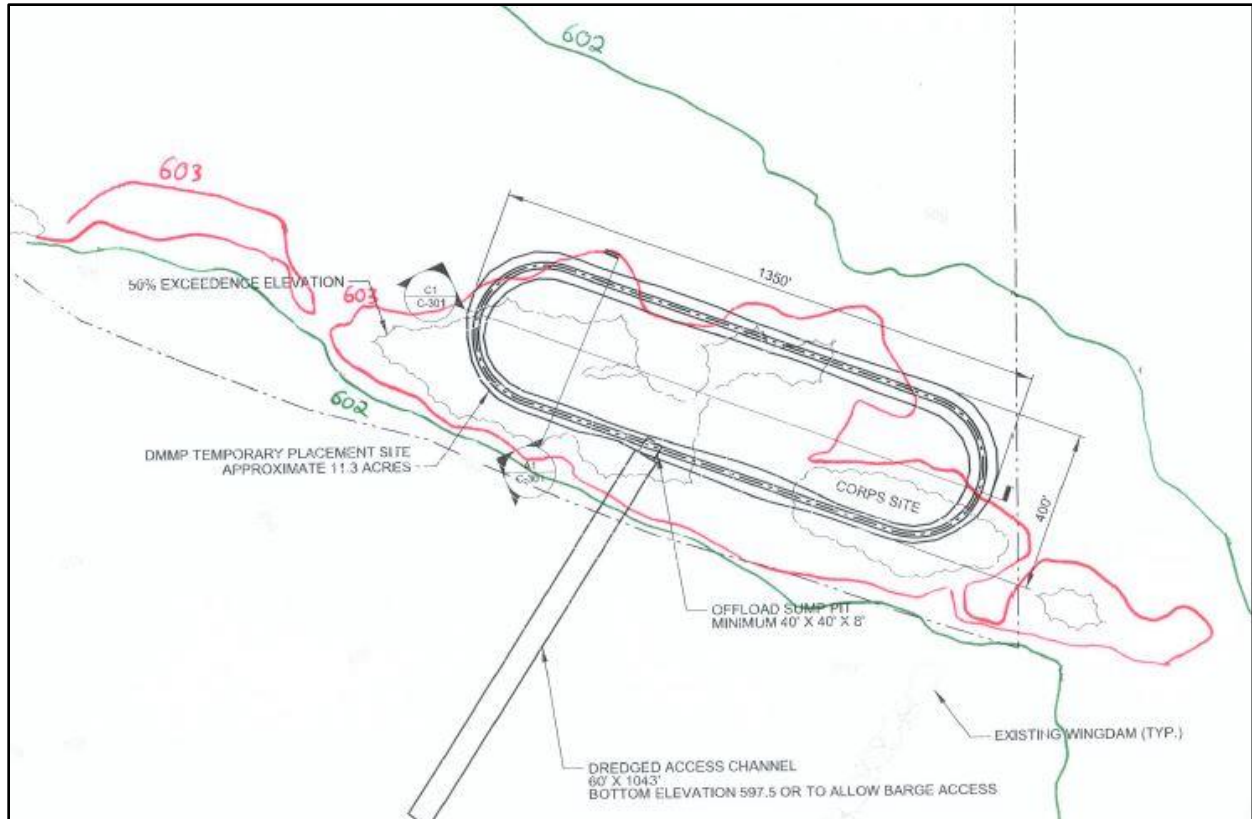
**Response:** Figure 3 and Table 4 show all the upland sites considered for this project. Table 4 describes the feasibility of each site and reasons they were dropped or carried forward for further consideration.

**Comment:** Utilization of dredged material for beneficial use such as landfill capping, road sanding, construction fill and similar uses is an option that minimizes wetland impacts while making material available for other economic benefits. This type of beneficial use was not described in the Draft DMMP Section 1.10, presumably due to equipment related constraints raised in Section 1.11.

**Response:** Section 1.11 was revised to include more examples of potential usage of material. Beneficial use is limited to the local interest and ability to transport material. Ongoing efforts are being made by the District to research users (ex: Mackinaw River, Illinois, dredged material to soil for construction purposes).

**Comment (Bathtub Site-site specific):** The Department recommends the footprint of the entire bathtub site be shifted to the east to remove the upstream end of the containment berms from extending into the backwater channel.

**Response:** It is understood that this concern is based on orthoimagery showing the proposed bathtub site in relation to the existing island mass. The orthoimagery was taken at a snapshot in time when water elevations may not adequately convey the topography of the island and surrounding river. Using contours of the area, the elevation on the northwest edge of the bathtub is considerably flat and does not vary significantly. Survey data shows the portion of the containment berm in question would be constructed at a location with elevation higher than 602ft MSL1912, and thus is less than 1 foot below flat pool of 603ft (Figure 10).



**Figure 10.** Elevations at Preferred Bathtub Site

**Comment:** Throughout the letter, WI DNR recommends that the District pre-excavates the bathtub interior. This will provide water quality benefits, minimize wetland impacts and increase offload efficiencies.

**Response:** The District is purposing to pre-excavate the bathtub interior to provide additional area (approximately 0.5 acre) for the offload operation.

**Comment (Farm Field/Quarry Site):** The long-term dredge material placement solution identified in the DMMP is to construct a temporary dredge material placement site (Bathtub) which is to be offloaded to Farm Field/Quarry (RM 591L) in 20 years. However, the MVR has not secured the long-term use for Farm Field/Quarry (RM 591L) site or any other upland placement sites. It is understood that current requirements necessitate that the Dredge Material Management Plan must be completed before land acquisition negotiations can take place. However, waiting 15 years before beginning these negotiations is not an acceptable option. These negotiations need to take place as soon as possible.

**Response:** Acquisition is not required with a willing landowner wanting to accept the dredged material. Section 1.12 explains three-phase interagency DMMP process with Phase 3: Acquisition of placement sites (as needed) and implementation of the Recommended Plan. Communication with the existing landowners has been conducted (See Appendix D, *Correspondence*, for email) and has expressed interested in receiving the material. Future communication will be conducted on a 5-year basis to ensure

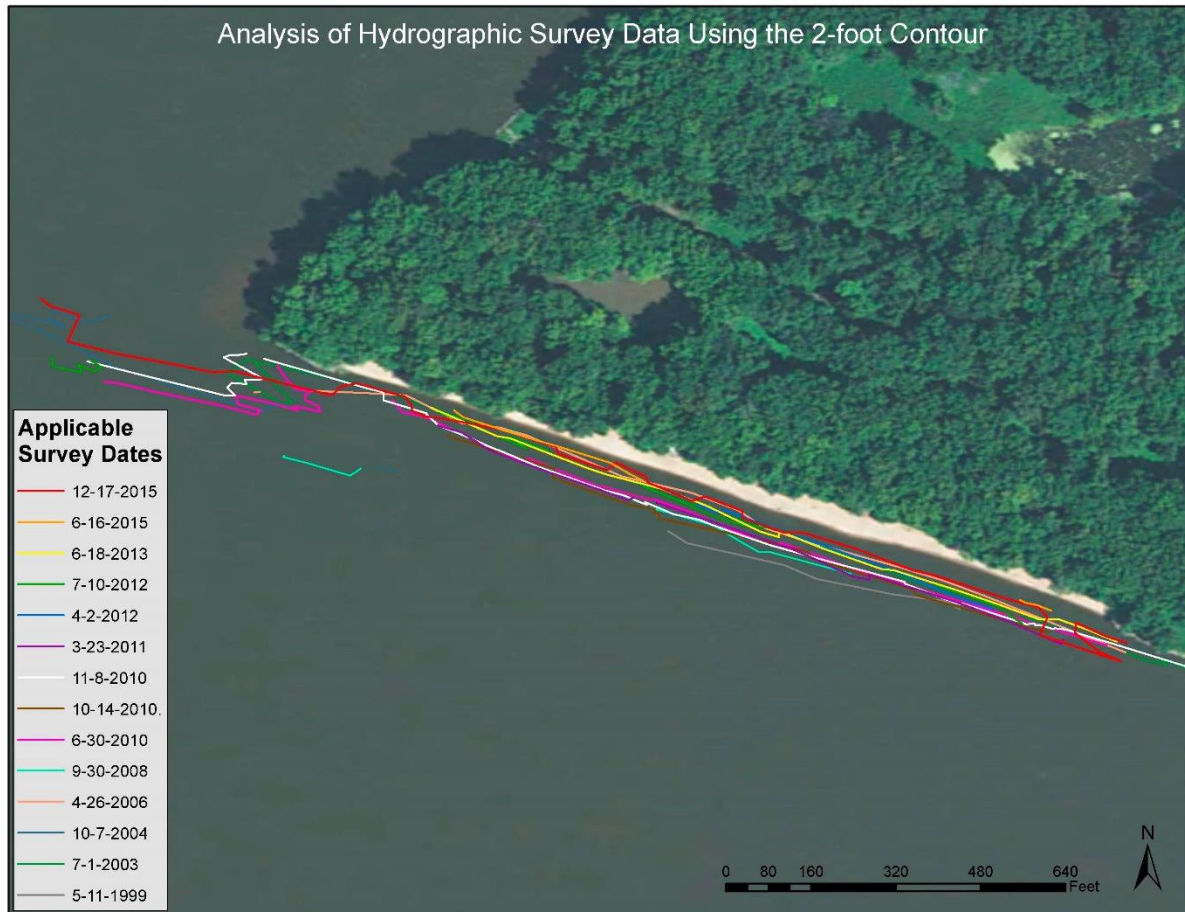
the landowners are still interested. This communication will be coordinated through the OSIT as part of the draft MOU (Appendix G-2).

**Comment (Hurricane Island Beach Site):** Consequently, if the Hurricane Island placement site is going to be utilized in the future, the DMMP needs to include a stabilization plan to address all of these concerns. This plan will need to, at minimum, incorporate the use of rock, fine material, erosion controls and vegetation to stabilize the site. Even if the proper stabilization is installed, this site should still only be considered a one-time placement location of dredge material for recreation purposes. The plans developed within the DMMP, once approved by the Department, will be incorporated into the MOU.

**Response:** The District has evaluated rebuilding wing dams near the Hurricane Bankline. Hydraulic modeling did not demonstrate a reduction in velocities along the Hurricane Island bankline with wing dams restored to original design grade or elevated to 3 feet below flat pool. The District also evaluated construction of rock groins, rock vanes, and blanket riprap. A blanket riprap option required more rock, resulting in a higher expense than a rock groin or rock vane option. Blanket riprap was also the least preferable to the District because it essentially removes any recreational use the Hurricane Island bankline site has had since 1968. *The Upper Mississippi River Restoration, Environmental Management Program, Environmental Design Handbook, December 2012* was used for design standards of newly proposed rock groins and vanes. Rock groins and rock veins showed a flood surface profile impact above the State of Wisconsin standard. Currently no measures (rock, fine materials, erosion controls, and planting) have been identified that meet the State of Wisconsin's minimum requirements for stabilization, and are under the threshold for the State of Wisconsin's flood surface profile impacts, and also allow the District to effectively use the bankline site for placement of dredged material. A one-time use site would not allow the District to meet the needs of anticipated future dredging quantities. Therefore, other sites were identified as part of the preferred alternative. While likely the State of Wisconsin will not approve placement without all of the stated minimum requirement, the District wishes to keep the Hurricane Island bankline as a potential placement option in the event a suitable stabilization method can be found or the State of Wisconsin requests placement at the bankline site with an exemption to the flood surface profile impact regulations.

Starting in 1998, the District agreed to perform monitoring erosion rates at Hurricane Island bankline. Monitoring was performed on the Hurricane Island bankline using hydrographic survey vessels starting in 1999. The limiting factor for collection of data is the river stage. In order to collect data closer to shore, elevated river stages are needed. A total of 40 surveys were performed between 1999 and 2015. Select surveys were used and a two-foot contour was selected to attempt to get more comparable survey data. Figure 11 shows a summary of this data.

The percent loss of material over a 3- or 4-year period is not able to be captured by this data. This data seems to suggest that material at the two-foot contour does move but has the potential to stay for longer periods under some channel conditions. Sediment contributions from upstream of the site also are not evident in this survey data.



**Figure 11:** Hurricane Island

**Comment (Capping Material Borrow Sites):** Borrow sites will require sediment samples to be collected and analyzed for potential contaminants.

**Response:** The District will use agreed upon sampling methods listed within the pending MOU.

**Comment (Cassville Power Plants):** The DMMP identifies the Cassville power plants (606 and 608) but states that they were not carried forward for review.

**Response:** The Cassville Power Plants were not carried for further review for long-term placement sites, but are examples of beneficial use sites. These sites are subject to the plant management objectives and need for the material. Future coordination will be necessary to ensure NEPA compliance. The District anticipates the MOU would address and clear any additional regulatory permits or encumbrances with using this site.

**Comment (Bathtub Access Design):** Before the dredging begins, sediment samples will need to be collected and analyzed for potential contaminants. Does the 60 foot width (stated in original report) represent the top or the bottom of the trapezoid shape channel to be excavated? According to Section 5.5.1, sediment is to be excavated and hauled to an existing approved placement site for offload. What

offload site is intended to be used? Due to the length of the access channel, WDNR recommends excavating a turning basin for the barges.

**Response:** The District will use agreed upon sampling methods listed within the pending MOU. The width is the bottom of the channel to be excavated. In communication with the District's dredging staff, the access channel needs to be at least 100 feet to fit barges. Care was taken to keep the channel in a path where no mussels were present to avoid impacts. A turning basin is not recommended because it would further increase mussel impacts and it is not required to perform the proposed actions. The dredged material from the approach channel can go temporarily on Finley's or directly to the bathtub site dependent on the methods and circumstances. The District is purposing to pre-excavate the bathtub interior to provide additional area (approximately 0.5 acre) for the offload operation.

**Comment (Bathtub Construction):**

1. The Geotechnical Engineering Report states that the berm will be "approximately 5 feet high and constructed with existing clay on the island". However, Section 5.5.1 of the DMMP indicates that the berms are to be constructed using dredge material from Finley's Landing placement site. Please clarify.
2. The Hurricane DMMP is inconsistent on the planting requirements for the berm. The berms need to be seeded upon completion of the clay cap. The establishment of woody vegetation will help stabilize the site, provide an aesthetic screen, reduce wind erosion on the site and decrease the possibility for this area turning into a high density recreation area
3. Section 5.5.3 states "during hydraulic placement operations at the bathtub, a gap would be left to allow the release of water". This is not an adequate outlet for the return water and could result in adverse erosion issues. The bathtub should have a designed outlet or weir capable of providing adequate detention time to assist in the removal of suspended solids.
4. The hydraulic modeling for the bathtub site demonstrates stable conditions for the bathtub during high water conditions and resistance to wind and wave action. WDNR recommends that a routine inspection and maintenance plan be developed. This plan should be adaptive in nature with the understanding that riprap or other erosion control measures may be required in the future.
5. Section 5.7 of the DMMP approximates the cost for the bathtub construction at \$196,466 while the Executive Summary states \$300,000. Please clarify.

**Response:**

1. The berms are to be constructed to elevation 608.0. They are constructed of a dredged sand core (2-foot to 4-foot height) with a clay cap (1 foot). On the channel side of the containment berm the height of the berm is less than 3 feet in places. In those locations the berm will be entirely constructed of clay. Geotechnical Engineering Report has been updated to reflect this. The berm has been modeled as a clay berm as that is more representative of how it will behave than a sand berm. The geotechnical modeling was completed with narrower berm widths and steeper side slopes than used in the final berm design. As the underlying material—not the berm design—was the limiting factor of the modeling, the model was not redone with final design dimensions. The slope of the sand placement will be limited to a slope of 7H:1V until the clay layer under the sand has compacted enough to support a steeper slope. It is recommended that borings be taken by the District and the model rerun if steeper slopes are desired.
2. See Step 5 under section 5.6. The containment berms will be constructed and capped as material is dredged. If the berm does not naturally vegetate, a seed mix will be applied. This seed mix is

to duplicate the sedge meadow habitat and does not include woody vegetation. A cost of \$9,700 for the seeding, if needed, is included in the cost estimate.

3. Construction of berms at the bathtub, as well as constructed sand weirs as material is being pumped, will slow and direct water flow to increase retention times as water is released back through a gap left in the berm. Total suspended solids (TSS) of the return water will be monitored at the outfall of "bathtub" and quarry site during dredging operations. Grab samples will be taken weekly and compared to the 80mg/L daily maximum, as listed within the Memorandum of Understanding (MOU) between WI DNR and the District. The berms are maintained and monitored one week for each year of life, for ¼ of the years of life to ensure berm sustainability.
4. Containment berm maintenance is assumed to take place one week for each year of life, for ¼ of the years of life to ensure berm sustainability. If visual inspection reveals erosion of the berms, necessary measures will be implemented.
5. The costs in the main report and Appendix F have been updated for consistencies.

**Comment (Farm Field/Quarry Design):** Section 5.9 of the DMMP states that the “offload action would involve placing a hydraulic pipe up an existing creek channel along the left descending bank, near RM 591.5, and pumping material into an upland site”. The actions described in this section may warrant additional environmental review.

**Response:** Additional coordination and environmental review will be necessary close to offloading at year 20, as stated in the FONSI.

**Comment (Dredging Quantities):** Section 1.7 of the DMMP recognizes the deferred dredging but fails to provide explanation of why the initial “clean out” is extended over 5 years of dredging at 25,000 CY per year and what this quantity represents. Is this the necessary quantity of dredging to restore recommended widths and depths through the area of deferred maintenance broken up over a 5 year implementation? How is the “clean out” dredging functionally changing the deposition rates within this section of channel such that it arrives back at historic frequencies after 5 years? It appears that some of the increased frequency of dredging at Finley’s is a result of reduced dredging at Hurricane, but it is not clear how that shift is accounted for within the plans for the “clean out” and the future estimated quantities. If the channel has been adequately navigated at historic frequencies, what is the benefit of the “clean out” dredging with its associated costs and impacts?

**Response:** The numbers provided in Section 1.7 are purely estimates and no guarantee of any material quantities that may result from channel maintenance dredging at any particular time. Historical dredging quantities and frequencies were used as the basis for these estimates. The dynamic nature of the river system will cause quantities to vary. Channel maintenance dredging was deferred in both 2015 and 2016 and these quantities are known. In general, reduced maintenance dredging has been performed in this reach due to the lack of available placement sites. The District anticipates both dredging frequency and quantities to remain relatively high for the first approximately 5 years. This would allow the District to address any deferred or past reduced dredging, while also effectively using both District and regional equipment to maintain a safe and navigable channel for all river miles under our jurisdiction. Evaluating available hydrographic survey data, there is currently and estimated quantity between 80,000 and 100,000 cubic yards within this reach if the channel were to be dredged at the maximum authorized dimensions. The 25,000 cubic yards per year for the first 5 years is roughly representing this quantity of material. Once the channel dimension is restored with adequate placement available, any necessary maintenance dredging could be performed. The additional space allows for an increased amount of time before



dredging is required due to reduced channel widths impacting navigation, resulting in a decrease in dredging frequency.

It is possible that reduced dredging at the Hurricane Island Dredge Cut may be correlated to increased frequencies at Finley's Landing Dredge Cut. With the potential array of sediment contributors and the complex nature of the transport of sediment in the Mississippi River, more data is needed to support this conclusion.

The existing conditions in this reach are not adequate for a safe and effective navigation channel. Except for an emergency closure in 2016, the District has kept a channel open for navigation despite the lack of adequate placement sites. Closures and a reduction in channel width both have cost to the navigation industry.

**Comment (Aesthetics):** Efforts need to be taken to preserve the natural scenic beauty of the Mississippi River. Section 4.1.2.10 of the Hurricane Island DMMP does not mention the aesthetic impacts of adding a large pile of dredge material in Pool 11.

**Response:** Section 4.1.2.10 describes the potential impacts to the area's aesthetic values. Since the berm would quickly revegetate and with the current sand pile at Finley's Landing, it is anticipated there will be little to no changes from the current state to aesthetics.

**Comment (Future Offload):** According to the Hurricane Island DMMP, the bathtub is projected to be offloaded two times in the next 40 years. The DMMP does not account for any of the logistics for a future hydraulic or mechanical offload. It is understood that these factors may be subject to change in the future but the DMMP should attempt to anticipate future hydraulic pipeline routes, account for access dredging and mobilization of equipment for both routine placements and offloads and document any potential aquatic resource concerns associated with those operations.

**Response:** In an effort to account for some of the known concerns at this point in time, measures have been taken to avoid and minimize impacts to the area surrounding the farm fields/quarry. For example, floating pipe will be used to transport material and an existing creek and/or an existing culvert will be used as a path for the pipe. These are methods to avoid and minimize tree clearing and access dredging as much as possible. The appropriate figures has been revised to note access into this area.

**Comment (Water Quality Standards):**

1. In Section 2.23 Waters/Wetlands, aluminum impairment was reported, but Pool 11 also has impairments for PCBs, mercury and total phosphorus and has fish consumption advisories stemming from PCB contaminated tissue. Sampling in 2016 found total phosphorus levels exceeding listing criteria for Fish and Aquatic Life use.
2. Sediment characterization conducted in 2015 found main channel dredged material to be uncontaminated based on Wisconsin's "Consensus-Based Sediment Quality Guidelines" (CBSQG) Threshold Effect Concentration (TEC), making it compatible with a surface water effluent limitation for total suspended solids of 80 mg/L. This is a daily maximum limit and grab samples must be collected weekly from the outfall discharge point.
3. Wisconsin's Runoff Management program (Wisconsin Administrative Code NR 151) outlines Best Management Practices to manage total suspended solids (TSS), nutrients, temperature, pollutants and erosion through the application of erosion prevention measures, infiltrating practices and nutrient management. The bathtub design needs to provide adequate time and area for the total suspended solids in the effluent to drop out of solution before entering the river during construction, dredge placement activities and material offload activities. Extra care must be taken to ensure that the mussel beds thriving near the proposed bathtub area are given an adequate level of protection, particularly as these mussel beds include endangered Higgin's eye mussels.
4. The Draft Hurricane DMMP (Section 6.1.5) indicates that a 401 Water Quality Certification is pending with the Department and that the Department will enter into the MOU in lieu of issuing a Water Quality Certification. In fact, a Water Quality Certification will be required for this DMMP.
5. The Department recommends that the DMMP outline a plan for water quality monitoring during the construction phase of this project.

**Response:**

1. Revised Section 2.23 to reflect the additional sampling from the draft report in 2016.
2. Total suspended solids (TSS) of the return water will be monitored at the outfall of "bathtub" and quarry site during dredging operations. Grab samples will be taken weekly and compared to the 80mg/L daily maximum, as listed within the pending MOU.
3. Operations will ensure enough distance for material to settle out prior to release to main channel by the construction of weirs and ponding areas. The mitigation area is an additional sediment capture to minimize drifted sediment reaching adjacent mussels. Please see Section 4.1.3 for more information on additional conservation measures and coordination for mussel impacts.
4. Additional coordination with WI DNR is required to determine the process with Water Quality Certification.
5. Total suspended solids (TSS) of the return water will be monitored at the outfall of "bathtub" and quarry site during dredging operations. Grab samples will be taken weekly and compared to the 80mg/L daily maximum, as listed within the pending MOU.

**Comment (Long Term Plan):** The Corps should develop a long-range plan for the lifespan of the bathtub that includes anticipated need, renewed capacity and if no longer needed, decommissioning that returns the site to a natural condition.

**Response:** The District's Operations office annually evaluates the main channel to determine short term and long term dredging needs and concerns. The bathtub site is anticipated to be in use for approximately 40 years to hold the necessary capacity after an offload to the permanent location at approximately Year 20 or 200,000 CY. As Year 40 approaches, the District will reevaluate this site to determine whether the site should be decommissioned or continue its use. The District would include the WI DNR and the OSIT in all of these decisions at that time.

**Comment (Wetland Mitigation):**

1. For the impacts that cannot be minimized, Wisconsin would like to see the compensatory mitigation be completed within Pool 11 of the Mississippi River.
2. Beyond that, the Great II Channel Maintenance Handbook identifies that the Fish and Wildlife Interagency Committee (FWIC) should be involved in the development of the compensatory mitigation requirements for the establishment of new dredge material disposal sites. Chapter IV Section D of the Handbook states the following: "Since the established policy for the Rock Island Engineers District is to use the GREAT II primary sites whenever possible, the OSIT will have to have strong rationale and vote by consensus for recommending the use of new or alternative sites. The procedures and priorities outlined in Section IV. B. above must be used by the OSIT in the selection of any new sites, and site preparation and mitigation recommendations should be in accordance with Section IV. C. and D above and Section IV. E. and G. below."
3. On February 14, 2017 the OSIT and members of the FWIC met to discuss alternative compensatory wetland mitigation options that were not considered in the draft DMMP document. The partnership outlined and agreed upon three alternative permittee-responsible compensatory mitigation options for further consideration.

**Response:**

1. The District has evaluated areas within Pool 11 for compensatory mitigation. Per the OSIT's on-site mitigation recommendation, the District developed a Compensatory Wetland Mitigation Plan (Appendix G-3). This appendix outlines several mitigation alternatives considered but not selected based on floodplain impacts, not meeting the in-kind replacement need, operational limitations, and endangered mussel impacts.
2. Please see Section 7.2 for the thorough coordination the District has had with the OSIT, which currently consists of the same members from the FWIC. The current onsite mitigation plan has been designed to compensate in compliance with Clean Water Act, Section 404 Federal regulations. The GREAT II Handbook was developed prior to these Federal regulations. For example, the 2008 Compensatory Mitigation Rule sets standards for mitigation measures and ratios with monitoring requirements necessary to fulfill Section 404. Any comments pertaining to the procedural recommendations of the interagency teams is outside the scope of this report. The District will coordinate any deviation from the Compensatory Wetland Mitigation Plan, outlined in Appendix G-3, through the OSIT chairperson.

3. According to the 2008 Compensatory Mitigation for Losses of Aquatic Resources (Mitigation Rule), which was implemented after the GREAT II Handbook was issued, proposed activities are evaluated to determine a net improvement of the function of the site. This is further defined as restoration (re-establishment or rehabilitation), enhancement, establishment (creation), buffer, or preservation ([http://www.sac.usace.army.mil/Portals/43/docs/regulatory/Guidelines\\_for\\_Preparing\\_a\\_Compensatory\\_Mitigation\\_Planf.pdf](http://www.sac.usace.army.mil/Portals/43/docs/regulatory/Guidelines_for_Preparing_a_Compensatory_Mitigation_Planf.pdf)). Preservation is defined as “removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanism. Preservation does NOT result in a gain of aquatic resource area or functions.” Therefore, preference was given to the OSIT Option 3. Bathtub Mudflat (see Appendix C, *Correspondence*). In coordination with District’s Regulatory office, The District used the OSIT’s Option 3 as a basis of acceptable in-kind mitigation. It is important to note that an official wetland delineation has not been conducted for the bathtub and mitigation sites. In order to analyze these areas in more detail to fulfill Section 404 requirements, the District’s Regulatory staff has required a delineation once growing season is underway. Any significant changes to the proposed plan would be coordinated at that time.

## Herzog, Kathryn M CIV USARMY CEMVR (US)

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**From:** Brown, Joshua A - DNR <JoshuaA.Brown@wisconsin.gov>  
**Sent:** Friday, March 03, 2017 3:57 PM  
**To:** Herzog, Kathryn M CIV USARMY CEMVR (US)  
**Cc:** Rasmussen, Kurt A - DNR  
**Subject:** [EXTERNAL] Pool 11/Hurricane Island wetland mitigation

Ms. Herzog,

As we discussed via phone on February 22nd, the Wisconsin Wetland Conservation Trust (WWCT) is not able to fulfill the Corps' wetland mitigation obligations resulting from the Rock Island Corps District's Hurricane Island/Pool 11 dredging project. Our WWCT Program Instrument, which details the Program's guidelines and responsibilities, states that "Through the sale of WWCT credits the Sponsor (DNR) accepts the legal responsibility to satisfy wetland compensatory mitigation requirements specified by US Army Corps of Engineers-St. Paul District permits authorized under Section 404 of the Clean Water Act, Section 10 of the River and Harbors Act and Wisconsin DNR Wetland Individual Permits pursuant to Chapter 281.36." Because there is no Section 404, Section 10, or DNR Wetland permit, the WWCT does not feel it can accept the Corps' mitigation obligations.

In a February 20th meeting with DNR staff, Kurt Rasmussen (copied here) of the DNR Mississippi River Team, suggested that the Rock Island Corps District work with the Upper Mississippi River (UMR) interagency partnership teams (Fish and Wildlife Interagency Committee and the On-Site Inspection Team) to develop alternative compensatory mitigation options on Pool 11 of the Mississippi River. We believe that working with UMR partnership teams will provide you with a reasonable solution to fulfilling your mitigation requirements. This option would also allow the Rock Island District to provide input on the restoration project and ensure that the project be located in or near the river, two of your requests that the WWCT could not accommodate.

Please let me know if you have any questions or comments.

Thanks,

Josh

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Josh Brown  
Wetland In-Lieu Fee Program Coordinator – Watershed Management Bureau  
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REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
CORPS OF ENGINEERS, ROCK ISLAND DISTRICT  
PO BOX 2004 CLOCK TOWER BUILDING  
ROCK ISLAND, ILLINOIS 61204-2004

CEMVR-PM-M

**APR 17 2017**

Mr. Dan Baumann  
1300 W Clairemont Avenue  
Eau Claire, WI 54701

Dear Mr. Baumann:

The U.S. Army Corps of Engineers, Rock Island District (District), is nearing completion of the Hurricane Island Reach Dredged Material Management Plan (DMMP), Pool 11 of the Upper Mississippi River. This DMMP will address one of the highest risk navigation channel sections in the Mississippi River that experienced an emergency channel closure in 2016, negatively impacting river commerce in the States of Wisconsin, Minnesota, Iowa and Illinois. We seek a proactive approach in order to avoid any future emergency closures.

This DMMP identifies new placement sites to accommodate anticipated 40-year channel maintenance dredging quantities. The planning effort for this particular DMMP began in 2010. The technical challenges that this stretch of river present contribute to the duration of this effort. From 2010 to the present, the District partnered with various resource agencies, including the Wisconsin Department of Natural Resources (WI DNR), the Iowa DNR, and the U.S. Fish and Wildlife Service (USFWS), in an attempt to collaboratively find a solution to this problematic area.

Our partnership generated a number of conceptual ideas that have been further vetted against Federal standards and regulations. As many conceptual ideas develop, they often fail to meet the expectations of one or more of the partners.

During recent project development, the District applied on January 20, 2017, to the WI DNR In-Lieu Fee Program (Enclosure 1) to address mitigation needs for wetland impacts from the construction and use of the proposed placement site. Upon follow up of the status of the application, the District learned that the WI DNR could potentially reject the application. In response to this information, the District met on February 14, 2017, with the WI DNR, the Iowa DNR, and the USFWS to generate additional conceptual options to address compensatory mitigation. The District received an e-mail on March 3, 2017 (Enclosure 2), confirming that the WI DNR had rejected the In-Lieu Fee Program application, stating that the District should find a compensatory mitigation option within Pool 11 instead.

Since the February 14 meeting, the District has continued to evaluate the conceptual options and developed a Compensatory Wetland Mitigation Plan (Enclosure 3) that is constructible, fits within the Corps' channel maintenance authority, and meets all applicable laws and standards. This mitigation plan, based on an option proposed by the WI DNR and other resource agencies, is included in the Public Review Draft of the DMMP that will be available no later than the end of April 2017.

If, during the 30-day public review period, it is determined that this new mitigation plan does not meet the expectations of the WI DNR, the District is asking for a reconsideration of the January 20, 2017, application to the In-Lieu Fee Program.

Thank you for the opportunity to communicate the current status of the Hurricane Island Reach DMMP. We continue to appreciate the partnership as we produce a finalized DMMP report intended to manage risks to navigation and state impacts on the Upper Mississippi River.

The point of contact for this matter is Mr. Adam Ziegler, 309-794-5168 or e-mail: [adam.t.ziegler@usace.army.mil](mailto:adam.t.ziegler@usace.army.mil).

Enclosures (3)



CRAIG S. BAUMGARTNER  
COL, EN  
Commanding





# STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR  
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
CHUCK GIPP, DIRECTOR

U.S. Army Corps of Engineers Rock Island District  
Attn: Colonel Craig Baumgartner  
Clock Tower Building PO Box 2004  
Rock Island, IL 61204-2004

May 22, 2017

Colonel Baumgartner,

Iowa Department of Natural Resources (IA DNR) field biologists have read the *SITE PLAN FOR THE HURRICANE ISLAND REACH, DREDGED MATERIAL MANAGEMENT PLAN WITH INTEGRATED ENVIRONMENTAL ASSESSMENT, POOL 11, DUBUQUE COUNTY, IA AND GRANT COUNTY, WI UPPER MISSISSIPPI RIVER, RIVER MILES 591-608, dated April 2017*. We have the following comments on the document.

The document is very well written and goes into considerable detail. IA DNR field biologist agrees with the general plan and implementation. We are in favor of the mitigation being near the project area. We agree that the mitigation contained in the mitigation plan is the best option at this time. We would like to comment on the wetland determination the District is performing that was not included in the document. If additional mitigation is required, IA DNR would like to have the Corps use the "*Protect Lower Hurricane Island Riprap*" alternative described on page G-3-11.

IA DNR field biologist have the following specific comments:

- Page 5. It looks like the Corps anticipates filling the bathtub with 175,000 cy during the first five years of use. With a total capacity of 194,000 cy, this only leaves 19,000 cy for 15 years of the plans first increment of 20 years.
- Page 23 section 3.4. If additional mitigation is needed, IA DNR is in favor of mitigation at the Lower Hurricane Island riprap site instead of using purchased wetland credits.
- Page 39. Total cost should include a credit for using channel maintenance sand that the Corps would have to have paid for disposal at some other site. (ie Cassville power plants).
- Page 45. This section needs to be re-written with verbiage from the new information on a Bald Eagle nest in the immediate area.

We appreciate the opportunity to comment on this document and value our involvement with the Rock Island District on Dredged Material Management Plans.

As you are aware, Iowa DNR issues 401 certification on an individual dredging event basis. The procedures are contained within the document titled, "STATE OF IOWA

SECTION 404 (t) PERMIT AND ON-SITE INSPECTION TEAM PROCESS FOR  
CORPS OF ENGINEERS MISSISSIPPI RIVER DREDGED MATERIAL PLACEMENT”

If you have any questions please contact Michael Griffin at  
[Michael.Griffin@dnr.iowa.gov](mailto:Michael.Griffin@dnr.iowa.gov) or 563 872 5700.

Thank you for taking our comments.

Michael Griffin  
IA DNR OSIT Captain  
206 Rose St.  
Bellevue IA 52031



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

MAY 22 2017

REPLY TO THE ATTENTION OF: E-19J

Kathryn Herzog  
U.S. Army Corps of Engineers, Rock Island  
Clock Tower Building  
1500 Rock Island Drive  
Rock Island, Illinois 61201

Re: Dredged Material Management Plan (DMMP) with Integrated Environmental Assessment for Pool 11, Dubuque County, Iowa, and Grant County, Wisconsin, Upper Mississippi River

Dear Ms. Herzog:

The U.S. Environmental Protection Agency has reviewed the above-mentioned document (EA), dated April 2017. Our comments in this letter are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

As stated in the EA, the project purpose is to identify a plan whereby material dredged from Pool 11 of the Upper Mississippi River (River) for maintenance of the 9-Foot Navigation Channel over a 40-year period can be placed. An estimated 400,000 cubic yards (CY) of material will be dredged from Pool 11 over the next 40 years using both mechanical and hydraulic dredging methods at the Hurricane Island Reach (the Hurricane Island Reach is located between river miles (RM) 599 and 591 in Pool 11). The EA analyzes impacts resulting from the dredge cuts and potential placement sites over a 40-year period.

Two alternatives, the No Action Alternative and a placement alternative, were considered to meet a dredging capacity of 400,000 CY. Minimization and avoidance of Federally-listed endangered mussels, as well as wetland and floodplain impacts, were considered when evaluating the alternatives. The EA indicates that Alternative B was selected as the Preferred Alternative. This alternative proposes to place dredged material at a small island (RM 594.1), located downstream of Hurricane Island. A berm would be constructed from dredged material, with additional dredged material placed inside the berm on an as-needed basis (the "bathtub site"). Once the approximately 11-acre bathtub site is at full capacity, the dredged material would be removed and placed in an upland field/quarry along the Wisconsin shoreline.

According to the EA, the Preferred Alternative provides the greatest flexibility in placement locations without increasing placement costs and safeguards against the possibility of increased dredging volumes over the 40-year life of the DMMP. The proposed project would impact approximately 11 acres of a mixed herbaceous wetland (sedge meadow and emergent wetlands); mitigation is planned adjacent to the temporary placement site (the Bathtub Mudflat).

Pursuant to our review of the EA and appendices, EPA has the following comments, separated by category.

### **PROJECT CONSTRAINTS**

The EA indicates a project planning constraint is the effort to reduce sediment load from contributing tributaries, as this is outside the authorities provided to U.S. Army Corps of Engineers (USACE) to operate and maintain a 9-foot navigational channel in the Upper Mississippi River.

**Recommendation:** While EPA acknowledges the extent of USACE authorities, it is reasonable to include in the analysis information attributed to other Federal and/or state agencies to reduce sediment load from overland and tributary sources. Therefore, EPA recommends the analysis address efforts by any entity to reduce sediment in this area of the Upper Mississippi River (e.g., use of bedload interceptors, etc.).

### **PLACEMENT SITES**

Table 4 of the EA, New Placement Sites Considered, indicates three sites, Alliant Energy, Nelson Dewey Plant at RM 608; Dairyland Power Cooperative at RM 606; and U.S. Fish and Wildlife Service (USFWS) fee-title Bathtub Islands at RM 595.5L and 596.7L, do not provide sufficient capacity for long-term placement, but could still be used for beneficial use.

**Recommendation:** While EPA acknowledges the EA indicates these sites would not provide sufficient capacity and the first two sites are located further than the allowable 10,000 feet away from dredge cuts, the EA is unclear as to whether these two sites will be incorporated into the Preferred Alternative (and ultimately the Finding of No Significant Impact (FONSI)). This comment is based on the idea that these three sites may provide a means of beneficially reusing dredged material. Therefore, EPA recommends the analysis address whether these three locations will be included in the Preferred Alternative and FONSI, in addition to the bathtub and upland permanent placement proposal.

### **WETLAND MITIGATION**

Section 5.5.2 of the EA, Maintenance, indicates the maintenance scope of the project will include non-native, invasive plant species (NNIS) control at 25 percent colonization ratio on the berms to native vegetation. Appendix G-3, Compensatory Wetland Mitigation Plan, indicates physical removal or chemical treatment of NNIS will occur if NNIS colonize 50 percent of the mitigation site prior to colonization by preferred wetland plants.

**Recommendation:** EPA recommends the analysis clearly state what the maximum allowable percentage of NNIS will be at the entire site in order for mitigation to be deemed successful.

### **AIR QUALITY AND DIESEL EMISSIONS REDUCTION**

EPA acknowledges the air quality analysis found in the EA. We recommend the protective measures outlined in the enclosure, *EPA's Suggested Construction Emission Controls*, are evaluated and applicable measures become commitments in the FONSI in an effort to improve health outcomes and lower the project's greenhouse gas footprint.

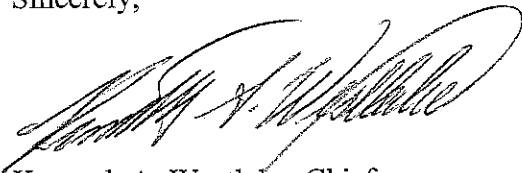
**THREATENED AND ENDANGERED SPECIES**

Appendix D-1, Endangered Species Act Coordination, includes correspondence from USFWS regarding Federally-listed species. However, neither the EA nor the appendices address coordination regarding state-listed threatened and endangered species listed in Section 4.1.3.2., Endangered Species.

**Recommendation:** EPA recommends the results of coordination with the Wisconsin and Iowa Departments of Natural Resources concerning state-listed species are included in the project analysis.

We appreciate that USACE addressed comments listed in our February 17, 2017 comment letter on the preliminary version of the EA and appendices. Please send one copy of future correspondence relating to the NEPA process, including the signed project decision document, for this project to me at the above address. If you have any questions about this letter, please contact Kathy Kowal of my staff at 312-353-5206 or via email at [kowal.kathleen@epa.gov](mailto:kowal.kathleen@epa.gov).

Sincerely,



Kenneth A. Westlake, Chief  
NEPA Implementation Section  
Office of Enforcement and Compliance Assurance

Enclosure: *EPA's Suggested Construction Emission Controls*  
cc: Larry Shepard, EPA, R7



**U.S. Environmental Protection Agency**  
**Construction Emission Control Checklist**

**Mobile and Stationary Source Diesel Controls**

Purchase or solicit bids that require the use of vehicles that are equipped with zero-emission technologies or the most advanced emission control systems available. Commit to the best available emissions control technologies for project equipment in order to meet the following standards.

- On-Highway Vehicles: On-highway vehicles should meet, or exceed, the EPA exhaust emissions standards for model year 2010 and newer heavy-duty, on-highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, shuttle buses, etc.).<sup>1</sup>
- Non-road Vehicles and Equipment: Non-road vehicles and equipment should meet, or exceed, the EPA Tier 4 exhaust emissions standards for heavy-duty, non-road compression-ignition engines (e.g., construction equipment, non-road trucks, etc.).<sup>2</sup>
- Low Emission Equipment Exemptions: The equipment specifications outlined above should be met unless: 1) a piece of specialized equipment is not available for purchase or lease within the United States; or 2) the relevant project contractor has been awarded funds to retrofit existing equipment, or purchase/lease new equipment, but the funds are not yet available.

Consider requiring the following best practices through the construction contracting or oversight process:

- Use onsite renewable electricity generation and/or grid-based electricity rather than diesel-powered generators or other equipment.
- Use ultra-low sulfur diesel fuel (15 ppm maximum) in construction vehicles and equipment.
- Use catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels.
- Use electric starting aids such as block heaters with older vehicles to warm the engine.
- Regularly maintain diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance (e.g., blue/black smoke indicates that an engine requires servicing or tuning).
- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Repower older vehicles and/or equipment with diesel- or alternatively-fueled engines certified to meet newer, more stringent emissions standards (e.g., plug-in hybrid-electric vehicles, battery-electric vehicles, fuel cell electric vehicles, advanced technology locomotives, etc.).
- Retire older vehicles, given the significant contribution of vehicle emissions to the poor air quality conditions. Implement programs to encourage the voluntary removal from use and the marketplace of pre-2010 model year on-highway vehicles (e.g., scrappage rebates) and replace them with newer vehicles that meet or exceed the latest EPA exhaust emissions standards.

**Fugitive Dust Source Controls**

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.

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<sup>1</sup> <http://www.epa.gov/otaq/standards/heavy-duty/hdci-exhaust.htm>

<sup>2</sup> <http://www.epa.gov/otaq/standards/nonroad/nonroadci.htm>

- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

### **Occupational Health**

- Reduce exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel-equipment operators to perform routine inspection, and maintaining filtration devices.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, reducing the fume concentration to which personnel are exposed.
- Use enclosed, climate-controlled cabs pressurized and equipped with high-efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Use respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the type of work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a NIOSH approval number.





May 25, 2017

Kathryn Herzog  
United States Army Corps of Engineers  
St. Paul District at Rock Island District  
Clock Tower Building  
P.O. Box 2004  
Rock Island, IL 61204-2004

Subject: Hurricane Island Reach DMMP - Public Review Draft - WDNR Comments

Dear Kathryn Herzog:

Thank you for the opportunity to review and comment on the public review draft of the Hurricane Island Reach Dredged Material Management Plan (DMMP) with Integrated Environmental Assessment. The Wisconsin Department of Natural Resources (Department) has reviewed the plan and provides detailed comments/questions that are sequential in order and follow the DMMP outline. Those comments are attached to this letter. Significant items of concern addressed in the comments are outlined below:

- The Bathtub construction process, phasing and timeline are unclear and require additional details.
- The DMMP did not include any design plans for the permittee-responsible wetland mitigation. The mitigation plan construction process, phasing, planting procedures and timeline are unclear and require additional details.
- Water Quality Certification (WQC) will be required for the construction of the bathtub and the permittee-responsible mitigation (PRM). New placement sites, expansions of existing sites and new major projects must be reviewed for consistency with Wisconsin's water quality standards. Before the Water Quality Certification evaluation can begin, construction plans, operational information and detailed mitigation plans will need to be developed. NOTE: the Memorandum of Understanding (MOU), to be developed separately and concurrently, will apply to future ongoing operations at the site, thus eliminating the need for individual permit applications for each subsequent placement event at the bathtub site during the approved MOU time-period.
- The Department is interested in maintaining the Hurricane Island Bankline site for recreation with dredge material placement for beach nourishment and the installation of proper bank stabilization.
- Under Wisconsin State law, mitigation is only required for discharges to wetlands authorized under State statute 281.36. For individual permits authorized under state statute 281.36 mitigation is required to replace the lost functional values of the wetland being impacted. State statute Ch. 30 regulates removal of material and placement of structures and material below the Ordinary High Water Mark (OHWM) in Navigable waters. Under Ch. 30 there is no mitigation requirement for activities regulated under the chapter. Since the activity proposed is wholly below the OHWM, there is no mechanism in state law to trigger and allow for mitigation, thus the Corps cannot utilize the WDNR In-Lieu Fee Program to address the mitigation needs for wetland impacts from construction and use of the proposed dredge material placement site.
- If additional wetland mitigation is needed, the Mississippi River Team recommends that the Lower Hurricane Rip Rap alternative be completed to protect existing wetlands and quality backwaters.

- In order to complete the MOU process, sediment sampling standard operation procedures require revision.
- MVR needs to expedite acquisition of placement interest at farm/quarry property upon completion of the DMMP, particularly in light of the Non-Metallic Mining Reclamation Plan filed with Grant County in January 2010 that states “the sand pit is proposed to extract material to a depth of 65 feet and is to remain in operation for 10 years, with an additional 1 to 3 years for implementation of the final reclamation.”
- The Department/MVR Memorandum of Understanding (MOU) in the Appendix G is draft. The Department will conduct reviews and edits in collaboration with the District as the Hurricane Island Reach DMMP process is completed.
- The responses to WDNR comments and questions need to be integrated into the plan sheets and narrative so that the modifications to construction, wetlands, water quality controls and monitoring are updated in the final report.

The following steps that need to take place prior to dredge material placement at the Bathtub site and/or the permittee responsible mitigation site.

- Next steps for the DMMP: 1) incorporate revisions and finalize DMMP, 2) DMMP endorsement (approval) by River Resources Coordinating Team (RRCT), 3) Finalize MOU with RRCT approved sites.
- Next steps for bathtub and PRM construction: 1) Develop detailed final plans & specifications, 2) Acquire final approvals (WQC and signed MOU). To apply for non-wetland WQC please visit the Department’s water permit applications website at the following location: <http://dnr.wi.gov/permits/water/> (choose Miscellaneous Structure - Individual Permit (fee exempt) and make it clear in the narrative that you are applying for a non-wetland Water Quality Certification)

We acknowledge the urgency associated with finalizing this plan in order to avoid emergency channel closures and commercial navigation delays. However this plan addresses dredging needs in only one reach of Pool 11; consistent with our past requests, we continue to advocate for a partnership-endorsed, comprehensive pool-wide DMMP. We assert that a pool-wide approach will provide enhanced environmental protections by identifying a suite of placement options and will reduce channel maintenance costs over the long-term. We look forward to future work with MVR and the partnership to explore additional alternatives.

If you have any questions or need any clarification on the items included in this letter or attachments, please contact Kurt Rasmussen, Mississippi River Planner, at (608) 785-9003 or by email at [Kurt.Rasmussen@Wisconsin.gov](mailto:Kurt.Rasmussen@Wisconsin.gov).

Sincerely,

Kurt Rasmussen  
Wisconsin Department of Natural Resources – Mississippi River Planner  
3550 Mormon Coulee Road  
La Crosse, WI 54601  
Phone: (608) 785-9003  
[Kurt.Rasmussen@Wisconsin.gov](mailto:Kurt.Rasmussen@Wisconsin.gov)

Cc: Adam Ziegler (USACE), Steve Galarneau (WDNR), James Fischer (WDNR), David Hon (WDNR), Ryan Papaas (WDNR), MVR On-Site Inspection Team

Encl: Detailed WDNR Comments/Questions on the Hurricane Island Reach DMMP

## MAIN REPORT

*Main Report Page ES-II: The total cost estimate for the project is approximately \$12.8 million, including an estimated \$6,235,500 for the bathtub site, and \$4,927,000 for offloading to the farm fields with and an estimated \$1,658,000 for the required compensatory mitigation.*

Comment: Recommend specifying the lifespan for this plan. Do the total costs listed on page ES-II reflect a 20-year (200,000 CY) or 40-year (400,000 CY) plan? Do the total costs for the plan include an offload at year 40?

*Main Report Page 5: The District has not been able to dredge to authorized channel dimensions within the Finley's Landing dredge cut due to lack of OSIT approved placement. In 2015 the District deferred dredging of 12,150 cubic yards because of lack of OSIT approved placement. During 2016 a channel closure occurred within the Finley's Landing Dredge cut, shutting down navigation traffic. The District identified approximately 32,000 cubic yards to be dredged. Only 18,702 cubic yards were dredged due to the lack of OSIT approved placement.*

Comment: The Rock Island District has not been able to place dredge material in Wisconsin due to an expired Memorandum of Agreement with the Department. The most recent Memorandum of Understanding (MOU) expired in July of 2013. That agreement was a two-year extension to the ten-year (2001-2010) MOU that expired in December of 2010. The 2011 two-year MOU extension contained the following provision: "The Corps will continue to work with the WDNR and other members of the On Site Inspection Team (OSIT) to develop alternatives that will meet the long-term (40-year) needs of both channel maintenance and environmental restoration in Pool 11. The goal will be to develop the following prior to implementing any subsequent MOU:

- i. Bathymetric maps identifying preferred placement sites approved by the River Resources Coordinating Team. Preferred sites will include estimates of site capacities, methods of transfer, frequency of use, and final site conditions.
- ii. A list of approvals or steps required to implement placement at the preferred sites."

Recommend changing "due to lack of OSIT approved placement" to "due to the lack of an approved dredge material management plan that would meet the long-term needs of channel maintenance and address the concerns raised by the OSIT".

*Main Report Page 6 – Projections of Future Conditions without DMMP: However, the OSIT has not approved placement at this location due to the State of Wisconsin's concerns for sediment migration. It is likely that dredged material will no longer continue to be placed at the historic Hurricane Island bankline site because of the State of Wisconsin's concerns.*

Comment: The Pool 11 Dredged material Disposal Plan from March of 1987 indicates that "this historic disposal site is capable of handling a single-event of 30,000 cubic yards. Thereafter, the site only will be available as a beach nourishment site, based upon OSIT inspection and recommendation." However, a total of 96,882 cubic yards were placed (7 events) on Hurricane Island beach since that time. The renewed capacity at this beach site area appears to be a function of excessive erosion rates. The WDNR is interested in maintaining the site for recreation with dredge material placement for beach nourishment and the installation of proper bank stabilization.

*Main Report Page 7 – Beneficial Use: Multiple interests have been established for beneficial use in the project area, specifically for island creation (e.g., Rosebrook Island, Snyder Slough). Other beneficial use options outside of the floodplain have been identified in the local industrial and commercial businesses. However, these options are not a permanent solution for long-term placement over the projected 40 years.*

Comment: The report overlooks the opportunities for beneficial use to meet the 40 year placement need. As noted below, double handling material is an expensive approach over the long term, particularly as offload costs rise due to increases in construction and real estate costs. While more expensive initially, direct placement to upland or on-shore transfer sites may be more cost-effective long-term. In light of the interest from the power plants at

Cassville, the opportunity to lease or acquire an offload site as those plants decommission and the interest from Bard Materials to utilize the dredged material for their clients, there could be sufficient capacity to meet the 400,000cy volume. The level of analysis of those alternatives within this plan does not allow for comparing potential cost-efficiencies of combining multiple beneficial use opportunities to meet the 40-yr need.

*Main Report Page 7 Objectives: Reduce O&M costs where possible.*

Comment: The MVR should also consider that the rising costs of dredging and double-handling of material at “bathtub” sites is increasingly posing challenges for the St. Paul District Corps of Engineers (MVP), and that direct placement to upland sites or on-shore transfer sites may be a more cost-effective long-term solution. The draft Pool 4 DMMP states “Temporarily storing the material on islands saves initial cost because the cost of moving the material to a final placement site is deferred to the future. However, managing dredged material in this manner is very costly long term due to “double-handling” of the material. Placing dredged material on an island site and later moving it to a permanent site (“double handling”) increases the life-cycle cost of the operation by approximately \$2 million annually in Lower Pool 4.” We encourage you to discuss these issues and potential solutions with the MVP.

*Main Report Page 8 – Constraints: Assess site access and the Dredge Goetz equipment limitations. Current dredging allows for placement of a maximum of 10,000 feet of distance from dredge cut, should not exceed 1,000 feet inland from the dredge cut, and should not exceed +/- 28 feet in height up a slope from the dredge cut.*

Comment: The Hurricane Island dredge cut is more than 10,000 feet from the bathtub site. This material (46,400cy) will need to be mechanically dredged or will require hydraulic equipment other than the Goetz. This material does not appear to be represented by mechanical dredging or contracted hydraulic dredging in the cost estimates. Please clarify where this material is going and what the cost will be. Presumably, if material is barged to the bathtub, the incremental difference is about 4 additional miles of hauling to reach Cassville (8.5 miles from Hurricane cut).

*Main Report Page 8 – Strategies: The overall DMMP would identify, evaluate and acquire placement sites meeting the District’s needs for a minimum of 20 years, and ideally for 40 years or longer, using the three-phase interagency DMMP process as follows:*

*Phase 1: Preliminary assessment and site/alternative identification and screening*

*Phase 2: Alternative evaluation, including environmental assessment, and engineering and cost considerations*

*Phase 3: Acquisition of placement sites (as needed) and implementation of the Recommended Plan.*

*This report represents completion of Phase 1 and Phase 2 of the process for the Hurricane Island Reach DMMP. Upon review, final approval, and availability of funding, the District will begin Phase 3.*

Comment: It is understood that there is currently a landowner/business that has expressed an interest in accepting the dredge material at the farm field permanent placement site. It is also understood that current requirements necessitate that the Dredge Material Management Plan must be completed before land acquisition negotiations can take place. Acquisition of upland dredge material placement sites on Pool 11 needs to be the top priority for the MVR. The shortage of land acquisition for dredge material has been an historic problem for the Army Corps of Engineers throughout the Upper Mississippi River system. Rock Island District’s Implementation Report for Great II Study (June 1981) identifies the importance of land acquisition. It ranks the acquisition of disposal sites or the rights for disposal at the earliest date possible as a High Implementation Priority Action. We recommend beginning negotiations for acquisition of the property as soon as possible to ensure the site is available for long-term use.

*Main Report Page 8: This report represents completion of Phase 1 and Phase 2 of the process for the Hurricane Island Reach DMMP. Upon review, final approval, and availability of funding, the District will begin Phase 3.*

Comment: What is the expected timeline for final approval and availability of funding for Phase 3? If construction work is likely to be spread over multiple fiscal years, can you provide an anticipated schedule of activities?

*Main Report Page 12- Farm Field/Quarry Permanent Dredged Material Placement Site: The Gen. J. M. Harrison shipwreck is at least 1.0 mile distant from the farm field/quarry. The farm field/quarry contains five recorded archeological sites (47GT0269, 47GT0272, 47GT0273, 47GT0459; 47GT0769; respectively, four prehistoric campsites/villages and one, an isolated chert flake find), none of which have been received National Register of Historic Places (NRHP) eligibility determinations. Prior Phase II testing indicates at least two (47GT0273, 47GT0459) are likely NRHP-eligible, due to the presence of intact prehistoric features, although 47GT0273 may now be destroyed by quarrying.*

Question: Will the existing archaeological sites, and the fact that site 47GT0273 may have been destroyed, create issues for permanent dredge material placement at the farm field/quarry site in the future?

*Main Report Page 12 – Waters/Wetlands: The USEPA listed Pool 11 of the Mississippi River as impaired under the Clean Water Act (CWA), Section 303(d). According to data from 2014, this reach of the Mississippi River is listed as impaired due to aluminum levels. In a draft report with additional data from 2016, total phosphorus, PCBs, and mercury were other pollutants increasing the impairment of Pool 11. This degraded water quality has led to fish consumption and other use restrictions. Total maximum daily loads, which is the maximum pollutant a water body can receive while still meeting water quality standards, apply.*

Comment: The 2014 Section 303d impaired waters list also has this reach of the Mississippi River as impaired for PCB's in fish tissue and the water column and for mercury in the water column in Wisconsin. Please see table below. Recommend replacing the last sentence with the following: "Total Maximum Daily Loads (TMDL's) have not yet been established for this reach of the river. TMDL's are pollution reduction plans that assign the maximum amount of a pollutant a waterbody can receive and still meet water quality standards."

**2014 and 2016 Impaired Waters Listings  
and Approved TMDLs on the Upper Mississippi River  
(impaired designated uses indicated in superscript)**

MINNESOTA <sup>1</sup>			WISCONSIN <sup>2</sup>	
2014	2016		2016	2014
PCBs (Fish Tissue) <sup>FC</sup> Total Suspended Solids <sup>AL</sup> Nutrients (L. Pepin) <sup>AR</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>FC</sup> Mercury (Water) <sup>FC</sup>	PCBs (Fish Tissue) <sup>FC</sup> Total Suspended Solids <sup>AL</sup> Nutrients/Eutrophication/Biological Indicators (L. Pepin) <sup>AR</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>FC</sup> Mercury (Water) <sup>FC</sup>	St. Croix River <i>Reach 1 (49 mi)</i>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> Total Suspended Solids <sup>AL</sup> PFOS (Fish Tissue) <sup>FC</sup> Total Phosphorus <sup>AL</sup>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> Total Suspended Solids <sup>AL</sup> PFOS (Fish Tissue) <sup>FC</sup> Total Phosphorus <sup>AL</sup>
PCBs (Fish Tissue) <sup>FC</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>FC</sup>	PCBs (Fish Tissue) <sup>FC</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>FC</sup>	Chippewa River <i>Reach 2 (49 mi)</i>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> PFOS (Fish Tissue) <sup>FC</sup> Total Phosphorus <sup>AL</sup>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> PFOS (Fish Tissue) <sup>FC</sup> Total Phosphorus <sup>AL</sup>
PCBs (Fish Tissue) <sup>FC</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>FC</sup>	PCBs (Fish Tissue) <sup>FC</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>FC</sup>	Lock & Dam 6 <i>Reach 3 (21 mi)</i>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> Total Phosphorus <sup>AL</sup>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> Total Phosphorus <sup>AL</sup>
PCBs (Fish Tissue) <sup>FC</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>FC</sup>	PCBs (Fish Tissue) <sup>FC</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>FC</sup>	Root River <i>Reach 4 (83 mi)</i>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> - Pool 8 and Pool 10 Mercury (Fish Tissue) <sup>FC</sup> - Pool 9 Total Phosphorus <sup>AL</sup>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> - Pool 8 and Pool 10 Mercury (Fish Tissue) <sup>FC</sup> - Pool 9 Total Phosphorus <sup>AL</sup>
IOWA <sup>3</sup>				
No listing	No listing			
Aluminum <sup>AL</sup>	Aluminum <sup>AL</sup>	Wisconsin River <i>Reach 5 (49 mi)</i>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> Total Phosphorus <sup>AL</sup>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup>
No listing	No listing	Lock & Dam 11 <i>Reach 6 (61 mi)</i>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup> Total Phosphorus <sup>AL</sup>	PCBs (Fish Tissue) <sup>FC</sup> PCBs (Water) <sup>FC</sup> Mercury (Water) <sup>FC</sup>
			ILLINOIS <sup>4</sup>	
		Lock & Dam 13 <i>L 11/L</i>	PCBs (Fish Tissue) <sup>FC</sup> Mercury (Fish Tissue) <sup>FC</sup>	PCBs (Fish Tissue) <sup>FC</sup> Mercury (Fish Tissue) <sup>FC</sup>

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*Main Report Page 14 – Waters/Wetlands: A unique black walnut forest community exist on the left descending bank near RM 592. Walnut has always been a noted resource on the UMR and protected for its limited distribution and occurrence. Usually the walnut trees are scattered and spread out on the islands and back water areas. They do occur mostly on micro-ridges on islands and primarily near confluences of streams and rivers that drain into the Mississippi River. Additional planted trees through the USFWS and the District’s Operations Division funding are located in the same area.*

Comment: Recommend moving to the Biota section (2.2.5). The State of Wisconsin 2016 Wetland Plant List identifies black walnut as FACU plant. Where exactly is this unique area located and will it be impacted by the future offload activities?

*Main Report Page 17 – Alternative Plans: The first step in the alternative planning process is to identify sites for screening (See Section 3.1). Sites meeting these criteria are evaluated for additional considerations concerning capacity, natural resources, cultural resources, hydraulic impacts, operability and socio-economic impacts. Alternative plans are then developed from sites having met the criteria and have remained feasible after further evaluation (See Section 3.2). These alternative plans are further evaluated, ultimately resulting in the selection of*

*the “Preferred Alternative”. The Preferred Alternative is considered as the least costly solution consistent with sound engineering practice and meeting all Federal environmental standards (See Section 3.4).*

The Department expected to see greater assessment of alternatives that would locate permanent placement for the dredged material outside the floodplain and its habitats. The preferred alternative identified in this plan relies on temporary placement at the bathtub island site and a deferred offload to the farm field/quarry site at year 20. Again, please note that temporarily storing the material on islands saves initial cost because the cost of moving the material to a final placement site is deferred to the future. However, managing dredged material in this manner is very costly long term due to “double-handling” of the material. Also, the projected cost does not include cost of decommissioning the bathtub site in year 40 to an approved reclamation plan.

*Main Report Page 18 – Site Identification and Screening Process: “The District and OSIT agreed suitable bankline placement capacity is available for the long-term, except on an event-by-event basis with OSIT recommendation.”*

Comment: Recommend editing to read: “The District and OSIT agreed suitable bankline placement capacity is not available for the long-term, except on an event-by-event basis with OSIT recommendation.” Please also note that bank stabilization for dredge material placed at the Hurricane Island bankline site will be required.

*Main Report Page 19 – Table 4. New Placement Sites Considered: Alliant Energy, Nelson Dewey Plant, Dairyland Power Cooperative-- Not enough capacity for long-term placement and more than the maximum allowed 10,000 feet away from the dredge cuts. Could still be used for beneficial use.*

Comment: The 10,000’ distance limitation should only be applied to hydraulic sites, as it is a specific equipment limitation that does not apply to a mechanical dredging operation. The Department requests that these sites be updated with quantity information and placement costs per cubic yard so that they may be considered for placement needs during the next 40 years.

*Main Report Page 22 – Alternative B – Bathtub and Farm Fields/Quarry: The staging area and berms would be constructed using the existing sand on Finley’s Landing, dredged material from the approach channel, and/or from the dredge cuts.*

Comment: Detailed plans and specifications will need to be developed before the WDNR will issue non-wetland Water Quality Certification (WQC) for the construction of the bathtub and the permittee-responsible mitigation (PRM). New placement sites, expansions of existing sites and new major projects must be reviewed for consistency with Wisconsin’s water quality standards. Water Quality Certification is also required for all HREP projects in Wisconsin waters. Before the Water Quality Certification evaluation can begin, construction plans, operational information and detailed mitigation plans will need to be developed.

*Main Report Page 23 – Selection of the Preferred Alternative: If PRM does not fully compensate for all mitigation loss, the District would attempt to meet the full mitigation need by combining PRM with the Wisconsin Wetland Conservation Trust (WWCT), a wetland mitigation In-Lieu Fee (ILF) Program.*

Under Wisconsin State law, mitigation is only required for discharges to wetlands authorized under State statute 281.36. For individual permits authorized under state statute 281.36 mitigation is required to replace the lost functional values of the wetland being impacted. State statute Ch. 30 regulates removal of material and placement of structures and material below the Ordinary High Water Mark (OHWM) in Navigable waters. Under Ch. 30 there is no mitigation requirement for activities regulated under the chapter. Since the activity proposed is wholly below the OHWM, there is no mechanism in state law to trigger and allow for mitigation, thus the Corps cannot utilize the WDNR In-Lieu Fee Program to address the mitigation needs for wetland impacts from construction and use of the proposed dredge material placement site.

*Main Report Page 24 – Public Facilities and Service: Maintenance of the channel for commercial, recreational, and environmental interests would positively impact public facilities and services. For example, Finley’s Landing is a popular recreational area and is at full capacity, allowing limited space for the local residents to enjoy. Sand would be removed from Finley’s Landing, reducing the pile of sand to an OSIT approved level for residents to continue to use.*

Comment: The sand removal from Finley’s Landing is not consistent throughout the report. Please revise accordingly. If the sand is to be used in the construction of bathtub or wetland mitigation site please include that information in the detailed plans and specifications that will be required prior to construction.

*Main Report Page 24 – Aesthetic Values: No permanent impacts to aesthetic values would result from placement of dredged material. Finley’s Landing is a popular recreational area and is at full capacity, allowing limited space for the local residents to enjoy. Sand would be removed from Finley’s Landing, reducing the pile of sand to an OSIT approved level for residents continued use. Given that Finley’s Landing is an existing sand pile, the proposed project would not significantly alter the overall existing aesthetics. Additionally, the relatively rural character of the surrounding area would remain unchanged, so no significant decline in aesthetic values would be anticipated.*

Comment: The sand removal from Finley’s Landing is not consistent throughout the report. Please revise accordingly. If the sand is to be used in the construction of bathtub or wetland mitigation site please include that information in the detailed plans and specifications that will be required prior to construction. A new 14-acre dredge material placement site will affect the aesthetic value. Please clarify.

*Main Report Page 31 - The District determined a berm height of elevation 608 mean sea level (msl) is necessary to reduce erosion during high water for this particular area of the UMR. In addition, maximum flow velocities for sand movement at the bathtub is 1.5 ft/sec (Figure 7, Sites H-J) which means sand at the bathtub will not migrate at the 0.85 ft/sec of a 100-year flood event. The maximum flow velocities for clay at the bathtub is 3ft/sec, which means the berms will erode only at well above a 100-year flood event. With these low rates, erosion of dredged material from flow velocity is not anticipated at the bathtub site. However, erosion of the dredged material is possible from wind wave forces for river stages exceeding the berm height and for high wind conditions. If these conditions occur when the bathtub is partially full, eroded sand should remain within the bathtub contained by the berm. If these conditions occur when the bathtub is full, the material should be trapped in the vegetated berm.*

Comment: In light of existing bank erosion at the bathtub site at present, the Department feels that protection from wave action may be warranted, particularly once the berm is created.

*Main Report Page 32 - Berms will be constructed to contain the material as the interior is filled. The berms have been designed at an elevation high enough (608 ft msl) to reduce erosion during high water. The berms will then be capped with fine materials (silt and clay) and allowed to vegetate to ensure stabilization.*

Comment: To prevent erosion from the berms, they should be capped and actively vegetated to ensure slopes are protected from erosion as the site is being established. Direct seeding of the berm is described in other sections of the report and in response to previous comments. Please update this section to match the final plans.

*Main Report Page 32 – Endangered Species: The berms will then be capped with fine materials (silt and clay) and allowed to vegetate to ensure stabilization.*

Comment: The geotechnical report and associated modeling identify the capping material as clay. Please clarify.



*Main Report Page 32-33 – Hazardous, Toxic and Radioactive Waste: However, the utilization of fine grains materials for capping the berms raises concerns of potential sediment contamination. It is recommended that representative samples of the sediments be collected and analyzed for HTRW parameters prior to use. The source of fine sediments would come from routine operation activity (ex: Lock and Dam clean outs) or from the bathtub site's interior. Stockpile of fine sediments would be at the bathtub site or another OSIT existing approved site.*

Comment: The Department agrees that representative samples of the fine grain sediments for capping the berms and used in the wetland mitigation area need to be collected and analyzed. The sediment in the access channel to the bathtub will also need to be characterized. Please work with the WDNR to develop site specific sediment sampling plans for these areas.

*Main Report Page 34 – Step 1 Gain Access to the Bathtub: Once the barge has been filled, it is transported to the offload site. The deck barge is pushed as close to the offload site as possible to minimize encroachment of material. The front-end loader on board pushes the material off the deck barge, creating a pile of material. Equipment sitting at the offload site will then begin to move the material. An excavator is sometimes required to reach out and grab the material. At other times, the excavator is not needed, and the dozers are able to push the material (Photographs 4, 5, and 6). Excavated sand from the bathtub access would be used for construction at the proposed bathtub site or stored at another existing approved placement site.*

Comment: The sediment in the access channel to the bathtub will need to be characterized prior to dredging. Please work with the WDNR to develop a site specific sediment sampling plans for this area. In order to complete Water Quality Certification, detailed plans and specifications need to be developed that identify the offload site for the access channel material.

*Main Report Page 36 – Step 3 – Initial Working of the Material into Berms: Once enough material has been placed for a work pad, equipment could be offloaded at the bathtub. The equipment could start construction of the containment berms (building an “L” shape). This enables the berms and work pads to be used for transportation of equipment to further work material.*

Questions: When will the berms be capped with fine material? Will the capping occur in phases? What is the proposed timeline for the construction of the bathtub and associated wetland mitigation project? Is there funding available to begin this work in 2017? In order to complete Water Quality Certification, detailed plans and specifications need to be developed that address berm construction, erosion protection measures and integration of wetland creation and berm construction.

*Main Report Page 37 – Additional Dredged Material Placement Considerations: Containment berms would be constructed to control material placement along with the water released from the hydraulic dredging operations and to ensure that no dredged material is allowed offsite per the Section 401 permit. Berms would most likely be constructed from sand from Finley's Landing but may also come directly from the dredge cuts and approach channel. Berms would be constructed to a maximum height of 5 feet above the existing ground.*

Question/Comment: What steps will be taken to reduce the sediment discharge to surface waters before the berms are completely constructed? It is recommended that the interior of the bathtub be pre-excavated. This will provide water quality benefits, minimize wetland impacts and increase offload efficiencies. Prior to Water Quality Certification, detailed plans and specifications need to be developed that identify the where the berm material will originate.

*Main Report Page 37 – Return Water from Hydraulic Dredging: The dredge slurry is approximately 80 percent water and 20 percent material. Within the riverine environment return water from the hydraulic dredging is directed back to the river by gravity flow. Increased retention times allow for additional material to fall out of suspension. Construction of berms at the bathtub, as well as constructed sand weirs as material is being pumped,*

*will slow and direct water flow to increase retention times as water is released back through a gap left in the berm. At the quarry site, the dredge slurry will be pumped into a location surrounded by a containment berm. The ponded dredge slurry will be routed to a sump area within the site using sand weirs to slow the water down as needed. The water will then be pumped into the existing ditch to the west of the quarry. Total suspended solids of the return water will be monitored at the outfall of “bathtub” and quarry site during dredging operations. Grab samples will be taken weekly and compared to the 80mg/L daily maximum, as listed within the Memorandum of Understanding (MOU) between WI DNR and the District.*

Comment: Please provide details on the gap left in the berm and the sump area within the site. Again, it is recommended that the interior of the bathtub be pre-excavated. This will provide water quality benefits by increasing retention time, minimizing wetland impacts and increasing offload efficiencies. It is also recommended that the bathtub have a designed outlet or weir capable of providing adequate detention time to assist in the removal of suspended solids. Information on the type of structure and the discharge location should be included in the DMMP or provided within detailed plans for Water Quality Certification. Please add the word “draft” to “the Memorandum of Understanding (MOU) between WI DNR and the District”. Please note that the “existing ditch to the west of the quarry” is an intermittent stream in the Hog Hollow drainage and it does support aquatic life.

*Main Report Page 38 – 5.4.4.1 Clean Water Act Section 404 and 401: A signed MOU would satisfy all requirements of the CWA Section 401 certification. The State of Wisconsin has indicated that both Clean Water Act Section 401 Certification and a signed MOU with the District would be needed to satisfy Clean Water Act requirements. Certification, waiver thereof, and/or an MOU would be obtained prior to initiation of dredging or placement. The District prepared a CWA, Section 404(b)(1) Evaluation for the proposed action (Appendix G-1). The proposed project would impact approximately 11 wetland acres and to compensate for this wetland loss, the District prepared a Compensatory Wetland Mitigation Plan (Appendix G-3).*

Comment: Wisconsin State Statute 30.202 allows the Department to enter into a Memorandum of Understanding (MOU) with the USACE concerning the dredging of the Mississippi River and the disposal of these dredge spoils. Any memorandum of understanding shall specify approved sites where dredge spoils may be deposited and shall specify conditions and standards which are required for use of an approved site. “Approved sites” need to be endorsed by the River Resources Coordinating Team and then added to the MOU. New placement sites, expansions of existing sites and new major projects go beyond the normal scope of dredge and place at an approved site and must be reviewed for consistency with Wisconsin’s water quality standards. Therefore, Wisconsin will not be waiving its right to issue water quality certification for the construction of the bathtub and PRM wetland mitigation. This is consistent with the Water Quality Certification requirement for all HREP projects in Wisconsin waters. Before the Water Quality Certification evaluation can begin, construction plans, operational information and detailed mitigation plans will all need to be developed.

30.202 Dredge disposal in and near the Mississippi, St. Croix and Black rivers by the U.S. Army Corps of Engineers

(1) MEMORANDUM OF UNDERSTANDING. The department may enter into a memorandum of understanding with the U.S. corps of engineers concerning the dredging of the Mississippi, St. Croix and Black rivers and the disposal of these dredge spoils. Any memorandum of understanding shall specify approved sites where dredge spoils may be deposited and shall specify conditions and standards which are required for use of an approved site. A memorandum of understanding may contain recommended or required dredge disposal methods, equipment and policies.

(2) AUTHORIZATION FOR DREDGING AND DREDGE SPOIL DISPOSAL. If the department enters into a memorandum of understanding with the U.S. corps of engineers under sub. (1), the U.S. corps of engineers may deposit dredge spoils from dredging the Mississippi, St. Croix and Black rivers at approved sites according to specified conditions and standards including any special conditions and standards established under sub. (4).

(3) EXEMPTION FROM STATUTES AND RULES. Dredge spoil disposal activities authorized under sub. (2) are exempt from any prohibition, restriction, requirement, permit, license, approval, authorization, fee, notice, hearing, procedure or penalty specified under s. 29.601, 30.01 to 30.20, 30.21 to 30.99, 59.692 or 87.30 or chs. 281 to 285 or 289 to 299 or specified in any rule promulgated, order issued or ordinance adopted under those sections or chapters.

(4) HAZARDOUS WASTE DREDGE SPOIL DISPOSAL. In consultation with the U.S. corps of engineers, the department shall establish special conditions and standards for the disposal of dredge spoils which are hazardous waste, as defined under s.

291.01 (7). These special conditions and standards shall be established to ensure that public health and the environment are protected.

History: 1981 c. 240; 1995 a. 201, 227; 1997 a. 35, 248; 2005 a. 347.

NOTE: Chapter 240, laws of 1981, which created this section, has "legislative findings" in section 1.

NOTE: 2005 Wis. Act 347, which affected this section, contains extensive explanatory notes.

*Main Report Page 38 – Floodway Permit: A preliminary floodplain model has predicted impacts to remain within the State of Wisconsin-accepted level of less than 0.00 ft at the 100-year flood event, as per Wisconsin Statute 30.202 (3) and (4).*

Comment: Recommend editing to read: "A preliminary floodplain model has predicted impacts to remain within the State of Wisconsin-accepted level of 0.00 ft at the 100-year flood event, as per FEMA minimum floodway standards CFR 60.3(d)(3)."

*Main Report Page 38 – NPDES Permit: This permit will be covered under the MOU between WI DNR and the District, per Wisconsin Statute 30.202 (3) and (4).*

Comment: The MOU will cover NPDES permitting concerns related to routine placement operations. Additional planning will be required at the time of the offload.

*Main Report Page 39 – Costs*

Comment: The costs in this section are difficult to interpret. The dredging cost for the bathtub should represent both hydraulic and mechanical costs. The budget should include a second offload at year 40, otherwise it should include a restoration or decommissioning cost that restores the site to permanent condition. It is not apparent to the Department that "assum[ed]ing that there will be no cost for acquiring land or easement rights" is reasonable. Could it not be considered equally feasible that the land comes under new ownership, becomes developed or that a landowner may request payment to allow the material to be placed at his/her site?

*Main Report Page 40 – Onsite Mitigation: Lastly, the mitigation for the bathtub site is estimated to be approximately \$1,658,000. The scope of work includes clearing, containment berm construction, clay capping, and seeding. It is assumed that in-house hired labor crews would begin by mechanical dredging the approach channel and building a work pad for equipment to construct the containment berm that will be used to contain the dredged material. A contractor is required to shape and seed the mitigation area. Main Report Page 36-37 – Material to the Mitigation Area: Once the fine material is dried enough to use, the area will be capped and natural vegetation will be allowed to reestablish. The District anticipates immediate vegetation response from the existing seed bank. Typical invader species include smartweed, (polygonum sp.) cottonwood (Populus deltoids), silver maple (Acer saccharinum), cattail (Typha sp.) and swamp milkweed (Asclepias incarnata). If OSIT deems the natural vegetation a success, no active planting or seeding would occur. If the natural seeding is not successful, the District would initiate planting native wetland plant species. After the mitigation area is constructed, monitoring will be conducted over 5 years to determine success. See Appendix G-3, Compensatory Wetland Mitigation Plan, for seed mixture and additional mitigation plan information.*

Comment: Inconsistent wetland planting procedures. Please clarify.

*Main Report Pages 40-41 – Real Estate Considerations: As the bathtub site reaches capacity, the dredged material will need to be relocated to an upland location. The offload action would involve placing a hydraulic pipe up an existing creek channel or an existing culvert along the left descending bank, near RM 591.5, and pumping material from the bathtub into an upland site (Figure 8). The future upland placement sites are currently utilized as agricultural fields and a sand quarry operation. Multiple landowners in this location have voluntarily expressed interest in accepting dredged material. It is anticipated that placement of material to this upland site would be accomplished by a temporary Dredged Material Placement Permit. An additional temporary permit will*

*also need to be obtained from the BNSF Railway as their right-of-way will be crossed by dredged material equipment during placement activities. All lands located riverward of the railroad in this location are owned by the Government. The Corps may pursue acquisition of permanent real estate interests as necessary to support placement actions.*

Comment: Placing the hydraulic offload pipe up the existing creek and the discharge of the return water will likely result in impacts to the Unnamed Tributary to the Mississippi River (Water Body Identification Code 955800). Please note, the discharge of Mississippi River carriage water to a different surface water may require water quality based effluent limitations. Recommend additional environmental review for the proposed offload procedures and options for the return water.

Acquisition of upland dredge material placement sites on Pool 11 needs to be the top priority for the MVR. The shortage of land acquisition for dredge material has been an historic problem for the Army Corps of Engineers throughout the Upper Mississippi River Basin. Rock Island District's Implementation Report for Great II Study (June 1981) identifies the importance of land acquisition. It ranks the acquisition of disposal sites or the rights for disposal at the earliest date possible as a High Implementation Priority Action. Recommend beginning negotiations for acquisition of the property immediately upon completion of the DMMP to ensure site is available for long-term use.

*Main Report Page 44 – Clean Water Act: The District prepared a Section 404(b)(1) Evaluation for the proposed action and is attached as Appendix G-1. Wetland impacts are anticipated and The District has applied for the WI DNR ILF Program but was denied (Appendix D-3, NHPA Correspondence). Appendix G-3, Compensatory Wetland Mitigation Plan, outlines the District's on-site mitigation. The State of Wisconsin indicated the preference to enter into a Memorandum of Understanding (MOU) with the District instead of issuing a CWA Section 401 certification. A signed MOU would satisfy all requirements of the CWA Section 401 certification. Certification, waiver thereof, or an MOU would be obtained prior to initiation of dredging or placement.*

Comment: Wisconsin State Statute 30.202 allows the Department to enter into a Memorandum of Understanding (MOU) with the USACE concerning the dredging of the Mississippi River and the disposal of these dredge spoils. Any memorandum of understanding shall specify approved sites where dredge spoils may be deposited and shall specify conditions and standards which are required for use of an approved site. "Approved sites" need to be endorsed by the River Resources Coordinating Team and then added to the MOU. New placement sites, expansions of existing sites and new major projects go beyond the normal scope of dredge and place at an approved site and must be reviewed for consistency with Wisconsin's water quality standards. Therefore, Wisconsin will not be waiving its right to issue water quality certification for the construction of the bathtub and PRM wetland mitigation. This is consistent with the Water Quality Certification requirement for all HREP projects in Wisconsin waters. Before the Water Quality Certification evaluation can begin, construction plans, operational information and detailed mitigation plans will all need to be developed.

*Main Report Page 49 – On-Site Inspection Team.*

Comment: Wisconsin DNR discussed erosion issues and suitability issues at Hurricane Island as early as 1989. That the timetable for documenting dialogue with the Department begins in January 2011 is emblematic of the District's lack of initiative in planning for alternative sites in a timely fashion. In November 2010, the OSIT discussed the erosion conditions at Hurricane and Wisconsin DNR provided a two-year extension to the MOU to allow additional time to develop alternative plans. During that extension (until July 2013), the District failed to urgently develop alternatives and criteria for assessing those alternatives and conducted very little communication with the Department between OSIT meetings. If potential alternatives were screened and rejected by Corps' staff during that time period, the Department received little to no information at all regarding the process, status of alternatives, or criteria for ranking out options.

*Main report Page 49 – May 2015 - Wisconsin would require additional testing beyond the typical sampling procedures performed by the District for “solid waste” permitting. The WI DNR also indicated additional testing of all dredge cuts would be needed to approve the new MOU.*

Comment: Wisconsin does require testing to ascertain that material can be considered “low hazard”, which is a particularly important determination if the District seeks to utilize the material for beneficial use. This testing is not meant to be burdensome, but rather to facilitate a reasonable characterization of the material.

*Main Report Page 50 – On-Site Inspection Team 2015 November: Conversation between District and WPL Plant Manager suggest applying for the additional permits and the time involved would make the usage of the material infeasible for the Plant.*

Comment: The Department does not recall receiving information about this conversation in November 2015. The Department communicated to the District that the plant should get in touch directly with our solid waste staffer who offered to streamline and expedite any permit modifications. In subsequent conversations, the Department was told that WPL didn’t need the material, not that there was a permitting concern.

*Main Report Page 50 – On-Site Inspection Team 2016 May: PDT and OSIT meeting to update the status of the planning process. Discussed design of placement sites, necessary mitigation, and habitat and hydrologic modeling results. The WI DNR did not encourage placement at Rosebrook Island for habitat restoration.*

Comment: Recommend changing “The WI DNR did not encourage placement at Rosebrook Island for habitat restoration” to “The WI DNR did not support the placement of dredge material in an isolated wetland on Rosebrook Island for forest habitat restoration”.

*Main Report Page 50 – On-Site Inspection Team 2017:*

*January: The District applies for the WI DNR ILF Program.*

*February: Draft DMMP report is sent to OSIT for a complimentary review.*

*February: PDT and OSIT meeting to discuss the OSIT preferred mitigation options. The OSIT agreed that a combination of the onsite mitigation options with the ILF Program would be approved.*

*March: WI DNR denies the District use of the ILF Program (Appendix D-3, OSIT Coordination).*

Comment: Missing the February 14, 2017 OSIT letter recommending permittee-responsible wetland mitigation. Also, the Department did not agree in a meeting that the ILF Program would be approved, but rather that it could be an option to consider. We lament that the ILF was offered as a possibility when it was later denied, but that determination had to be made by the WWCT staff, not the Mississippi River staff.

*Main Report Page 52 – Responses to WDNR Letter Dated March 3, 2017: Comment: Throughout the letter, WI DNR recommends that the District pre-excavates the bathtub interior. This will provide water quality benefits, minimize wetland impacts and increase offload efficiencies. Response: The District is purposing to pre-excavate the bathtub interior to provide additional area (approximately 0.5 acre) for the offload operation.*

Comment: This additional area (approximately 0.5 acres) to be excavated for the offload operation is not identified in description of the preferred plan. Please add details about the excavated area and details about how the offload will occur.

*Main Report Page 54 Comment (excerpt): While likely the State of Wisconsin will not approve placement without all of the stated minimum requirement, the District wishes to keep the Hurricane Island bankline as a potential placement option in the event a suitable stabilization method can be found or the State of Wisconsin requests placement at the bankline site with an exemption to the flood surface profile impact regulations.*

Comment: Wisconsin is interested in stabilizing the bankline site at Hurricane and management of the site as a recreational beach area with one-time nourishment. The Department feels there are alternatives to explore that can meet the floodway standards.

*Main Report Page 54 – Responses to WDNR Letter Dated March 3, 2017: Response: Starting in 1998, the District agreed to perform monitoring erosion rates at Hurricane Island bankline. Monitoring was performed on the Hurricane Island bankline using hydrographic survey vessels starting in 1999. The limiting factor for collection of data is the river stage. In order to collect data closer to shore, elevated river stages are needed. A total of 40 surveys were performed between 1999 and 2015. Select surveys were used and a two-foot contour was selected to attempt to get more comparable survey data. Figure 10 shows a summary of this data.*

*The percent loss of material over a 3- or 4-year period is not able to be captured by this data. This data seems to suggest that material at the two-foot contour does move but has the potential to stay for longer periods under some channel conditions. Sediment contributions from upstream of the site also are not evident in this survey data.*

Question: Was the hydrographic data depicted in Figure 10 corrected for river stage?

*Main Report Page 55 Response: The Cassville Power Plants were not carried for further review for long-term placement sites, but are examples of beneficial use sites. These sites are subject to the plant management objectives and need for the material. Future coordination will be necessary to ensure NEPA compliance. The District anticipates the MOU would address and clear any additional regulatory permits or encumbrances with using this site.*

Comment: With quantity and location information updated, the power plant sites could be incorporated into the MOU for future placement. Solid waste coordination will be necessary in order to pre-approve these placement sites, which would require the cooperation of the Department, District and power plants.

*Main Report Page 57 – Response 2: See Step 5 under section 5.6. The containment berms will be constructed and capped as material is dredged. If the berm does not naturally vegetate, a seed mix will be applied. This seed mix is to duplicate the sedge meadow habitat and does not include woody vegetation. A cost of \$9,700 for the seeding, if needed, is included in the cost estimate.*

Comment: Section 5.6 of the Main Report is Real Estate Considerations and does not contain a Step 5. Section 5.4 (Construction and Implementation) contains details about working on the initial berms but is unclear if the berms will be “constructed and capped” as referenced above. Please clarify.

*Main Report Page 59 – Response 3: Operations will ensure enough distance for material to settle out prior to release to main channel by the construction of weirs and ponding areas. The mitigation area is an additional sediment capture to minimize drifted sediment reaching adjacent mussels. Please see Section 4.1.3 for more information on additional conservation measures and coordination for mussel impacts.*

Question/Comment: How will the mitigation area be used as “an additional sediment capture to minimize drifted sediment reaching adjacent mussels” for the return water? There are no details describing this process in the text of the main report. Please clarify and provide additional information.

*Main Report Page 60 – Response 2: Please see Section 7.2 for the thorough coordination the District has had with the OSIT, which currently consists of the same members from the FWIC. The current onsite mitigation plan has been designed to compensate in compliance with Clean Water Act, Section 404 Federal regulations. The GREAT II Handbook was developed prior to these Federal regulations. For example, the 2008 Compensatory*

*Mitigation Rule sets standards for mitigation measures and ratios with monitoring requirements necessary to fulfill Section 404. Any comments pertaining to the procedural recommendations of the interagency teams is outside the scope of this report. The District will coordinate any deviation from the Compensatory Wetland Mitigation Plan, outlined in Appendix G-3, through the OSIT chairperson.*

Comment: It is understood that the federal regulations have changed since the GREAT II Channel Maintenance Handbook (CMH). However, the Legislation that allows the Department to enter into an MOU with Corps concerning dredged material placement is based upon the extensive studies of GREAT II. Therefore it is imperative that the interagency teams and partnerships continue to play a role in the development of these plans.

*Main Report FONSI (Page 64) – F: The State of Wisconsin indicated the preference to enter into a Memorandum of Understanding (MOU) with the District instead of issuing a CWA Section 401 certification. A signed MOU would satisfy all requirements of the CWA Section 401 certification. Certification, waiver thereof, or an MOU would be obtained prior to initiation of dredging or placement.*

Comment: Wisconsin State Statute 30.202 allows the Department to enter into a Memorandum of Understanding (MOU) with the USACE concerning the dredging of the Mississippi River and the disposal of these dredge spoils. Any memorandum of understanding shall specify approved sites where dredge spoils may be deposited and shall specify conditions and standards which are required for use of an approved site. “Approved sites” need to be endorsed by the River Resources Coordinating Team and then added to the MOU. New placement sites, expansions of existing sites and new major projects go beyond the normal scope of dredge and place at an approved site and must be reviewed for consistency with Wisconsin’s water quality standards. Therefore, Wisconsin will not be waiving its right to issue water quality certification for the construction of the bathtub and PRM wetland mitigation. This is consistent with the Water Quality Certification requirement for all HREP projects in Wisconsin waters. Before the Water Quality Certification evaluation can begin, construction plans, operational information and detailed mitigation plans will all need to be developed.

## **APPENDIX B – STATE SPECIES STATUS LIST**

Appendix B – Wisconsin Species Status List Page 1: As stated on page 1, “*The following is a list of species and natural features on the Natural Heritage Working List that have been documented in Grant County. These data are provided for general planning and assessment purposes only and should not be used for screening or reviewing proposed land development or land management projects.*” Please work directly with the Department NHI staff for project specific data.

## **APPENDIX D – CORRESPONDANCE**

*March 9, 2017 Letter from RPEDN to USFWS – Page 2: In response to coordination with the On-Site Inspection Team (OSIT), their preferred wetland mitigation options are currently being considered to fulfill wetland mitigation requirements (Encl 3, dated March 1, 2017). According to the 2008 Compensatory Mitigation for Losses of Aquatic Resources (Mitigation Rule), proposed activities are evaluated to determine a net improvement of the function of the site. This is further defined as restoration (re-establishment or rehabilitation), enhancement, establishment (creation), buffer, or preservation ([http://www.sac.usace.army.mil/Portals/43/docs/regulatory/Guidelines\\_for\\_Preparing\\_a\\_Compensatory\\_Mitigation\\_Planf.pdf](http://www.sac.usace.army.mil/Portals/43/docs/regulatory/Guidelines_for_Preparing_a_Compensatory_Mitigation_Planf.pdf)). Preservation is defined as “removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanism. Preservation does NOT result in a gain of aquatic resource area or functions.” Since the OSIT Option 1, Lower Hurricane Island Rip-Rap and 2, Rosebrook Island Rip-Rap, include rock placement for “bankline stabilization and protection of interior wetlands”, this only demonstrates preservation and does not*

*provide the net improvement under the 2008 Mitigation Rule. Therefore, preference was given to the OSIT Option 3, Bathtub Mudflat.*

Comment: It is understood that preference was given to OSIT Option 3, the Bathtub Mudflat, due to the net gain of wetland area and function. However, OSIT Option 1, Lower Hurricane Island Rip-Rap, provides protection for existing backwater wetlands that are threatened due to failing bankline stabilization. This option also has the potential to benefit the navigation channel by repairing a dated channel training structure, capturing flow lost to backwaters and stabilizing eroding banks. The WDNR Mississippi River Team believes there is significant value in protecting threatened, existing, functioning wetlands. Therefore, if additional mitigation is required, please consider OSIT Option 1, Lower Hurricane Island Rip-Rap.

## **APPENDIX E – ENGINEERING**

Appendix E – General Comment: The engineering plans lack the level of detail needed for the WDNR to process Water Quality Certification (WQC) for the construction of the bathtub and the permittee-responsible mitigation (PRM). WQC will require a 30-day comment period of which people are notified by a newspaper and website notice and mailing to interested parties. During the comment period, an informational hearing may be requested. Detailed plans along with pertinent specifications that are comprehensive and accurate will need to be developed. These plans should at minimum include phased construction details for both the bathtub and the mitigation area, sump details and cross-sections, longitudinal cross sections of each berm, return water outlet construction, etc.

Appendix E – General Comment: The engineering plans do not contain any information, drawings or details regarding the permittee responsible wetland mitigation area. Detailed plans and specifications must be developed for the mitigation area prior to water quality certification.

Appendix E – Sheet ID C-102 Farm Fields/Quarry Plan – Comments: The “existing ditch” labeled on the map is actually an unnamed tributary to the Mississippi River (Water Body Identification Code 955800). Brook Sticklebacks were documented in the stream during a 2012 survey by the WDNR.

Appendix E – Sheet ID C-103 Hurricane Island Plan – Comments: Hurricane Island Plan should be removed from the engineering plan or referenced as a proposed material placement alternative. The Hurricane Island bankline placement is not part of the preferred alternative discussed in this plan. However, the WDNR is interested in maintaining this site for recreation with dredge material placement for beach nourishment and with the installation of proper bank stabilization. Recommend continuing the coordination with the OSIT and WDNR to develop a plan for the Hurricane Island bankline site. Below you will find additional comments regarding the proposed Hurricane Island plan sheet that may be useful for future plan development:

- Illustration shows an island located north-west of the bankline site that does not exist,
- Add the rock protection that was added to the head end of Hurricane Island in the 1990’s,
- Change levee to railroad embankment.
- Rock vanes should be considered for stabilization, not rock groins. According to the UMRR EMP Environmental Design Handbook, rock vanes are in-stream structures constructed for the purpose of reducing shear stress on streambanks. Rock groins, however, are used mainly on new construction in shallow water where wave action and littoral drift are the dominant processes.
- Wing dams do not appear to be illustrated to scale.
- The channel east of the placement channel has continuous flow.
- Placement quantity and footprint will need to be defined by WDNR requirements and standards.

Appendix E – Sheet ID C104 Corps Island Plan – Comments: Recommend the addition of rock vanes on the north end of the bathtub island to reduce impacts from the channel flow. The hydraulic modeling for the bathtub site demonstrates stable conditions for the bathtub during high water conditions and resistance to wind and wave



action. However, Appendix G Page G-3-3 identifies that there are current impacts from the erosive wave action forces to the existing island where the bathtub site is proposed: *“The island also provides some limited wind fetch reduction across a large expanse of water. However, historic photos show the island is getting smaller, probably due to the wave erosion from wind and boat traffic.”* Rock stabilization should be installed to reduce impacts from wind fetch and boat traffic. This plan sheet also does not identify any return water outlet locations or any details about the adjacent wetland mitigation. Detailed plans and specifications need to be developed to alleviate these issues.

Appendix E – Sheet ID C301. Comments: The Corps Island cross sections identify four foot high sand berms with one foot of clay cap for a total height of 5 feet. The berms will be constructed with 5:1 side slopes and a top width of 15 feet. Observations of constructed berms at three different locations within Pool 11 provide evidence that past modeling has not been effective at predicting potential erosion rates due to velocity and/or wave action. Sunfish Lake and Mud Lake each have berms constructed of clay and random material. Both have shown excessive wind erosion over time that was unanticipated. The erosion of the berm at Sunfish was severe enough that the addition of a rock mound mid-way through berm construction was warranted to prevent breaching of the berm. Mud Lake erosion is still being monitored. Bertom Island has experienced velocity associated erosion on the southern tip that faces Hurricane Slough. This erosion continues to be monitored. The Bertom berm is larger than the bathtub berm with a height of 8 feet above flat pool and 6:1 slope. It is recommended that the berm top width be expanded 50 feet and height raised to 6 feet with the additional height achieved through placement of additional clay. Observations at Bertom indicate one foot of material is insufficient for the growth of tree cover. Providing tree cover on the berm will reduce attractiveness of the area for recreation and reduce wind induced erosion of sand off of the placement site. This recommendation is based on lessons learned over many years constructing the Upper Mississippi River Restoration Habitat Rehabilitation and Enhancement Projects and working with CM on achieving their mission.

It is understood that an Operation and Maintenance Plan will be developed during the implementation phase of this project. However, section 5.5.3 of the Main Report (Repair, Rehabilitation and Replacement Considerations) states the following: “Repair, rehabilitation and replacement considerations may extend outside of the typical 40-year period of analysis.” This is inadequate and a plan to deal with repairs, rehabilitation and replacement should be developed for both the construction phase and long-term use. This plan should be adaptive in nature with the understanding that riprap or other erosion control measures may be required in the future. WDNR recommends that this plan be amended to include these plan details for the construction phase. Long-term repair, rehabilitation and replacement considerations need to be addressed in the O&M Plan.

It is understood that the farm field/quarry cross section (B1) is typical cross section and not drawn to scale. Could you please clarify the purpose of the “Veg. Free Zone” illustrated on the cross section?

Cross Section A1 shows existing trees on both sides of the bathtub. The trees on the north side of the bathtub will need to be removed during construction.

Appendix E – Sheet ID C302 Details – Comments: Hurricane Island cross sections and groin plans should be removed from the engineering plan or referenced as details for a placement alternative. The Hurricane Island bankline placement is not part of the preferred alternative discussed in this plan. However, the WDNR is interested in maintaining this site for recreation with dredge material placement for beach nourishment and with the installation of proper bank stabilization. Recommend continuing the coordination with the OSIT and WDNR to develop a plan for the Hurricane Island bankline site.

*Appendix E – Geotechnical Engineering Report Page 6 Berm: Dredge placement containment consists of building a clay-capped sand berm prior to placement of dredged material. Clay will allow vegetation to grow on the berm and provide some protection against any minor erosion that may occur from boat wake or wind-generated waves. A typical section of the proposed berm can be found in the Slope/W model in*

*Appendix B.*

*A berm with approximately 5 feet height will be constructed of dredged sand and capped with existing clay on the island. The clay capping material will be semi-saturated in some parts and will need time to drain and some effort to achieve semi compaction. The stability of the berm was modeled using a slope of the berm of 4H:1V and a crest width of 10 feet. During the planning process the berms were widened to a crest width of 15 feet and a side slope of 5H:1V. However, since the subsurface material—not berm width—was the limiting factor in determining the maximum slope of the sand pile it was not necessary to update the modeling.*

Comments/Questions: The geotechnical report clearly identifies the containment berms to be constructed with dredge sand and capped with clay. This is inconsistent with some areas of main report that identify “silt or clay”. The report goes on to say that the clay will allow vegetation to grow on the berm and provide some protection against any minor erosion that may occur from boat wake or wind-generated waves. During a recent conversation with MVR it was stated that clay was not needed to stabilize the berm. Please clarify the function of the clay on the berm. What requirements will the MVR have for the capping material? Have similar berms been constructed elsewhere in the district and been stable? Were there any issues with the clay forming a hardpan and limiting vegetation growth or insufficient depth of fines/clay to support terrestrial vegetation as an erosion control method?

*Appendix E – Geotechnical Engineering Report Page 6 Borrow: The sand borrow for berm construction will likely come from Finley’s Landing DMMP site or dredging within the navigation channel. The clay borrow for berm capping will likely come from the Lock and Dam 11 forebay or the south side of the Corps Island.*

The sand removal from Finley’s Landing is not consistent throughout the report. Please revise accordingly. If the sand is to be used in the construction of bathtub or wetland mitigation site please include that information in the detailed plans and specifications that will be required prior to construction. Detailed plans and specifications need to be developed that identify the where the berm capping material will originate. It is recommended that the clay capping material be obtained from the interior of the bathtub. The sediment in the borrow sites will need to be characterized prior to dredging and clearly defined along with aerial extent and depth. This detail will be needed for issuance of WQ certification. Please work with the WDNR to develop a site specific sediment sampling plans for this area.

*Appendix E – Geotechnical Engineering Report Page 6 Riprap: Since the Mississippi river does not have a ‘flashy’ nature regarding rapid water depths, and from discussions with personnel from Rock Island District Hydraulics Branch, it was determined that riprap is not needed along the berm toe to protect it from erosion. Another reason is the low velocities of the current in the immediate area of the Corps Island.*

Comment: This paragraph is inconsistent with the documented current conditions of the bathtub site identified in Appendix G Page G-3-3: “*The island also provides some limited wind fetch reduction across a large expanse of water. However, historic photos show the island is getting smaller, probably due to the wave erosion from wind and boat traffic.*” Recommend the addition of rock toe protection to protect against wave erosion from wind and boat traffic.

Hurricane Recommendations EC-H: Recommend adding clarification that identifies the modeling for the preferred alternative and the

Hurricane Recommendations EC-H – Hurricane Island Bankline Placement: The bathymetry used to model the Hurricane Island bankline site appears to have some errors. The contours of elevation map shows an island located north-west of the head of Hurricane Island that does not exist. The island area elevation errors also appear to be carried into flow modeling. Were these same elevation errors present at other modeled locations within the

project area? Recommend fixing these errors and continuing coordination with the OSIT and WDNR to develop a plan for the Hurricane Island bankline site.

## **APPENDIX F – COST ESTIMATES OF ALTERNATIVES**

Appendix F General Comment: The wetland mitigation alternatives appear to be compared by total cost and total cost/cubic yard. Recommend comparing the wetland alternatives in cost per acre of wetland restoration or a cost per acre of wetland mitigation acre of mitigation credits. It is difficult to discern the wetland cost benefit ratio of all of the alternatives.

Appendix F Page F-2: The cost estimated does not appear to account for the cost associated with dredging the Hurricane Island cut. The Hurricane cut is located more than 3 miles away from the bathtub site. Additional booster pumps or mechanical dredging will be needed to get the material to this site. Please clarify.

Appendix F Page F-5: Where does the 400,000 cubic yard value come from? Would this be considered an offload to the Snyder Slough HREP? No placement or capping costs identified. Dredging costs at \$23.42 per cubic yard seem high. Please clarify.

Appendix F Page F-8: Identifies a clay cap at \$39.63 per cubic yard. How was this cost derived? Would an adjacent fine borrow site provide a cheaper alternative? Please clarify.

Appendix F Page F-6: The Enhance Rosebrook Island Option A only accounts for dredging. No other costs are itemized. The sand would need to be capped with fine material and trees would need to be planted for any bottom land forest restoration actions. Please provide details on how this cost estimate was derived.

Appendix F Page F-8: The Enhance Lower Hurricane wetland mitigation option identifies costs for 14 acres of tree planting. This number seems high. Would the project result in 14 acres of suitable tree planting habitat? Please clarify.

Appendix F Page F-9: The “Permanent Mitigation Placement” column identifies “Cost/CY Temporary Placement”. Please change to read “Cost/CY Permanent Placement”.

Appendix F Page F-9: The final 40 year cost for the preferred alternative (Bathtub to the Farm Fields with Mitigation) is \$29/cy for 446,383 cubic yards of permanently placed main channel dredge material (berms, wetland, two offloads to the Farm Fields), assuming the farm field/quarry is still available. No money appears to be allocated for land acquisition. Rock Island District’s Implementation Report for Great II Study (June 1981) identifies the importance of land acquisition. It ranks the acquisition of disposal sites or the rights for disposal at the earliest date possible as a High Implementation Priority Action. We recommend beginning negotiations for acquisition of the property as soon as possible to ensure the site is available for long-term use.

## **APPENDIX G – CLEAN WATER ACT REPORTS**

*Appendix G Page G-1-1: This study evaluates additional suitable placement alternatives for both mechanical and hydraulic dredging methods at the Hurricane Island Reach.*

Comment: As mentioned previously, mechanical dredging placement sites appear to have been unnecessarily limited by the 10,000’ reach limitation of the Dredge Goetz.

*Appendix G Page G-1-1: This material [approximately 9,000 cubic yards (CY)] would be permanently placed on the Bathtub site.*

Comment: As noted previously, please indicate where material will be temporarily stockpiled during access channel dredging.

*Appendix G Figure G-1-2: Proposed Site Development Plan for the Bathtub Site, (RM 594.1)*

Comment: This figure does not match the Engineering Section.

*Appendix G Page G-1-4: The District would first construct a partial containment berm, using existing sand at the Finley's Landing placement site.*

Comment: In the main report, construction methods describe utilizing sand from Finley's Landing or from the navigation channel for berm construction. Please clarify which site will be used.

*Appendix G Page G-1-4: As dredging continues through the first 20-year period, the District would continue the berm to protect the placed material from erosion. Once the final stage of the containment berm is completed, the District would place fine material (silts and clays) on the berm's outside slope.*

Comment: What is the timeline for completion of the berms? Please clarify if the berm will be capped with clay (for geotechnical purposes) or a mix of silts and clays (for vegetation establishment).

*Appendix G Page G-1-4: Finally, if vegetation does not naturally establish on the capped berm, the District would seed the berm with native vegetation to provide additional protection against minor erosion that may occur from boat wake or wind-generated waves.*

Comment: How will the unvegetated berms be stabilized and protected from wind and wave erosion in the interim? It is not common practice to allow sites that are elevated more than about 6" above water surfaces to attempt to vegetate on their own, particularly if they are lacking fine material.

*Appendix G Page G-1-4: Floodplain modeling using HEC-RAS (1D) showed the increase in the floodplain caused by the Bathtub site is 0.003', which is less than the allowable 0.0049*

Comment: The State of Wisconsin's allowable rise is 0.00.

*Appendix G Page G-1-8: The District would then use hydraulic dredging to move material to the adjacent mitigation area and to the bathtub site.*

Comment: Construction methods for the mitigation area must be clarified prior to Water Quality Certification. The above statement makes it appear that hydraulic dredging may be utilized to directly place material for the wetland area, but in conversation, the District has described moving the material across the site with a bulldozer.

*Appendix G Page G-1-8: The proposed action would place the hydraulically dredged material within the bermed portion of the bathtub site. Since the District does not anticipate a single 200,000 CY dredging event, the berm and material inside the berm would be placed incrementally over the 20-year period on an as needed basis but in a sequential order from upstream to downstream. If the site reaches full capacity before 20 years, the District would plan and prepare to offload the material to the upland Farm field/Quarry site.*

Comment: As noted previously, the Department is concerned about an extended construction window in which the site is vulnerable to wind, wave and rain erosion. In order to complete Water Quality Certification, detailed plans and specifications need to be developed that address berm construction, erosion protection measures and integration of wetland creation and berm construction. In addition, please reconcile the statement: 'District does

not anticipate a single 200,000 CY dredging event' with the discussion of the quantities and impacts of deferred dredging outlined on Page 5 of the Main Report.

*Appendix G Page 1-10 Figure G-1-3: Bathtub Placement Site Cross Sections*

Comment: Again, figures here do not match those from the Engineering section.

*Appendix G Page G-1-11: The "clean" dredge water would be allowed to reenter the Mississippi River at various locations along the placement site in order to avoid water quality impacts, especially suspended sediment. Careful return water management would also reduce adverse erosion and potential failure of the retention berm. The District will test the return water to ensure water quality standards are not violated.*

Comment: As noted previously, Water Quality Certification will require details regarding specific measures that will be undertaken to reduce the sediment discharge to surface waters before the berms are completely constructed and during routine operations. The Department has measured significant water clarity benefits associated with increased residence time within pre-excavated bathtub sites.

*Appendix G Page G-1-11: To collect the berm capping material, the District would either obtain it from the Bathtub interior, historically On Site Inspection Team (OSIT) approved stockpile sites or from lock and dam auxiliary locks or lock forebays.*

Comment: Please clarify where "historically OSIT approved stockpile sites" exist for fine materials. As borrow sites are selected, please work with the WDNR to develop site specific sediment sampling plans for these areas.

*Appendix G Page G-1-11: Again, capping material decanting would take place at an approved OSIT site such as inside the bathtub or at a previously approved placement site.*

Comment: Prior to Water Quality Certification, please explain how fine material stockpile areas will be isolated from carriage water during routine hydraulic operations.

*Appendix G Page G-1-14: Since the District does not have an exact location for capping material, it did not complete a grain size analysis on fine material. For forebay and auxiliary lock clean outs or backwater borrow sites, Table G-1-3 shows grain size analysis from the Pool 12 Overwintering Habitat Restoration Project. The District assumes this data from a backwater project in Pool 12 (down river from the Hurricane Island Reach project) is representative of the capping material used for Hurricane Island Reach Project.*

Comment: We concur with your statement from the Main Report HTRW section "It is recommended that representative samples of the sediments be collected and analyzed for HTRW parameters prior to use". It is our standard practice to gather site specific sediment data for borrow locations.

*Appendix G Page G-1-15: Actions to Minimize Impacts: The District has thoroughly analyzed velocities at the Bathtub site to ensure the final design does not impact the river aquatic community. The design includes capping the containment berm so that it quickly vegetates, the layout was moved to avoid the most wetlands in the lower area of the island, and the approach channel was moved to avoid mussel impacts.*

Comment: As shown in Photograph G-1-4, bankline erosion already occurs on the island, likely due to wind & wave action. Please describe any measures that will be undertaken to limit this erosion on the island itself and any constructed elements. Also, prior to Water Quality Certification, please clarify your plan for capping the berms. Earlier in this appendix (pages G-1-4 & G-1-8), an extended phase of berm construction is described with capping occurring at the completion of the berm. Completing the berms quickly and establishing vegetation proactively will be effective measures to protect water quality.

*Appendix G Pages G-1-15-16 Water Circulation, Fluctuation, and Salinity Determinations. Clarity, Color, Nutrients, etc. “The proposed project would not have any impacts...”*

Comment: WDNR appreciates the desire to certify a low-impact project, but in light of the plan to utilize hydraulic dredging without a berm in place, it seems more accurate to state that “There will be short-term impacts during construction which will be minimized after berms are constructed.”

*Appendix G Page G-1-16 Actions Taken to Minimize Impacts: The District would use chemically stable materials and physical stabilization of materials to avoid impacts to the riverine system.*

Comment: Again, once these plans are clarified in other sections, they should be directly referenced here (i.e. berm construction measures, sediment testing plan for fine materials, erosion controls)

*Appendix G Page G-1-17 Violations of Applicable Water Quality Standards: The District would obtain the permits, certification, and/or waiver of certification under the Clean Water Act, Section 401 before construction begins.*

Comment: As noted previously, Wisconsin will not be waiving Water Quality Certification and detailed plans and specifications will need to be developed before the WDNR will issue non-wetland Water Quality Certification (WQC) for the construction of the bathtub and the permittee-responsible mitigation (PRM).

*Appendix G Pages G-1-17 Actions Taken to Minimize Impacts: Return water would not be able to return to the Mississippi River until Wisconsin water quality standards are met.*

Comment: Detailed plans and specifications will need to be developed before the WDNR will issue non-wetland Water Quality Certification (WQC) for the construction of the bathtub and the permittee-responsible mitigation (PRM).

*Appendix G Page G-1-17 Contaminant Determinations: Dredged or fill material is most likely to be free from chemical, biological, or other pollutants where it is composed primarily of sand, gravel, or other naturally occurring inert material. Dredged material may be excluded from further testing if there is a reasonable assurance it is not a carrier of contaminants. Section II.A explains that existing information for this project provides a sufficient basis for making a factual determination concerning impacts to waters of the United States. The dredged material meets the exclusion from testing/evaluation criteria as explained in the Clean Water Act, Section 404(b)(1) Guidelines and the Inland Testing Manual. It is therefore reasonable to assume no further testing is required. This said, the District conducted chemical testing for dredged material in the Hurricane reach in 2015 (Table G-1-4)*

Comment: The Department acknowledges that coarser grained materials pose a lower risk of bearing potential contaminants. However, intermittent sampling of the routine dredge cuts is warranted to provide the “reasonable assurance”, to allow all partners to communicate risks to the public, and to ascertain that material meets solid waste standards for a wide range of future beneficial uses. Routine sampling measures will be incorporated into the MOU.

*Appendix G Page G-1-17 Contaminant Determinations: Table G-1-3 also outlines what the capping material’s chemical make-up may be. This information was from backwater samples of similar capping material dredged at an ecosystem restoration project in Pool 12.*

Comment: It is the Department’s standard practice to gather site specific sediment data for borrow locations. Please work with the WDNR to develop site specific sediment sampling plans for these areas

*Appendix G Page G-1-18 Table G-1-4 Main Channel Sediment Chemical Analysis.*

Comment: Reported detection limits for Mercury are higher than the TEC. Recommend considering a lab with lower detection limits. PAH data needs to be adjusted to 1% TOC, it is unclear if this was done.

*Appendix G Page G-1-21 Nature and Degree of Effect, Individually, and Cumulatively. The District determined there are no additional beneficial or negative effects contributing to the project area aquatic ecosystem and organisms. Wetland mitigation would replace any environmental value from the existing wetlands.*

Comment: During wetland delineation and/or mussel sampling efforts, please evaluate the depths, flows, and substrate conditions that would allow the displaced emergent/submersed vegetation beds to shift downstream of the wetland mitigation area.

*Appendix G Page G-1-21 Mixing Zone Determinations. A mixing zone is the volume of water at a placement site or discharge site required to dilute contaminant concentrations associated with a discharge of dredged material to an acceptable level. Since terrestrial placement is involved, the return water would be allowed to return the Mississippi River virtually free of sediment. No violation of any standard would result from the placement of dredged material.*

Comment: The Department has observed TSS levels exceeding 100 mg/L in hydraulic placement operations that utilized a lagoon to increase residence time. Without establishing detailed plans and specifications for carriage water controls, there could be significant impacts to sensitive resources. Please provide such plans so that the WDNR can issue non-wetland Water Quality Certification (WQC) for the construction of the bathtub and the permittee-responsible mitigation (PRM).

*Appendix G Page G-1-22 Determination of Compliance with Applicable Water Quality Standards. The District would obtain Section 401 Water Quality certification, in compliance with the Clean Water Act, and all permits necessary for the completion of the project prior to project implementation.*

Comment: We concur with the above statement and request that all related discussions of permitting processes reflect are in agreement, thereby clarifying that MOU and WQC will be completed.

*Appendix G Page G-1-23 Threatened and Endangered Species.*

Comment: Please update this section to reflect the recent discovery of a bald eagle nest at the bathtub site and any avoidance measures that will be undertaken in compliance with the Bald and Golden Eagle Protection Act.

*Appendix G Page G-1-23 Mollusks.*

Comment: Please update this section to reflect the additional sampling that will be undertaken by the OSIT.

*Appendix G Page G-1-23 Effects on Plankton, Nekton, and Benthos. Because the likelihood of contamination by pollutants is generally low for projects involving dredging, the District anticipates the impacts to the aquatic ecosystem as negligible.*

Comment: This project anticipates both coarse material and fine material dredging. There is a potential contaminants may be encountered. Consider revising this statement.

*Appendix G Page G-1-24 Vegetated Shallows. The proposed action would affect existing vegetative shallows on the Corps-managed island. The District would conduct compensatory mitigation to offset the loss of these 1.4 acres of wetlands.*

Comment: During wetland delineation process, please clarify the size and location of this area. If referring to the area to be converted to wetlands for mitigation, please see above comment under *Appendix G Page G-1-21 Nature and Degree of Effect, Individually, and Cumulatively*.

*Appendix G Section 404(b)(1) Evaluation: Alternative B- RM594 Bathtub to Farm Fields/Sand Quarry*

Comment: Please ensure that details within this section match the engineering designs and main report narrative. Presently, the description of berm construction is inconsistent with those other sections. Also, the narrative related to the proposed use of the WWCT ILF program must be corrected per our previous comment: Under Wisconsin State law, mitigation is only required for discharges to wetlands authorized under State statute 281.36. For individual permits authorized under state statute 281.36 mitigation is required to replace the lost functional values of the wetland being impacted. State statute Ch. 30 regulates removal of material and placement of structures and material below the Ordinary High Water Mark (OHWM) in Navigable waters. Under Ch. 30 there is no mitigation requirement for activities regulated under the chapter. Since the activity proposed is wholly below the OHWM, there is no mechanism in state law to trigger and allow for mitigation, thus the Corps cannot utilize the WDNR In-Lieu Fee Program to address the mitigation needs for wetland impacts from construction and use of the proposed dredge material placement site.

*Appendix G Page G-2-1 Memorandum of Understanding*

Comment: This MOU is draft. The Department will conduct reviews and edits in collaboration with the District as the Hurricane Island Reach DMMP process is completed.

Appendix G-2-A General Comment: Recommend continuing to work with the WDNR on the development of this SOP for sediment evaluation.

Appendix G-2-A General Comment: This SOP appears to be a scaled down version of the draft ChaMPP sediment evaluation guidelines. With all the time and effort that went into developing those sediment evaluation guidelines, why not adopt that document?

*Appendix G-2-A Page G-2-A-2 Normal Updating of Existing Sediment Data Base: Normal Updating of Existing Sediment Data Base. Because there are approximately 200 dredge cuts within the District and a very short time between determining the need to dredge and the actual dredging, it is not always possible to follow the tiered testing protocol sequentially. Routine updating of the sediments database along with review of contaminant spills and point discharge records supplied by the appropriate agencies are used to determine if historically "clean" dredge cuts may have been negatively impacted. This process provides enough information to provide a Tier I decision. An annual report is prepared summarizing any data collected that year, and the sediment quality data in the Channel Maintenance Pool Plan, Tab 5, would be updated.*

Comment: This plan needs to include routine sediment quality updates for each dredge cut. While we agree that the risk of contaminants is very low in coarser materials, the purpose of this testing is to provide a broad characterization of material that can be utilized for both water resource protection and solid waste reviews necessary to support beneficial use. In point of fact, our typical procedure in the rest of the Mississippi River is based upon 5-yr main channel sampling with base parameters and grain size analysis. When reviewing that testing, we do expect minimal contamination from cuts that grade <10% passing #200 sieve, but the testing is critical to establish that material is indeed suitable for a variety of end uses. Beyond that, this information will allow you to make factual determinations regarding the contaminant levels in the sediment, helps address future permitting needs and allows all partners to communicate risks to the public.

Question: Is Tab 5 of the Channel Maintenance Pool Plan kept up to date?



*Appendix G-2-A Page G-2-A-3 Project Specific Sediment Sampling: This section is for potentially larger projects, like new lock construction, or ecosystem restoration projects, where a decision is reached that the data provided by the routine updating of sediment quality does not provide adequate information to make a decision. These projects would be handled on a case-by-case basis, following the tiered testing approach described above in Section 2.1. Interagency coordination will be an integral part of the decision-making process. When the results of a tier are obtained, the Corps of Engineers would evaluate the results and make a preliminary determination. The results and the preliminary determination would then be coordinated with all the agencies having regulatory authority and a mutually agreed upon decision made. The agencies that would be included are the U.S. Environmental Protection Agency and the appropriate State agency having regulatory authority for the particular project. If a decision were reached to proceed to the next tier of testing, the number of samples, the sampling strategy, and the tests to be performed would be discussed with all the agencies and agreed to by the appropriate regulatory agencies for a particular project. Subsequent meetings of the technical experts would be held to discuss the interpretation of the results of the tiers and what, if any, additional testing would be required. A final contaminants determination would be included in the 404(b)(1) Evaluation that is prepared and circulated for public and agency review.*

Comment: The Department appreciates the Corps willingness to coordinate with other agencies. Project specific sampling will be required anytime dredging is conducted outside of the defined main channel dredge cuts.

*Appendix G-2-A Page G-2-A-4 Project Specific Sediment Sampling: Concern that vertical heterogeneity exists within the sediments is addressed by compositing core samples taken from depths representative of the dredge cut.*

Comment: Full-compositing only partially addresses these concerns. Compositing the entire core based on vertical dredge-cut range effectively dilutes the sample. If there are any COC's present at concentrations that would require moving to a Tier II assessment they could be 'disguised' by this method. In turn, this could lead to associated risks at terrestrial or aquatic placement site. Also, this method does not entirely do away with the risk of re-exposing contaminants, as the material comprising the post-dredge cut surface would not be included in the lab analysis. Recommend vertically compositing of the core if 1) a second sample (6" of material) below the target dredge depth were also retrieved and sampled at each core location, or 2) if the segmented sampling done for horizontal homogeneity was designed to have enough representative lower segments run for analysis (statistical significance).

*Appendix G-2-A Page G-2-A-4 Sample Collection Methods: Samples for organic analysis should be collected with a stainless steel corer and samples for metal analysis should be collected with a PVC or similarly inert corer.*

Comment: Recommend polycarbonate tubing, rather than PVC.

*Appendix G-2-A Page G-2-A-4 Sample Storage: Sediment samples should be collected and stored at 4oC in glass containers with Teflon-lined caps for analysis of organics and either linear polyethylene containers or glass containers with Teflon-lined caps for analysis of metals.*

Comment: Recommend non-clear (brown) glass containers should be used for organic

*Appendix G-2-A Page G-2-A-5 Physical and Chemical Characterization and Table 1.*

Comment: The following of parameters should be analyzed during routine sampling on the defined channel maintenance dredge cuts on a proposed 5-year interval. Dredging outside of the defined channel maintenance dredge cuts may require additional parameters for analysis.

General

Total Organic Carbon  
Particle Size (% passing 200 sieve)  
Ammonium Nitrogen  
Water Leach Test (ASTM D3987-12)

Metals

Arsenic  
Cadmium  
Chromium  
Hexavalent Chromium  
Copper  
Lead  
Manganese  
Mercury  
Nickel  
Zinc

PCB and Pesticides

Total PCB's (c) (e.d.)

PAH's (EPA 8310)

Acenaphthene  
Acenaphthylene  
Anthracene  
Benz(a)anthracene  
Fluoranthene  
Benzo(b)fluoranthene  
Benzo(k)fluoranthene  
Pyrene  
Benzo(a)pyrene  
Benzo(g,h,i)perylene  
Naphthalene  
Phenanthrene  
Fluorene  
Chrysene  
Indeno(1,2,3-Cd)pyrene  
Dibenz(a,h)anthracene  
Benzo(e)pyrene  
1-Methylnaphthalene  
2-Methylnaphthalene

PCB testing. This is part of our routine suite of parameters. Pool 11 has PCB impairments for fish tissue and water quality. While we recognize the reduced risk of high concentrations of PCBs in coarser grained materials, we also feel that baseline data for PCBs in Pool 11 is justified. Given the proposed 5-yr interval on sampling and the impairment concerns, we find that PCB analysis is warranted.

PAH testing. This is also part of our routine suite of parameters within our sediment sampling and analysis guidelines. Moreover, if material may be used beneficially for landfill or reclamation purposes, it is extremely beneficial to have PAH information that can either verify that material is sufficiently uncontaminated or can help

target more intensive sampling. We propose analysis of the PAH-18 priority pollutants (please report 1-methylnaphthalene and/or 2-methylnaphthalene, if available by your lab).

Water Leach Test. Since the material is likely to be used for mine reclamation, a water leach test is recommended. The test should follow ASTM D3987-12 and should be analyzed against the Preventative Action Levels (PALs) for groundwater (Tables 1 & 2 for parameters in the attached Excel file). This is the more restrictive standard and therefore clears the material for nearly any beneficial use in Wisconsin.

Please include raw (non-normalized to TOC) results along with normalized results in report.

*Appendix G-2-A Page G-2-A-5 Elutriate Preparation: This is then allowed to settle for 24 hours or the predicted project settling time, and samples of the supernatant are drawn from the cylinder at a point midway between the water surface and the settled sediment interface using syringe and tubing.*

Comment: Please clarify “predicted project settling time”. Is this based on the Column Settling Test as described in Section 4.3? If so, please reference.

*Appendix G Page G-3-3: Wetland Impacts - The island also provides some limited wind fetch reduction across a large expanse of water. However, historic photos show the island is getting smaller, probably due to the wave erosion from wind and boat traffic.*

Comment: We concur that the island has ongoing wave erosion from wind and boat traffic. Please provide a plan for ensuring the stability of the island to protect the toe of the berm.

*Appendix G Page G-3-6: The District analyzed the last 30 years of hydraulic elevation data at the Bathtub Site, and determined a 25% exceedance at elevation 604 MSL. Emergent wetlands are considered any vegetation from the 25% exceedance of 604 feet minus 3 feet (verbal communication with Corps Regulatory). Therefore, deep/shallow wetlands are considered at an elevation at and below 604 (9.7 acres) and any area at 605 (1.4 acres) is considered a sedge meadow community.*

Comment: Please ground-truth these values during the wetland delineation.

*Appendix G Page G-3-6 Opportunities and Constraints:*

Comment: In preparation for Water Quality Certification, please provide a design plan for the wetland mitigation that commits quantities, material locations, construction methods, erosion protection measures, wetland performance targets, planting plans and monitoring.

*Appendix G Page G-3-9 Alternative Development and Preliminary Screening Criteria.*

Comment: While not bound by Wisconsin wetland mitigation law due to jurisdictional issues discussed previously, it bears noting that the proposal to convert open water to wetlands for mitigation would likely not be acceptable for wetland mitigation projects required by the DNR under a wetland individual permit.

*Appendix G Page G-3-11 Mitigation Options Considered. Enhance Rosebrook Island:*

Comment: The WI DNR did not support the placement of dredge material in an isolated wetland on Rosebrook Island for forest habitat restoration.

*Appendix G Page G-3-11 Mitigation Options Considered - Enhance Lower Hurricane Island: The District proposed placing dredged material along the riverside bankline, cap the material with fine material, and then*

*allow the site to naturally vegetate. This feature would increase wetland habitat and protect a backwater wetland. Again, hydraulic modelling demonstrated placed material on the bankline would require riprap protection to avoid erosion. This alternative was eliminated due to the high cost of the riprap protection, resulting in a total cost \$4,620,000.*

Comment: Did the lower island enhancement with rock, sand and backwater material pass the flood stage analysis? Could this project be considered for future environmental improvement?

*Appendix G Page G-3-11 Mitigation Options Considered - Protect Lower Hurricane Island:*

Comment: The Department and OSIT are in agreement that protecting Lower Hurricane Island should be considered a valuable mitigation action due to the precarious condition of the remaining island leg. 1.1 million dollars seems like a good investment for rock placement that benefits channel maintenance, preserves backwater habitat and protects the secondary channel from flow inputs from the main channel. If flows break through the remaining island, backwater and marsh habitats will be lost. If additional mitigation is required, please consider OSIT Option 1, Lower Hurricane Island Rip-Rap.

*Appendix G Page G-3-12 Mitigation Options Considered - Snyder Slough Restoration: Access to Snyder Slough was cost prohibitive, at an estimated cost of \$14,305,000, due to its location in backwaters and distance to the dredge cuts.*

Comment: It is understood that access dredging would be needed but the cost analysis only identifies 400,000 cubic yards of material to be dredged with a small hydraulic unit at \$23.42 per cubic yard. No other costs were accounted for. Cost estimate seems very high. Please clarify. Were all of the islands depicted on Figure G-3-3 identified as a single operation or were they identified as individual components of a project? It makes most sense to see if there are island locations where depth is sufficient (or nearly), velocities are low and proximity to either the cut OR the bathtub allows for minimal handling distance. In light of the insecurity of the quarry site for future offload, it seems prudent that the Corps should investigate the cost to channel maintenance to construct the nearest elements of the Snyder Slough HREP project as a means of restoring capacity within the bathtub site at the 20-25yr time interval. In light of the long planning timeline for restoration design development, it would behoove the partners to begin discussion of goals of that project and likely designs no later than 2025.

*Appendix G Page G-3-12 Wisconsin Wetland Conservation Trust: On January 20, 2017, the District submitted a WWCT In-Lieu Fee Program Application (Appendix G-3-1). In its March 3, 2017, email response the WI DNR denied the District's In-Lieu request since the project would not require Section 404, Section 10, or WI DNR permits (Appendix G-3-2). In a letter dated April 17, 2017, the District requested the WI DNR to reconsider its position if on site mitigation cannot meet state and Federal regulations or meet mitigation success criteria (Appendix G-3-2).*

Comment: As stated elsewhere in this document, Under Wisconsin State law, mitigation is only required for discharges to wetlands authorized under State statute 281.36. For individual permits authorized under state statute 281.36 mitigation is required to replace the lost functional values of the wetland being impacted. State statute Ch. 30 regulates removal of material and placement of structures and material below the Ordinary High Water Mark (OHWM) in Navigable waters. Under Ch. 30 there is no mitigation requirement for activities regulated under the chapter. Since the activity proposed is wholly below the OHWM, there is no mechanism in state law to trigger and allow for mitigation, thus the Corps cannot utilize the WDNR In-Lieu Fee Program to address the mitigation needs for wetland impacts from construction and use of the proposed dredge material placement site.

*Appendix G Page G-3-13 Permittee-Responsible Mitigation: The Mitigation Rule identifies three types of permittee-responsible mitigation (PRM) plans: PRM under a watershed approach, PRM through on-site and in-kind mitigation, and PRM through off-site and/or out-of-kind mitigation. The OSIT developed PRM plans using a*

*watershed approach and are environmentally preferable. In addition, this PRM plan addresses the components of a complete mitigation plan as described in the Mitigation Rule (33 CFR 332.4(c)).*

*If the District were ultimately denied using the WWCT, the District would perform on site PRM. The detailed Hurricane Island PRM is located in Section 5, Mitigation Plan.*

Comment: Please clarify the following statement “*The OSIT developed PRM plans using a watershed approach and are environmentally preferable.*”

As stated elsewhere in this document, Under Wisconsin State law, mitigation is only required for discharges to wetlands authorized under State statute 281.36. For individual permits authorized under state statute 281.36 mitigation is required to replace the lost functional values of the wetland being impacted. State statute Ch. 30 regulates removal of material and placement of structures and material below the Ordinary High Water Mark (OHWM) in Navigable waters. Under Ch. 30 there is no mitigation requirement for activities regulated under the chapter. Since the activity proposed is wholly below the OHWM, there is no mechanism in state law to trigger and allow for mitigation, thus the Corps cannot utilize the WDNR In-Lieu Fee Program to address the mitigation needs for wetland impacts from construction and use of the proposed dredge material placement site. The Department and OSIT are in agreement that protecting Lower Hurricane Island should be considered a valuable mitigation action due to the precarious condition of the remaining island leg. If flows break through the remaining island, backwater and marsh habitats will be lost. If additional mitigation is required, please consider OSIT Option 1, Lower Hurricane Island Rip-Rap.

*Appendix G Page G-3-13 PRM/In-Lieu Fee Hybrid. If PRM does not fully compensate for all mitigation loss, the District would again attempt to meet the full mitigation need by combining PRM with the WWCT.*

Comment: As stated elsewhere in this document, Under Wisconsin State law, mitigation is only required for discharges to wetlands authorized under State statute 281.36. For individual permits authorized under state statute 281.36 mitigation is required to replace the lost functional values of the wetland being impacted. State statute Ch. 30 regulates removal of material and placement of structures and material below the Ordinary High Water Mark (OHWM) in Navigable waters. Under Ch. 30 there is no mitigation requirement for activities regulated under the chapter. Since the activity proposed is wholly below the OHWM, there is no mechanism in state law to trigger and allow for mitigation, thus the Corps cannot utilize the WDNR In-Lieu Fee Program to address the mitigation needs for wetland impacts from construction and use of the proposed dredge material placement site. The Department and OSIT are in agreement that protecting Lower Hurricane Island should be considered a valuable mitigation action due to the precarious condition of the remaining island leg. If flows break through the remaining island, backwater and marsh habitats will be lost. If additional mitigation is required, please consider OSIT Option 1, Lower Hurricane Island Rip-Rap.

*Appendix G Page G-3-13 Mitigation Plan: This mitigation alternative is located on USFWS fee-titled land. The proposed mitigation would protect the lower end of the island and would allow for sediment accretion. It does not create enough habitat to compensate for the approximately 11 emergent wetland acres lost. The District embellished this mitigation alternative to create the required approximately 12 acres of needed mitigation.*

Comment: Please explain and identify the areas of this mitigation plan that have been embellished. Does it refer to the permanently flooded four acres added north of the Bathtub? Does bathymetry permit construction of longer downstream leg on the channel side? Recommend incorporating the wood from the tree removal into the mitigation plan. Please clarify how the construction of the bathtub and the mitigation occur in sync. The berms for the bathtub need to be built at the outset, so the impacts to the interior wetlands begin immediately. Is the mitigation to be built concurrent with bathtub construction?

*Appendix G Page G-3-13 Mitigation Plan: Based on the preceding evaluation of mitigation alternatives, the Bathtub Site mitigation plan consists of the following:*

- *Use dredged material to expand the existing island in a phased approach; as the bathtub expands over several years, appropriate mitigation development will also expand. The mitigation would fill aquatic habitat up to elevation 604 MSL. Elevation 604 MSL is the same elevation as the impacted wetland (Figure G-3-4).*
- *Include swale(s) (603.5 msl) within the mitigation area(s).*
- *Cap with fine material from near a lock and dam or Bathtub Site interior.*
- *Seed with native, local ecotype herbaceous sedge and emergent wetland plant species.*
- *Control invasive species.*
- *Monitor and adaptive manage to ensure success.*

Comment: Please provide detailed plans and specifications on the construction process, phasing, fine material borrow sites, swale design and timeline for the mitigation site. Planting plan is inconsistent throughout the document. Recommend required seeding and/or planting at the mitigation sites.

*Appendix G Page G-3-16 Site Protection: The Corps and USFWS mangle the mitigation site as fee title, meaning the lands are in Federal ownership.*

Comment: Replace word “mangle” with “manage”.

*Appendix G Page G-3-16 Mitigation Sites. The mitigation site is comprised of permanently flooded areas (16.1 acres and semipermanently flooded (4.5) totaling 20.8 acres. This site is highly influenced by fluctuating river levels. During normal growing seasons, American lotus (Nelumbo lutea), and Wild celery (Vallisneria americana) are found in the area. During flooding conditions during the growing season, aquatic vegetation is not present and may take a year or two to begin recolonizing the site.*

Comment: The mitigation will displace a water level dependent lotus/celery bed. Recommend monitoring to confirm the expectation that that bed will re-establish itself adjacent to its former location. This should be added to the monitoring plan. In advance, we should be evaluating depths, velocities, seed bed and substrate within the new area to confirm that we have the minimal conditions to allow for that natural establishment.

*Appendix G Page G-3-17 Dredged Material Placement: Once the District begins constructing the Bathtub Site with dredged material, it will begin placing material adjacent to the Bathtub Site and push it to the mitigation site limits. Once enough material is placed to support heavy equipment, the site would be groomed to an elevation 604 MSL, which is similar to the Bathtub Site’s wetlands. The District would then place approximately one foot of fine (silt and clay) material on top of the sandy dredged material. The fine material would come would be dredged from either the interior of the Bathtub Site, or at a lock and dam facility needing an auxiliary lock or forebay cleanout. Once the fine material is dry enough to work, the District would level the material to final grade. The final grade would vary and include at least one swale to accommodate a graduation of saturated soils. Following compaction and dewatering, the area would be allowed to naturally revegetate, but if it does not meet the mitigation goals, the District would plant/seed the area with wetland vegetation appropriate for the site. For wetland restoration, the District assumed existing elevations of the proposed Bathtub Site’s average, is about 1.5 to 3 feet of above the river’s ordinary high water mark. Maximum slurry elevation would be +3.5 to 10 feet high. The final target grade elevation for wetland would be +1.5 to 2 feet, or somewhat equal to the Bathtub Site (elevation 603-605 MSL). Necessary adjustments to these elevations would be determined during the PED phase.*

Comments: Edit the following sentence: “*The fine material would come would be dredged from either the interior of the Bathtub Site, or at a lock and dam facility needing an auxiliary lock or forebay cleanout.*”

Detailed plans and specifications need to be developed that identify where the fine materials will originate. It is recommended that the fine material be obtained from the interior of the bathtub. The sediment in the borrow sites

will need to be characterized prior to dredging and clearly defined along with aerial extent and depth. This detail will be needed for issuance of WQ certification. Please also work with the WDNR to develop a site specific sediment sampling plans for this area.

Recommend developing a performance standard to the silt depth to ensure that sufficient final condition of substrate exists after incorporation.

*Appendix G Page G-3-17 Planting Plan: Once the dredged material has settled to the final target grade, the District anticipates immediate vegetation response from the existing seed bank. Typical invader species include smartweed (polygonum sp.), cottonwood (Populus deltoids), silver maple (Acer saccharinum), cattail (Typha sp.) and swamp milkweed (Asclepias incarnata). If the OSIT deems the natural vegetation a success, no active planting or seeding would occur. If the natural seeding is not successful, the District would initiate planting native wetland plant species.*

Comment: Planting/seeding plan is inconsistent throughout the document. Recommend required seeding and/or planting at the mitigation sites.

*Appendix G Page G-3-19 Planting Plan: If invasive species colonize 50 percent of the mitigation site prior to preferred wetland plants, the District would have to physical remove or chemically treat the plants.*

Comment: Recommend including invasive species management as a requirement that begins at the start of a project. Managing invasive species at 50% colonization would be extremely difficult and establishing native vegetation would also be more challenging. Projects required by WDNR have a final performance standard that would only allow a maximum of 20% aerial cover of invasive species.

*Appendix G Page G-3-19 As-Built Reports: The District will submit an As-Built Report to the OSIT for the wetland restoration/creation area within 1 year following completion of all the work. For the wetland restoration/creation area, the As-Built Report shall contain a survey providing the areal extent of the dredge disposal area and the settled grade of the dredged material and adjacent wetland areas.*

Comment: Detailed construction plans and specifications for the wetland mitigation area need to be developed prior to water quality certification. Recommend requiring the as-built report to reflect these detailed construction plans and specifications.

*Appendix G Page G-3-22 Table G-3-5 Standard Monitoring Report Schedule*

Question: The monitoring report schedule indicates that construction will be complete in two years. Is this schedule accurate? How will the construction mesh with the bathtub construction?

*Appendix G Page G-3-22 Invasive Species Management: The District does not expect any adaptive management for invasive species. No adaptive management is expected to be needed as maintenance of invasive species is part of the O&M for the project (begin eradication of invasive species if the mitigation site has 50% coverage of invasive species). If a large amount of invasive species are removed through O&M efforts, potential Adaptive Management actions include replanting of the areas previously covered by invasive species. Additional thresholds/triggers will be developed during the project's PED phase.*

Comment: Recommend including invasive species management as a requirement that begins at the start of a project. Managing invasive species at 50% colonization would be extremely difficult and establishing native vegetation would also be more challenging. Projects required by WDNR have a final performance standard that would only allow a maximum of 20% aerial cover of invasive species.







# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Rock Island Field Office  
1511 47<sup>th</sup> Avenue  
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IN REPLY REFER  
TO:

FWS/IL-IA FO

May 26, 2017

James Ross, Acting Chief, Environmental Planning Branch  
Attn: Kathryn Herzog, Environmental Planning Branch  
U.S. Army Corps of Engineers  
Rock Island District  
Clock Tower Building, P.O. Box 2004  
Rock Island, Illinois 61204-2004

Dear Mr. Ross:

Thank you for the opportunity to review your 2017 draft Upper Mississippi River Dredged Material Management Program with Integrated Environmental Assessment for the Hurricane Island Reach (draft DMMP). The U.S. Fish and Wildlife Service (USFWS) provided Refuge and Ecological Services coordinated comments on March 23, 2017, which were integrated into the revised draft. We have reviewed the draft revisions and have the following additional comments.

1. **Eagle Nest at Proposed Bathtub Placement Site:** A new eagle nest was identified within the project boundaries by the Corps during a site visit on May 10, 2017. The nest is located at the southwest corner of the proposed bathtub site. See attached map.

USFWS staff will determine if this or any other nests are active each spring and will notify the Corps of any active nests. The Corps' activities at the site shall comply with the avoidance measures of the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), as follows:

- **Restrict all channel maintenance and construction activities within 660 feet of any identified active eagle nest to dates outside the nesting season (i.e. outside the nesting season is from August through mid-January in the Midwest, however the Refuge has established an earlier fledging date of around June 15). USFWS staff will determine when nesting activity has ended (i.e., eaglets have fledged) and will notify the Corps that they may immediately proceed with channel maintenance operations and construction activities within the buffer area.**

- Maintain established landscape buffers that screen the activity from the nest. We will not support cutting of trees, especially clear-cutting of trees on Refuge-managed land unless there is a safety concern or it is part of a planned and approved habitat restoration project. We are not likely to consider exceptions to this, especially if those trees are currently providing a habitat function.
- We will not consider removing an eagle nest unless the tree falls into a category above (tree removal) and all other options have been exhausted.

2. **Capping and Seeding of Berms:** To contain the dredged material within the bathtub, the Corps will construct berms around the bathtub perimeter as dredged material placement progresses over the years.

To ensure the berms are providing an adequate level of protection and to protect the berms from erosion, the USFWS recommends the following.

- Any constructed portion of berm should be completed to full section, including topsoil (clay) and seeding, prior to demobilizing from the site after each placement event. At a minimum, the berms should be stabilized prior to the end of the dredging season. No berm should be left untiltopsoiled and unseeded or otherwise unprotected during the winter months.
  - The capped berms should be promptly seeded with a suitable seed mix rather than waiting to see if native vegetation is successful. Invasive species such as purple loosestrife are more likely to become established if disturbed areas are not seeded with a suitable seed mix.. USFWS staff is willing to work with the Corps to design effective, inexpensive permanent and temporary seed mixes for this site.
3. **Mitigation:** The USFWS understands that mitigation regulations for wetland creation have more mitigation “credit value” than protecting existing habitat. However, the USFWS still believes that it is cost effective and important to protect existing high quality habitat. Protecting the existing high quality habitat on Hurricane and Rosebrook Islands should be prioritized above creating the new wetland. These mitigation features are outlined in Appendix G-3 of the report.

In addition to protecting existing habitat, measures to protect Hurricane and Rosebrook Islands should help maintain the navigation channel. For example, the Hurricane Island lower end narrow berm is rapidly deteriorating and will soon cease function as a barrier between the main channel and backwater area.

4. **Section 7 Consultation:** Freshwater mussel survey efforts did not include the proposed “mudflat” mitigation site surrounding the bathtub placement site. We provided concurrence with your Not Likely to Adversely Affect determination for the Higgin’s eye pearl mussel (*Lampsilis higinzii*) with respect to the bathtub placement area. Consultation has not yet

occurred for the “mudflat” mitigation area. We recommend a distinction be made between these areas in the Section 4.1.3.2 Endangered Species discussion.

- 5. On-Site Inspection Team (OSIT): A discussion of the March 1, 2017, OSIT mitigation recommendation letter should be included in Section 7.2.

This letter provides comments under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); and the Endangered Species Act of 1973, as amended.

Thank you for the opportunity to provide comments. If you have any questions concerning our comments, please contact Sara Schmuecker of my staff at (309) 757-5800, extension 203.

Sincerely,

  
for Kraig McPeck  
Illinois-Iowa Field Office Supervisor

Cc: UMRNWFR: Sharonne Baylor  
Sabrina Chandler  
Brandon Jones,  
Wendy Woyczik  
Tim Yager

## Hurricane Island Bathtub

Eagle nest with 660' buffer shown.

Proposed offloading access is located about where the "rr" in "Hurricane" is.

Contours from Corps. Eagle nest coordinates from Baylor, converted by Schmuecker. Buffer by Schmuecker.

### Legend



602



603



604



605



606



Hurricane Island Eagle Nest FWS

Hurricane Island Eagle Nest FWS



## Herzog, Kathryn M CIV USARMY CEMVR (US)

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**From:** Brown, Kirsten L CIV USARMY CEMVR (US)  
**Sent:** Friday, June 02, 2017 3:00 PM  
**To:** Herzog, Kathryn M CIV USARMY CEMVR (US)  
**Cc:** Jordan, Joseph W CIV (US); Ziegler, Adam T CIV USARMY CEMVR (US); Afflerbaugh, Matthew J CIV USARMY CEMVR (US)  
**Subject:** 2017-177: USACE - Hurricane Island

Kat,

The proposal to offset the permanent impacts to the approximately 11 acre emergent wetland at the bathtub site, mitigation is required for permit CEMVR-OD-P-2017-177: US Army Corps of Engineers - Hurricane Island.

The mitigation proposed in the public notice, PN comment period May 8 – 22, 2017, fulfills the Section 404 requirements. Please find below, the proposed and accepted mitigation plan to adequately offset approximately 11 acres of emergent wetland at the bathtub site.

1. **In-Lieu Fee:** The District proposed to purchase credits from the Wisconsin Wetland Conservation Trust (WCCT) in-lieu fee program. The types and amount of credit will be determined and approved by the OSIT, a multi-agency group that assists the District with dredged material placement decisions.

2. **Permittee-Responsible Mitigation:** If credits cannot be purchased at the WCCT, or sufficient credits are not available for purchase, the District will utilize permittee-responsible mitigation at the bathtub site. This project is part of a 40 year Dredged Material Management Plan (DMMP) project and mitigation will occur in phases as wetlands are impacted. Mitigation plans include the use of dredged material to expand the existing island easterly and downstream, and will include swale(s) toward the downstream edge. A total of up to 12 acres of emergent wetland will be created at four areas adjacent to the bathtub site; 3 acres and 1-acre to the east, and 5 acres and 3 acres to the south. Once the District begins constructing the bathtub placement site with dredged material, it will begin placing material adjacent to the bathtub and pushing it to the mitigation site limits. Once enough material is placed to support heavy equipment, the site will be groomed to an elevation 604 MSL, which is similar to the bathtub's wetlands. The District will then place approximately one foot of fine (silt and clay) material over the mitigation sites. The source of the fine materials will be from either the interior of the bathtub, or a lock and dam facility needing an auxiliary lock or forebay cleanout. Once the fine material is dry enough to work, the District will level the material to final grade. The final grade will vary and include at least one swale to accommodate a graduation of saturated soils. Through natural processes, and from the existing seed bank, the capped area will be allowed to revegetate naturally. If the natural seeding is unsuccessful, the District will initiate the planting of native, local ecotype herbaceous sedge and emergent wetland plant species. If natural seeding is successful no active planting or seeding will occur. The mitigation areas will be monitored and have an adaptive management plan to ensure success. Once the mitigation areas are constructed, they will not be impacted by removal of the dredged material in the bathtub site for transportation to the farm/quarry site.

- Generalized ratios for generating mitigation credits

Impact Site Credit Ratio	Mitigation Site Credit Ratio	Location
1:1		Bathtub Emergent wetland loss
1.5:1		Bathtub Sedge meadow loss

	1:1	Permanently Flooded area wetland establishment (creation)
	1.5:1	Semi-permanently flooded area wetland enhancement

Kirsten Brown, Biologist  
Regulatory - IL/MO Section

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**UPPER MISSISSIPPI RIVER  
DREDGED MATERIAL MANAGEMENT PLAN  
WITH INTEGRATED ENVIRONMENTAL ASSESSMENT**

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**SITE PLAN FOR THE  
HURRICANE ISLAND REACH**

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**POOL 11  
DUBUQUE COUNTY, IA AND GRANT COUNTY, WI  
UPPER MISSISSIPPI RIVER, RIVER MILES 591-608**

**FINAL**

**APPENDIX D-4**

**PUBLIC COORDINATION**





From: [Wamsley, James](#)  
To: [Herzog, Kathryn MVP @ MVR](#)  
Cc: [Afflerbaugh, Matthew J MVR](#); [Martin.Herrick@wi.gov](mailto:Martin.Herrick@wi.gov); [Wischmeyer, Jenna](#)  
Subject: [EXTERNAL] RE: MS-595.0.xlsm (UNCLASSIFIED)  
Date: Friday, November 20, 2015 2:23:57 PM

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Kathryn,

I sent the information that Matt provided to our environmental and decommissioning team. There in the process of working with an engineering firm on the amount and type of material required for a project here at the Nelson Dewey site.

Alliant is still interested in the material. At this time no work has been done towards the necessary permit for this material until they confirm the amount/material type that is needed for this project.

Jenna Wischmeyer is the decommissioning project manager working on the Nelson Dewey project. Jenna will keep you updated on their progress.

Thanks,

Jim Wamsley  
Plant Manager  
Nelson Dewey Generating Station  
Cassville, Wis. 53806  
Office 608-725-2249  
Cell 608-751-4486

-----Original Message-----

From: Herzog, Kathryn MVP @ MVR [<mailto:Kathryn.Herzog@usace.army.mil>]  
Sent: Monday, November 16, 2015 10:01 AM  
To: Wamsley, James  
Cc: Afflerbaugh, Matthew J MVR; [Martin.Herrick@wi.gov](mailto:Martin.Herrick@wi.gov)  
Subject: RE: MS-595.0.xlsm (UNCLASSIFIED)

Good morning gentlemen,

Since Matt has now moved into Operations, I am taking on his role here in Planning/Environmental. I will be working on the Environmental Assessment/Dredged Material Management Plan. I wanted to reach out to the both of you to get an update on having the plant use the dredged material at the Nelson Dewey Site. Jim, is Alliant Energy still interested in using the material? Have any process been made in getting the necessary permit? I appreciate any information you may have.

Thank you for your time,  
Kat Herzog

Kat Herzog  
309-794-5231 (w)  
501-707-8870 (c)  
Biologist, Environmental Planning Section  
St. Paul District at Rock Island  
Clock Tower Building  
P.O. Box 2004

Rock Island, IL 61204-2004

-----Original Message-----

From: Afflerbaugh, Matthew J MVR  
Sent: Tuesday, November 03, 2015 2:00 PM  
To: JimWamsley@alliantenergy.com  
Subject: FW: MS-595.0.xlsm (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Jim,

Attached to this email are the results from the additional sediment sampling the Corps performed this summer in the Finley's Landing/Rosebrook cut. I've also attached the email I sent to the WI DNR folks we've been working with for dredging.

The Corps has been told that additional solid waste permitting would likely be required by Alliant for dredge material placement at the Nelson Dewey site. The level of permitting apparently depends on the intended use of the material. We were given Martin Herrick as a contact regarding the solid waste permits. Martin.Herrick@wi.gov or (608) 789-5518.

Please let me know if you have any questions or if we can assist in supplying more information for the solid waste permitting for the Nelson Dewey site.

Thanks,

Matt Afflerbaugh  
Dredging Coordinator  
Rock Island District  
Operations Division  
Office: (309)794-5384  
Cell: (309)883-6607

Classification: UNCLASSIFIED  
Caveats: NONE

**From:** [wamsleyexcavating@tds.net](mailto:wamsleyexcavating@tds.net)  
**To:** [Klingman, Jon A CIV USARMY CEMVR \(US\)](#); [Afflerbaugh, Matthew J CIV USARMY CEMVR \(US\)](#)  
**Subject:** [EXTERNAL] sand pit  
**Date:** Monday, July 25, 2016 8:30:36 AM

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My site in Potosi Township could hold 200 - 300,000 yards of sand and would be available for 50 years.

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Charlie Wamsley  
Wamsley Excavating & Quarry Products, LLC  
8715 Cty Rd U  
Cassville, WI 53806  
Phone (608) 794-2222

