ST. PAUL DISTRICT
UPPER MISSISSIPPI RIVER 9-FOOT CHANNEL PROJECT
POOL 2 DREDGED MATERIAL MANAGEMENT PLAN

SPANNING FROM THE CITY OF HASTINGS TO THE CITY OF MINNEAPOLIS; TOUCHING THE COUNTIES OF HENNEPIN, RAMSEY, DAKOTA AND WASHINGTON; WITHIN THE STATE OF MINNESOTA

REAL ESTATE PLAN

18 June 2019
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1.0 PURPOSE AND GENERAL PROJECT DESCRIPTION

1.1 PURPOSE: The purpose of this Real Estate Plan (REP) is to provide an analysis of the real estate requirements deemed necessary to support the Upper Mississippi River Pool 2 Dredged Material Management Plan (DMMP). In addition to identifying the real estate requirements that support the DMMP, this REP provides an estimate of the real estate costs associated with the Tentatively Selected Plan (TSP), as recommended by the St. Paul District. The purpose of the DMMP is to prepare a coordinated, long-term plan for managing material dredged in Pool 2 for the continued operation and maintenance of the 9-Foot Channel Navigation Project.

1.2 GENERAL PROJECT INFORMATION: Pool 2 encompasses the area between Lock and Dam 2 at river mile (RM) 815.2 near Hastings, MN and extends upstream through St. Paul and Minneapolis to Lock and Dam 1 at RM 847.7. Pool 2 flows through portions of Ramsey, Hennepin, Dakota, and Washington Counties.

Pool 2 serves as a link between the upstream ports of Minneapolis, St. Paul, the Minnesota River, and the remaining Mississippi River navigation system downstream. Between 2006 and 2015, barge freight through Lock and Dam 2 ranged from 4.7 to 7.4 million tons with an average of 6.8 million tons. The most important commodities hauled are farm products moving from local terminals in St. Paul and on the Minnesota River to the Gulf of Mexico for export. Other important commodities include fertilizer, crude materials (sand, gravel, and stone, road salt, scrap metal, etc.), cement, and petroleum products.

Upper Pool 2 is situated in the urban area of Minneapolis and St. Paul. Pigs Eye Lake, a 628-acre, shallow backwater lake, situated southeast of St. Paul, is an important feature of Upper Pool 2. The Minnesota River confluence near Fort Snelling is another significant feature of Upper Pool 2; the Minnesota River joins the Mississippi River at RM 844.

Lower Pool 2 is situated in an area where the main-navigation channel meanders back and forth across the floodplain. The river is approximately 160 feet below the surrounding upland bluffs. The Upper Mississippi River corridor in Lower Pool 2 includes industrial (e.g., Aggregate Industries), urban, agricultural, and natural (e.g., Spring Lake Park Reserve) landscapes. The corridor supports commercial navigation, recreation, industrial water supply, wastewater treatment, and important fish and wildlife habitat.

Records of maintenance dredging, kept since 1970, show that there are 13 historic channel dredge cuts in Pool 2. Ten of the historic dredge cuts have been dredged since 2000. Between 1981 and 2014, the average amount of material dredged per year in Pool 2 was approximately 107,000 cubic yards. In addition to the channel cuts, historic dredging has been completed at the St. Paul Small Boat Harbor, LD2 lock chamber, and access to dredged material placement sites, though volumes generated in these locations are generally marginal.
A sediment assessment was completed in September 2016 to predict future dredging requirements throughout Pool 2. The Assessment of Pool 2 (RM 815.2-847.6) Sediment Sources and Dredging (Hendrickson and Libbey 2016) addressed the impact that increasing flow conditions and changes in dredging practices in the Upper St. Anthony Falls (USA) Pool and Pool 1 will have on channel dredging throughout Pool 2. In summary, dredging requirements throughout Pool 2 are anticipated to increase substantially—to approximately 169,000 cubic yards per year. Therefore, the 40-year target capacity for the Pool 2 DMMP is approximately 6.8 million cubic yards.

The TSP for the Pool 2 DMMP is identified as the lowest cost, operationally-feasible, and environmentally acceptable alternative. The TSP identifies two (2) placement sites, to include: the Southport Terminal Placement Site and the Lower Grey Cloud Island (LGCI) Pit. If the proposed NSE for Southport is not approved by HQUSACE, all material would be placed in the LGCI Pit. The pit has enough capacity to accommodate all material for a 40-year time period.

1.3 AUTHORITY: The U.S. Army Corps of Engineers (Corps) is responsible for maintaining a navigable channel on the Mississippi River. Authority for continued operation and maintenance of the Upper Mississippi River (UMR) 9-Foot Channel Navigation Project is provided in the River and Harbor Acts of 1930 and 1932. Original authority for the Corps to work on the Mississippi River was provided in the Rivers and Harbors Act of 1878. In addition, pursuant to Section 1103(i) of the Water Resources Development Act of 1986 (33 U.S.C. § 652(i)), Congress authorized the Corps to dispose of dredged material from the system pursuant to the recommendations of the Great River Environmental Action Team (GREAT) I study, which were implemented, in part, in the Channel Maintenance Management Plan (CMMP). The project is authorized by the referenced legislation, and its purpose is compatible with the annual Operations and Maintenance appropriation.

(1) The River and Harbors Act of 3 July 1930, which authorized the Mississippi River 9-Foot Channel Project and which states in part:

"Mississippi River between mouth of Illinois River and Minneapolis, MN: The existing project is hereby modified so as to provide a channel depth of nine feet at low water with widths suitable for long-haul common-carrier service."

(2) 33 USC 591, which authorized condemnation, purchase, or donation of land or right-of-way for the improvement of rivers.

(3) Section 1103 of the Water Resources Development Act of 1986, 33 USC 652(i)(i), which authorized the purchase of the subject tracts in fee. It further states that:

"the Secretary shall, as he determines feasible, dispose of dredged material from the system pursuant to the recommendations of the GREAT I, GREAT II, and GRRM studies."

The GREAT I Study contains the following recommendation as Policy/Funding Item 6 on Page VII-23:
“The Corps of Engineers should change its policy and allow the acquisition of private land for stockpiling of dredged material to implement the channel maintenance plan and make material available for beneficial use.”
Figure 1. Pool 2 Study Area
Principal Features of Pool 2:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Mississippi River</th>
<th>Minnesota River</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Pool</td>
<td>32.5 river miles</td>
<td>25.0 river miles</td>
</tr>
<tr>
<td>River Mile Limits</td>
<td>815.2–847.7</td>
<td>0.0–25.0</td>
</tr>
<tr>
<td>Project Pool Elevation</td>
<td>687.2 feet</td>
<td></td>
</tr>
<tr>
<td>Pool Surface Area</td>
<td>9,652 acres</td>
<td></td>
</tr>
<tr>
<td>Shoreline Miles</td>
<td>110 miles</td>
<td></td>
</tr>
</tbody>
</table>

1.4 CHANNEL MAINTENANCE MANAGEMENT PLAN (CMMP): In 1976, Section 117 of Public Law 94-587 authorized a cooperative Federal-State interagency study of the Upper Mississippi River to develop a comprehensive river system management plan. The resulting GREAT I study was completed in 1980 and recommended that long-term upland dredged material placement locations be identified in a subsequent report for each pool. The CMMP, dated April 1996, evaluated proposed dredged material placement sites in each pool for capacity, cost, economic, cultural, recreational, aesthetic, environmental, and hydraulic impacts. The report designated the Lower Grey Cloud Island Pit as a preferred site.

The Corps then acquired three dredged material placement sites within Pool 2. Two perpetual easements were acquired over two separate islands and an additional island was acquired in fee via condemnation from the State of Minnesota. Specifically, in Lower Pool 2, Upper and Lower Boulanger Islands are privately-owned sites for which the Corps holds an easement in perpetuity. Pine Bend Island is currently owned by the United States of America, managed by the Corps, and was acquired from the State of Minnesota. Historically, the Corps held a 20-year agreement (1998–2017) with a subsequent shorter term agreement for a 2-year period (2018–2019), granted by the St. Paul Port Authority, for placement of material at the Southport Placement Site. The St. Paul Port Authority has indicated no desire to convey the fee interest in the property as it serves as a terminal transfer site for the Port Authority, but will entertain a long-term easement agreement with the Corps for continued use of the site.

A majority of the placement sites identified in the CMMP are carried forward for potential future contingency use in Pool 2. The placement sites identified for use in the CMMP are retained as part of the DMMP to provide operational flexibility and contingency.

The following is a description of the previously identified CMMP sites:

**LOWER POOL 2 SITES**

**Pine Bend, RM 823.8**

*General Description:* This location at RM 823.8 has been an active placement site since 1996 and is a designated temporary (island) placement site in the CMMP. The capacity at Pine Bend, however, is not sufficient for the dredging needs in Lower Pool 2, and the unit cost is higher than other available sites in the area due to material re-handling. Estimated placement costs at this site are $16.35/CY. The site is identified in the approved CMMP with potential environmental impacts discussed in the Corps’ 1997 FEIS. The site could potentially be utilized when dredging multiple locations in Lower Pool 2 concurrently and is retained as part of the DMMP to provide operational flexibility and contingency.
Ownership: United States of America

Size and Capacity:

<table>
<thead>
<tr>
<th></th>
<th>Site Area:</th>
<th>Maximum Fill Height:</th>
<th>Capacity:</th>
<th>Beneficial Use Removal:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8 acres</td>
<td>30 feet above low control pool elevation</td>
<td>379,500 cubic yards</td>
<td>No</td>
</tr>
</tbody>
</table>

Operational Feasibility: The site is suitable for both mechanical and hydraulic placement of material from Lower Pool 2.

Natural Resources: The site is bound by bottomland forest and the main navigation channel. There is little vegetation located within the operational boundary identified in the CMMP. There are no known cultural resources at the site, and there are no known federally listed threatened and endangered species within the placement and containment areas of the site.

CF INDUSTRIES DOCK SITE, RM 823.8

General Description: This is an industrial dock site located at RM 823.8. Dredged material placement at the dock site would be limited to approximately one acre in an area bounded by the river, the CF industries dock, and bottomland forest. The site is identified in the approved CMMP with potential environmental impacts discussed in the Corps’ 1997 FEIS. Estimated placement costs at this site are $9.10/CY. The site could potentially be utilized when dredging multiple locations concurrently and will be retained for potential future dredged material placement, though only on a contingency basis, for example in an emergency situation, or when dredging multiple locations at once.

Ownership: CF Industries.

Size and Capacity:

<table>
<thead>
<tr>
<th></th>
<th>Site Area:</th>
<th>Maximum Fill Height:</th>
<th>Capacity:</th>
<th>Beneficial Use Removal:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 acre</td>
<td>40 feet above low control pool elevation</td>
<td>40,000 cubic yards</td>
<td>Yes, landowner coordinated</td>
</tr>
</tbody>
</table>

Operational Feasibility: The site is suitable for mechanical placement of material from lower Pool 2.

Natural Resources: This site is established as an industrial dock site for CF Industries, so few impacts to natural resources would be expected.

CF INDUSTRIES PIT SITE, RM 823.5

General Description: This is an industrial pit site located at RM 823.5. This site would require trucking material and has a relatively high unit cost to move dredged material. Estimated placement costs at this site are $11.50/CY. The site is upland and disturbed; vegetation includes grasses, brush, and a few trees. The site is identified in the approved CMMP with potential environmental impacts discussed in the Corps’ 1997 FEIS. The site could potentially be utilized when dredging multiple locations concurrently and is retained for potential future dredged material placement.
Ownership: CF Industries.

Size and Capacity:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Area:</td>
<td>6.5 acres</td>
</tr>
<tr>
<td>Maximum Fill Height:</td>
<td>40 feet above low control pool elevation</td>
</tr>
<tr>
<td>Capacity:</td>
<td>150,000 cubic yards</td>
</tr>
<tr>
<td>Beneficial Use Removal:</td>
<td>Yes, landowner coordinated</td>
</tr>
</tbody>
</table>

Operational Feasibility: The site is suitable for mechanical placement of material from Lower Pool 2.

Natural Resources: This site is established as an industrial pit site for CF Industries, so few impacts to natural resources would be expected.

SHIELY PIT, RM 822.5

General Description: The Shiely pit site is identified in the approved CMMP with potential environmental impacts discussed in the Corps' 1997 FEIS. The site is part of the Aggregate Industries' Nelson Mine on Grey Cloud Trail. The pit has been mined for sand and gravel, and active mining operations continue within the vicinity of the identified site. The actual pit site exceeds 300 acres; however, the CMMP identified only fifteen acres on Lower Grey Cloud Island for initial placement of dredged material. The site could potentially be utilized when dredging multiple locations concurrently and is retained for potential future dredged material placement. Estimated placement costs at this site are $10.50/CY.

Ownership: PAS Associates and First Trust Company of Saint Paul.

Size and Capacity:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Area:</td>
<td>15 acres</td>
</tr>
<tr>
<td>Maximum Fill Height:</td>
<td>50 feet above low control pool elevation</td>
</tr>
<tr>
<td>Capacity:</td>
<td>500,000 cubic yards</td>
</tr>
<tr>
<td>Beneficial Use Removal:</td>
<td>Yes, landowner coordinated</td>
</tr>
</tbody>
</table>

Operational Feasibility: Site is suitable for mechanical placement of material from Lower Pool 2.

Natural Resources: This is an established mining site, so few impacts to natural resources would be expected.

UPPER BOULANGER, RM 821.5

General Description: This location at RM 821.5 has been an active placement site since 1996 and is a designated temporary (island) placement site in the CMMP. The capacity at this site is not sufficient for the future dredging needs in Lower Pool 2, and the unit cost is higher than other available sites in the area due to material re-handling. Estimated placement costs at this site are $16.00/CY. The site is identified in the approved CMMP with potential environmental impacts discussed in the Corps' 1997 FEIS. The site could potentially be utilized when dredging multiple locations concurrently and is retained for potential future dredged material placement.
Ownership: PAS Associates and First Trust Company of Saint Paul.

Size and Capacity:

<table>
<thead>
<tr>
<th>Site Area:</th>
<th>4 acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Fill Height:</td>
<td>30 feet above low control pool elevation</td>
</tr>
<tr>
<td>Capacity:</td>
<td>200,000 cubic yards</td>
</tr>
<tr>
<td>Beneficial Use Removal:</td>
<td>No</td>
</tr>
</tbody>
</table>

Operational Feasibility: The site is suitable for both mechanical and hydraulic placement of material from Lower Pool 2.

Natural Resources: The site is bound by bottomland forest and the main navigation channel. There is no vegetation located within the diked containment and material placement site. There are no known cultural resources at the site, and there are no known federally listed threatened and endangered species within the placement and containment areas of the site.

Lower Boulanger, RM 821.1

General Description: This location at RM 821.1 has been an active placement site since 1996 and is a designated temporary (island) placement site in the CMMP. The capacity at this site is not sufficient for the future dredging needs in Lower Pool 2, and the unit cost is higher than other available sites in the area due to material re-handling. Estimated placement costs at this site are $16.35/CY. The site is identified in the approved CMMP with potential environmental impacts discussed in the Corps' 1997 FEIS. The site could potentially be utilized when dredging multiple locations concurrently and is retained for potential future dredged material placement.

Ownership: PAS Associates and First Trust Company of Saint Paul.

Size and Capacity:

<table>
<thead>
<tr>
<th>Site Area:</th>
<th>8 acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Fill Height:</td>
<td>30 feet above low control pool elevation</td>
</tr>
<tr>
<td>Capacity:</td>
<td>355,500 cubic yards</td>
</tr>
<tr>
<td>Beneficial Use Removal:</td>
<td>No</td>
</tr>
</tbody>
</table>

Operational Feasibility: The site is suitable for both mechanical and hydraulic placement of material from Lower Pool 2.

Natural Resources: The site is bound by bottomland forest and the main navigation channel. There is no vegetation located within the diked containment and material placement site. There are no known cultural resources at the site, and there are no known federally listed threatened and endangered species within the placement and containment areas of the site.
Figure 2. Lower Pool Map
UPPER POOL 2 SITES

HIGHBRIDGE, RM 840.4

General Description: This site is a previously filled wetland that includes some sparse trees and grasses with a total area of approximately four acres. Highbridge is primarily used as a boat landing. The St. Paul Parks & Recreation Department manages the site, which is owned by the city of St. Paul. The city of St. Paul is the local sponsor for dredging the St. Paul Small Boat Harbor, and they initially provided this site to the Corps as a potential location for storing dredged material from the harbor. This is a designated placement site in the approved CMMP with potential environmental impacts discussed in the Corps' 1997 Final Environmental Impact Statement (FEIS) for the 9-Foot Channel Navigation Project, published June 6, 1997, and will be retained for potential future dredged material placement, though only on a contingency basis, for example in an emergency situation, or when dredging multiple locations at once. Estimated placement costs at this site are $9.10/CY.

Ownership: City of St. Paul.

Size and Capacity:

<table>
<thead>
<tr>
<th>Site Area:</th>
<th>4 acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Fill Height:</td>
<td>30 feet above low control pool elevation</td>
</tr>
<tr>
<td>Capacity:</td>
<td>100,000 cubic yards</td>
</tr>
<tr>
<td>Beneficial Use Removal:</td>
<td>Yes, landowner coordinated</td>
</tr>
</tbody>
</table>

Operational Feasibility: The site is suitable for mechanical placement of material from Upper Pool 2.

Natural Resources: This site is an established city boat landing, so few impacts to natural resources would be expected.

HOLMAN FIELD, RM 836.8

General Description: The St. Paul Downtown Airport, also known as Holman Field, is an airport adjacent to Pool 2 across the Mississippi River from downtown Saint Paul, MN. It is operated by the Metropolitan Airports Commission (MAC). The site was selected as a placement site in the 80s during the GREAT I study and was carried forward in the 1990s for the CMMP (shown on Plate 1). The site consisted of 110 acres of undeveloped wetland at the time of selection. As part of the implementation of the CMMP, the site has been filled and buildings and parking lots have been constructed. Additional material could be provided to the Airport if future site development is planned. Material would be provided only after the airport operators acquire all Federal State, and local permits necessary for their fill activities. It is recommended to continue to communicate with the airport to determine if there are future beneficial use and cost-share opportunities. This site would be used at the request of the MAC based on material needs. If the site were to be used in the future, additional assessment would be required to determine the specific area and capacity where dredged material could be placed. This site will be retained for potential future dredged material placement, though only on a contingency basis, for example upon the landowner’s request for material. Estimated placement costs at this site are $13.48/CY.
Ownership: Metropolitan Airports Commission.

Size and Capacity:

<table>
<thead>
<tr>
<th>Site Area:</th>
<th>To be determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Fill Height:</td>
<td>To be determined</td>
</tr>
<tr>
<td>Capacity:</td>
<td>To be determined</td>
</tr>
<tr>
<td>Beneficial Use Removal:</td>
<td>No material will be removed once placed. Material placed here would be used beneficially as landfill to develop an airport expansion.</td>
</tr>
</tbody>
</table>

Operational Feasibility: The site is suitable for mechanical placement of material from Upper Pool 2.

Natural Resources: No specific placement areas have been identified. Natural Resources effects would need to be evaluated prior to implementation, and the site owner would need to acquire all applicable Federal, State, and local permits and approvals.
Figure 3. Upper Pool Map
2.0 PROJECT LANDS, EASEMENTS, RIGHT-OF-WAYS, RELOCATIONS, AND DREDGE OR EXCAVATED
MATERIAL DISPOSAL AREAS (LERRD)

2.1 UPPER POOL 2: In accordance with Corps regulations, the St. Paul District has and, yet
continues, to negotiate with Southport to acquire the placement site in fee. Thus far however,
Southport has steadfastly maintained a firm reluctance to sell. Historically, the Corps has had a
long term agreement with the St. Paul Port Authority (SPPA) for the placement of material
generated from nearby dredge cuts. A significant component to the success of that prior
agreement was Southport’s willingness to directly oversee and manage the site’s ongoing
beneficial use program. Without a robust beneficial use program however, the site literally has
no long term capacity. Over the last 20 years, SPPA has successfully managed the site’s
beneficial use program that has literally disposed of 600,000 cubic yards of dredged material at
no cost to the government. Without fail, SPPA has consistently, through their beneficial use
program, annually ‘refreshed’ the site’s placement capacity.

The Southport Placement Site would accommodate material generated from the St. Paul Barge Terminal
dredge cut (River Mile 836.4 – 837.8). The average dredging job at the St. Paul Barge Terminal dredge
cut has typically generated approximately 47,000 cubic yards of dredged material (1970-2017). The
minimum interest deemed necessary for the project has been determined to be fee. All lands
associated with the project will be acquired in Fee-Simple Absolute title. However, if the minimum
interest cannot be acquired through landowner negotiations, the District Chief of Real Estate may
propose to deviate from the required minimum interest and/or standard estate. A formal request to
HQUSACE to deviate from established policy and/or standard estate language would be required. When
a policy deviation or Non-Standard Estate has been proposed for a project, HQUSACE approval will be
secured before landowner negotiations resume.

SOUTHPORT, RM 836.3
General Description: The Southport site is located just downstream of downtown St. Paul. The site was
selected as part of the GREAT I study. The site initially consisted of 18 acres of type 1 wetland with
willows in the Mississippi River floodplain, the majority of which has since been filled and disturbed. The
site is bordered by the main navigation channel on the east, a barge terminal on the southwest, and an
airfield on the northwest. Since its inception, the site has been vastly reduced in size due to various
reasons. The site is owned by the St. Paul Port Authority and managed by LS Marine. LS Marine also
utilizes a small portion of the original site for equipment staging. Presently, the Corps has access to
approximately 7 acres of the previously identified GREAT I site for dredged material placement. The
placement site is upland and highly disturbed. Though the site footprint has decreased, material is
removed for beneficial use at a rate that ensures capacity is available to meet placement needs. LS
Marine and the St. Paul Port Authority partner to market the dredged material very well, restoring the
site’s capacity to hold material each year. Estimated placement costs at this site are $9.10/CY.

Ownership: St. Paul Port Authority. Historically the Corps real estate interest in the site consisted of an
easement for a portion of the property. For continued use of the Southport site, the plan recommends
pursuing a fee interest from the landowner.
Size and Capacity:

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Area</td>
<td>Approximately 7 acres</td>
</tr>
<tr>
<td>Maximum Fill Height</td>
<td>25 feet above low control pool elevation</td>
</tr>
<tr>
<td>Capacity</td>
<td>100,000 cubic yards</td>
</tr>
<tr>
<td>Beneficial Use Removal</td>
<td>Yes, landowner coordinated</td>
</tr>
</tbody>
</table>

Operational Feasibility: This site has been used historically for mechanical and hydraulic dredging. Estimated dredging and placement costs are $9.10 per cubic yard. For hydraulic placement, the Corps coordinates with LS Marine well in advance of a dredging event so the site can be prepared. Considerably less notification is requested for mechanical dredging operations. The St. Paul Port Authority, LS Marine, and the Corps have collaborated to establish a site management manual that lays the groundwork for coordinating dredged material placement.

Natural Resources: This is an established industrial site, so few impacts to natural resources would be expected.
Figure 4. Southport Placement Sites
2.2 LOWER POOL 2: The Corps proposes to acquire the Lower Grey Cloud Island Pit placement site, which is under private ownership, in fee through direct purchase from the landowner. The Corps has historically worked with the landowner to utilize Lower Grey Cloud Island for dredged material placement. In August of 1999, a Corps contractor began dredging ~1,250,000 cubic yards of material, which was placed on Grey Cloud Island: 1,000,000 cubic yards came from temporary sites in Lower Pool 2, while 250,000 cubic yards came from the channel. The work ended in the spring of 2000. In addition, the Corps has placed material excavated from temporary sites in Lower Pool 2 on an incremental basis, last in 2013. There are eight historic dredge cuts in Lower Pool 2, covering roughly 13 miles of river from River Mile 815 to River Mile 828. The majority of material generated in Lower Pool 2 is derived from five dredge cuts from RM 818-825: Pine Bend Landing, Pine Bend, Boulanger Bend, Boulanger Bend Lower Light, and Freeborn Light. The Corps dredges approximately 63,500 cubic yards of material per year in this reach of Lower Pool 2. The required dredging in this reach is anticipated to increase 39% in the future (Hendrickson and Libbey, 2015). This site was identified to manage over six million cubic yards (CY) of material over a 40-year planning period.

**LOWER GREY CLOUD ISLAND PIT**

*General Description:* The Lower Grey Cloud Island pit is located on the south side of Lower Grey Cloud Island and contains the Aggregate Industries’ Nelson Mine on Grey Cloud Trail. The pit was previously mined for aggregate and is currently being used for placement of tailings, as additional westward property is mined. Excavation is not being conducted in the area under consideration for dredged material placement, but it is part of the active mining operation because it is being used for the placement of tailings.

The Lower Grey Cloud Island pit and the majority of Grey Cloud Island is owned by PAS Associates and First Trust Company of Saint Paul. The site is currently leased to Aggregate Industries. As of today, the portion of the property under consideration is a mined pit site; the aggregate mining pit has an uneven bottom depth and is filled with water. The area under consideration is used only for mine tailings, as active mining continues nearby. Estimated placement costs at this site are $9.10/CY.

*Ownership:* PAS Associates. There is no existing real estate interest in the site; the acquisition of the site in fee title is recommended.

*Size and Capacity:*

<table>
<thead>
<tr>
<th>Site Area:</th>
<th>326 acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Fill Height:</td>
<td>35 feet above low control pool elevation</td>
</tr>
<tr>
<td>Capacity:</td>
<td>12,000,000 cubic yards</td>
</tr>
<tr>
<td>Beneficial Use Removal:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Operational Feasibility:* The site is suitable for mechanical or hydraulic placement of material from Lower Pool 2. Estimated dredging and placement costs are $9.10 per cubic yard. The site has adequate capacity for all the material expected to be dredged from Lower Pool 2 over the next 40 years and beyond. In addition, the site has capacity for permanent placement of the dredged material located on the Pine Bend, Upper Boulanger, and Lower Boulanger temporary placement sites. It is the only large site that is centrally located to the Lower Pool 2 dredge cuts.
Natural Resources: This is an established mining site, so few impacts to natural resources would be expected. Placement of sand from the channel onto Lower Grey Cloud Island is consistent with the current approved Reclamation Plan that Aggregate Industries has developed as part of their permit. In addition, Lower Grey Cloud Island is designated as a rural and open space district (CA-ROS) in the recently published Mississippi River Corridor Critical Area District Map. Filling in portions of the gravel pit with sand is in keeping with this designation.
Figure 5. Grey Cloud Island
2.3 PRIOR REAL ESTATE PLANS: Numerous Real Estate Design Memorandums (REDM) have been completed for Pool 2. The most recent REDM was completed in October, 1997, in support of the real estate interests for Pine Bend Island, and Upper/Lower Boulanger Islands.

3.0 ESTATES TO BE ACQUIRED

3.1 SOUTHPORT PLACEMENT SITE: The Corps had a 20-year agreement with the St. Paul Port Authority for use of the Southport placement site that expired on December 31, 2017. Over the years, the St. Paul Port Authority has been a willing and accommodating partner of the District’s channel maintenance program, but is unwilling to divest itself of the fee interest in the property.

The minimum interest deemed necessary for the project has been determined to be fee. All lands associated with the project will be acquired in Fee-Simple Absolute title. However, if the minimum interest cannot be acquired through landowner negotiations, the District Chief of Real Estate may propose to deviate from the required minimum interest and/or standard estate. A formal request to HQUSACE to deviate from established policy and/or standard estate language would be required. When a policy deviation or Non-Standard Estate has been proposed for a project, HQUSACE approval will be secured before landowner negotiations resume.

3.2 LOWER GREY CLOUD ISLAND: The District proposes to acquire fee simple title for the Lower Grey Cloud Island Pit placement site.

3.3 ESTATES:

FEE SIMPLE:

The fee simple title to . . . and described in (Schedule A) (Tracts Nos. , , and), subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

4.0 FEDERALLY-OWNED LANDS OR OTHER INTEREST: Pine Bend Island, Upper Boulanger Island and Lower Boulanger Island are in close proximity to Lower Grey Cloud Island. Pine Bend, Upper Boulanger, and Lower Boulanger are temporary sites that are actively used for placement purposes. Fee title is held in the name of the United States for Pine Bend. Upper and Lower Boulanger are privately owned but subject to a perpetual dredged material placement easement.

5.0 NAVIGATION SERVITUDE: Navigation Servitude is not applicable to the proposed acquisitions.

6.0 PROJECT MAPS
Figure 6. Location of Upper Pool 2 Dredge Cuts and the Southport placement site.
Figure 7. Location of Lower Pool 2 Dredge Cuts and the Lower Grey Cloud Island Pit placement site.
7.0 **INDUCED FLOODING:** The TSP will not adversely impact the existing floodplain.

8.0 **REAL ESTATE BASELINE COST ESTIMATE:** Restricted

9.0 **MINERAL ACTIVITY**

9.1 **SOUTHPORT:** There is no present or anticipated oil/gas/mineral extraction activities occurring that will impact the acquisition, operation, or maintenance of the Southport Placement Site.

9.2 **LOWER GREY CLOUD ISLAND PIT:** Aggregate Industries is currently conducting gravel mining operations on the larger parcel and utilizing the existing pit for placement of spoil material. Aggregate Industries has a lease agreement with the landowner which allows for the activity to continue through 2031.

It is advantageous for the District to allow Aggregate Industries, under their current lease agreement, to continue mining. Even though Aggregate Industries will be placing approximately 60% of the excavated material back into the pit as 'spoils', the long-term net result is they are slowly continuing to enlarge the pit's material placement capacity which, in the long-run, directly benefits the District.

Bathymetric sounds completed about 5 years ago for the pit revealed a capacity of around 12M yds. In addition, Aggregate Industries plans to excavate another 8M yards over the next 10 years.

Thus, not knowing what Aggregate Industries may excavate in the future, conservatively speaking the pit’s current potential capacity is approximately 8-9M cubic yards with another potential for 4M yards by 2030.

9.3 **TIMBER:** There are no timber resources located on either parcel.

10.0 **ZONING ORDINANCE REQUIREMENTS:** No application or enactment of zoning ordinances is proposed.

11.0 **ACQUISITION SCHEDULE:** Major acquisition milestones are identified in Table 2. Total acquisition duration is estimated to be between 18 to 24 months. A more defined acquisition schedule will be developed as acquisition is initiated for each site.
TABLE 1
REAL ESTATE LAND ACQUISITION MAJOR MILESTONES

<table>
<thead>
<tr>
<th>TASK</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey and Mapping</td>
<td>90 Days</td>
</tr>
<tr>
<td>Tract Appraisal</td>
<td>120 Days</td>
</tr>
<tr>
<td>Secure Title Commitment(s)</td>
<td>30 Days</td>
</tr>
<tr>
<td>Preliminary Title Opinion</td>
<td>30 Days</td>
</tr>
<tr>
<td>Offer to Purchase / Negotiations</td>
<td>180 Days</td>
</tr>
<tr>
<td>Title Curative</td>
<td>120 Days</td>
</tr>
<tr>
<td>Closing / Conveyance of Title</td>
<td>30 Days</td>
</tr>
<tr>
<td>Condemnation (if necessary)</td>
<td>18 – 24 Months</td>
</tr>
</tbody>
</table>

12.0. PUBLIC UTILITY OR FACILITY RELOCATIONS, ALTERATIONS, OR REPLACEMENT: There will be no public utility or facility relocations, alterations, or replacements associated with the proposed placement sites.

13.0 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)

13.1 Lower Grey Cloud Island Pit: Based on the information obtained during the site reconnaissance portion of the environmental site assessment (ESA) a Phase II ESA is not currently recommended. It should be noted that the complete report must be read in order to fully understand the findings associated with the subject property.

13.2 Southport Placement Site: The site is actively managed by the current owner (St Paul Port Authority). The owner has conducted an Environmental Assessment of the site in coordination with multiple state and local stakeholders along the river corridor. No significant environmental concerns as relating to sediment transported pollution were identified. The Corps of Engineers – St. Paul District conducts a regular dredge sediment sampling program at this location in order to identify any potential contaminants prior to their placement at Southport. To date no significant impacts have been identified. This process has been in place at this site since 1998 and no significant operational changes are anticipated.

14.0 RELOCATION ASSISTANCE BENEFITS, PUBLIC LAW 91-646: No relocation assistance benefits are anticipated for the proposed acquisitions.

15.0 NON-FEDERAL SPONSOR REAL ESTATE ACQUISITION CAPABILITIES ASSESSMENT: N/A

16.0 LANDOWNER ATTITUDE(S)

16.1 SOUTHPORT: The owner of the Southport Site (St. Paul Port Authority) is opposed to conveying a fee interest to USACE; the owner does, however, support the continuation of the process utilized in the past to temporarily place dredge material on the site and to allow the owner to remove and utilize the material.
16.2 LOWER GREY CLOUD ISLAND PIT: Although there is no known public opposition to the placement of dredged material at the Lower Grey Cloud Island Pit Site, the landowner has verbally expressed strong opposition to any proposed acquisition that would interfere with any existing mining activities. The lease payments from the mining activities are crucial to the landowner in that they provide the cash flow that allows the landowner to pay the overhead and carrying costs (such as real estate taxes) on the vacant island property. While the landowner clearly does not want the existing mining lease cash flow interrupted or in any way disturbed, the landowner has expressed a willingness, under the right conditions, to work with and try to accommodate the District.

17.0 OTHER RELEVANT REAL ESTATE ISSUES: The contents of this REP provide the reader with all relevant real estate related issues. No additional information is provided.

Stephanie Dupey (Preparer)
Realty Specialist

[Signature]

6/18/2019

Penny Caldwell (Reviewer)
Realty Specialist

[Signature]

6/18/19

Kevin Sommerland (Approver)
Chief of Real Estate
St. Paul District

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6/18/2019