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**ISSUE PAPER**  
**PROCESS AND OUTCOME OF IMPLEMENTATION OF THE**  
**GREAT LAKES NAVIGATION REGIONAL FUNDING PROVISIONS**  
**FY2008, FY2009, FY2010**

This issue paper outlines the process followed and the results achieved by the U.S. Army Corps of Engineers in implementing regional funding provisions in the FY08, FY09, and FY10 Energy and Water Development Appropriations Acts for Great Lakes Navigation dredging and maintenance. These regional provisions provided the Corps the flexibility to work with stakeholders and local communities to identify and apply the funds to the most critical system needs using current condition data.

The results demonstrate that providing funds on a regional basis for Great Lakes Navigation maintenance is a very efficient means to meet critical system needs and optimize scarce funds.

**FY08 Regional Provisions**

The FY08 Omnibus Bill included three regional provisions directed at Great Lakes navigation dredging. The three provisions with language directly from the Bill are:

- 1) For Great Lakes Navigation, Indiana, Illinois, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin – Within the funds provided under this heading \$6,544,000 is included to execute backlog dredging at commercial navigation projects within the Great Lakes. This funding shall be allocated based on maximizing transportation cost savings, taking into account the relationship among harbors. It further states that the Corps shall coordinate with the House and Senate Committees on Appropriations as well as other interested parties in allocating this funding. (p.13)
- 2) Michigan Harbors, Michigan – The Appropriations Committees note that there are some 30 federally maintained harbors in Michigan; however, fewer than 10 are budgeted. The Appropriations Committees have attempted to provide for some of the dredging needs of the State. However, recognizing that conditions at these harbors are constantly changing and that the Great Lakes are continuing to suffer from historic low water levels, the Corps is directed to propose a dredging program for fiscal year 2008 that would most effectively utilize the scarce funds available for these harbor projects. This plan should be presented within 30 days of enactment of this Act as a reprogramming action for approval by the House and Senate Appropriations Committees. (p.14)
- 3) Lake Superior Small Harbor Dredging, Wisconsin – Additional funding is included to respond to maintenance needs of small harbors on Lake Superior (p. 16). A line item under this title was included in the Appropriations Act for \$1,564,000.

**1. Great Lakes Navigation - \$6.544M**

The Great Lakes Navigation Project Delivery Team took a systems approach to determining how to best allocate the \$6.544M targeted by Congress for commercial backlog dredging. The team focused on the direction provided by Congress in the Appropriations Act language and used a rigorous, performance based process taking into account the system's critical needs,

maximizing transportation cost savings, and considering the relationship among harbors in the Great Lakes Navigation System.

The team reviewed recent surveys to determine the most critical current needs and updated transportation cost savings for each harbor based on the current shoaling rate (amount of material deposited in the navigation channel). In addition, we sought and incorporated the concerns and insights of our stakeholders. To fully account for the relationship among harbors as Congress directed, we coordinated on multiple occasions during this period with individual ports, the Lakes Carriers' Association, the American Great Lakes Ports Association, and also the Canadian Shipowners Association to obtain their input on critical dredging needs. The Canadian Shipowners' input is important because many U.S. ports are directly and positively affected by Canadian shippers. They were able to give us information on which U.S. harbors were in need of maintenance dredging from their members' experiences.

The team developed the following recommended allocation of the \$6.544M:

Ashtabula, OH	\$947,000
Duluth, MN	\$725,000
Fairport, OH	\$900,000
Huron, OH	\$807,000
Monroe, MI	\$200,000
Muskegon, MI	\$200,000
Oswego, NY	\$640,000
Rouge River, MI	\$600,000
St Joseph, MI	\$525,000
St Marys River, MI	\$1,000,000

BG Berwick, LRD Commander, submitted this recommended plan to USACE HQ on 23 Jan 2008. The plan was approved by the Appropriations Sub Committees on 20 Feb 2008. This quick turnaround was very important to the success of the provision. In order to execute these additional funds, the Corps needed sufficient time to allow for the design, environmental requirements, and the contract procurement period for each of the additional dredging projects.

Some key success stories as a result of this additional funding are illustrated below:

- Duluth, MN: Duluth is the largest harbor on the Great Lakes, handling over 45M tons of cargo per year. Duluth ships to or receives from over 40 U.S. and Canadian ports, as well as handling international cargo. Constrained funding has restricted dredging in some crucial areas of the harbor. Record low water levels in late 2007 also exacerbated shoaling conditions in Lake Superior and particularly throughout Duluth Harbor. The FY08 Omnibus Bill provided funding to dredge 100,000 cubic yards but there was an additional critical need to dredge 50,000 more cubic yards of material. This additional funding provided less restricted access to areas of the harbor that had limited channel dimensions or depths. Dredging Duluth Harbor in FY08 for a total of \$2.8M provides a transportation cost savings of \$7.3M, for a nearly 3:1 benefit cost ratio.
- Fairport, OH: Fairport Harbor handles 2.5M tons of cargo annually. Fairport is connected to 18 U.S. and Canadian ports. The harbor must be dredged every 2 years but had not been dredged since 2005. The FY2007 Continuing Resolution rules precluded funds from being apportioned to Fairport so it was not dredged on its normal dredging cycle in FY07. No funds were provided in the FY2008 Omnibus bill. At least

three groundings were reported in 2006 through 2008 due to the shoaling conditions. Dredging Fairport Harbor for \$900,000 provides a transportation cost savings of \$12M, for a nearly 13:1 benefit cost ratio. Dredging was completed in September 2008 and this work removed the most critical shoals and allow commercial shipping to continue in the harbor. Additional dredging in FY09 brought the Federal channel to normal operating conditions.

- St. Joseph, MI: St. Joseph Harbor is an important harbor for the local economy in southwest Michigan. The harbor handles under 1M tons but receives critical construction materials (stone, cement, sand & slag) by vessel. These bulk materials support the local economy of southwest Michigan, and provide for the cost-effective delivery of construction materials. St. Joseph Harbor is a receiving port only, but it connects with up to 7 other harbors that support shipping on the Great Lakes. Due to an unusually large winter storm event, a severe shoaling problem developed in the St. Joseph inner harbor in early 2008 closing the harbor to all commercial traffic. Available depth was only 7 feet out of an authorized channel of 21 feet. The regional funds from this allocation were focused on the inner harbor. However, due to the extreme shoaling that occurred, this additional allocation was insufficient. These funds plus an additional \$900,000 of reprogrammed funds were used to dredge the large shoal in the inner harbor. The harbor was reopened to commercial traffic in mid-August. The first ship delivered nearly 13,000 tons of limestone for reconstruction of a major interchange in southwest Michigan. This one shipload of cargo would have required the equivalent of 1,200 truckloads, which clearly demonstrates the efficiency of the waterborne commerce system on the Great Lakes.

These examples illustrate the success of the regional funding provision. This provision was worked between three Corps Districts with detailed discussions with field staff who were knowledgeable of local conditions as well as extensive coordination with local ports, shipping associations, and their members who were aware of current critical conditions and bottlenecks in the system. The flexibility that it provides allowed the Corps to work with stakeholders to direct the funds to the most critical needs with the greatest return on investment.

## **2. Michigan Harbors Reprogramming**

The Fiscal Year 2008 Omnibus Bill directed the Corps to provide a reprogramming action for approval by the House and Senate Appropriations Committees for dredging of harbors within the State of Michigan within 30 days of enactment of the bill. The bill notes that conditions at these harbors are constantly changing and thus directs the Corps to propose a dredging program for fiscal year 2008 that would most effectively utilize the scarce funds available for these harbors.

The Omnibus Bill correctly notes that conditions on the Great Lakes are constantly changing, especially following the winter storm season. The Bill required a plan within 30 days of enactment of the Bill (26 Dec 2007). However, the full extent of dredging needs on all Michigan harbors could not be adequately assessed until the ice cover had cleared. Within the 30-day time frame, the Corps submitted a tentative plan for reprogramming and requested the opportunity to modify that plan once ice cleared on the lakes and we were able to obtain and analyze project condition surveys. The tentative reprogramming plan identified two donor harbors (Bay Port Harbor and Caseville Harbor) and two potential recipient harbors (Sebewaing

River and Au Sable Harbor). The tentative plan was coordinated with local communities, affected Congressional staff, and the Appropriations Committees in late January 2007.

There are two different issues regarding the donor projects. Bay Port Harbor had a need of \$1.2M to complete dredging, which greatly exceeds the \$252K provided in the FY08 Omnibus Bill. Caseville Harbor was dredged in 2005; we coordinated with both the local community and Congresswoman Miller's staff, reviewed the condition surveys with them, and all agreed that dredging was not needed in 2008 and the funds could be better spent elsewhere. Sebewaing River and Au Sable Harbor were both in need of additional funds to adequately dredge the harbors because the amount of funds needed to dredge these projects is greater than the funding provided in the Omnibus Bill.

After condition surveys were completed and dredging needs revised, the final Michigan Reprogramming was submitted by HQ for Committee approval. The final recommendation had the same four harbors identified with slight revision to the amounts compared to the tentative plan submitted in January. The final reprogramming amounts are shown below:

Bay Port Harbor, MI	-\$250,000
Caseville Harbor, MI	-\$152,000
Sebewaing River, MI	+\$277,000
Au Sable Harbor, MI	+\$125,000

These four harbors are all shallow draft harbors. We reviewed the dredging needs at deep draft commercial harbors in Michigan. Although we identified additional dredging needs at many Michigan commercial harbors, we did not identify any commercial harbor that had excess funds that would be a reprogramming donor.

The flexibility offered by this provision is a critical tool in correctly allocating scarce dredging dollars. As Congress noted in its direction on this provision, conditions on the Great Lakes are constantly changing. Dredging needs are often not fully developed until the early spring of the dredging year. Lakes levels are another important consideration that are not known at the time budgets are being built. The success of this provision is demonstrated in the two harbors (Sebewaing and Au Sable) that were dredged in FY08 but otherwise would not have been dredged due to lack of funds. This also eliminated carryover of funds on Bay Port and Caseville that were either insufficient for the dredging project (Bay Port) or unnecessary this year (Caseville).

### **3. Lake Superior Small Harbor Dredging**

The FY08 Omnibus Bill included a provision identified as Lake Superior Small Harbor Dredging, Wisconsin with an amount of \$1,564,000 to respond to maintenance needs of small harbors on Lake Superior. Congressman Obey was the sponsor of this provision. The Congressman had preliminarily identified seven harbors for these funds; although they were not specifically named in the bill. Because the bill language specified for Lake Superior small harbors, and did not name individual harbors, it allowed the Corps flexibility to review the needs of each of the harbors originally considered. It also provided the Corps the much needed capability to make revisions to the estimated amounts, and add or delete harbors once conditions were known after the ice cleared in the spring.

The harbors are in Wisconsin, Michigan, and Minnesota - all three Lake Superior states. The estimated dredging need as of Dec 2007 when the Omnibus Bill was passed is shown below. This was a starting point based on needs expressed the previous year.

Little Lake, MI	\$286,000
Cornucopia, WI	\$123,000
Port Wing, WI	\$165,000
LaPointe, WI	\$110,000
Grand Marais, MN	\$450,000
Big Bay, MI	\$190,000
Whitefish Point, MI	\$240,000

From the start, the Detroit District was confident that six of the seven harbors needed dredging. LaPointe Harbor was dredged by the local community in 2007 so the need for dredging again by the Corps in FY08 was questionable. When the ice cleared, the Detroit District conducted a condition survey that confirmed that no additional dredging was needed at LaPointe Harbor. We were able to apply these funds to the next highest priority harbor—Saxon Harbor. Saxon Harbor was not originally identified in early discussions on this provision but condition surveys in the spring showed a critical need. The flexibility of the regional funding provision allowed for this revision.

The final distribution of funds was as follows:

Little Lake, MI	\$275,000
Cornucopia, WI	\$91,000
Port Wing, WI	\$130,000
LaPointe, WI	\$0
Grand Marais, MN	\$438,000
Big Bay, MI	\$190,000
Whitefish Point, MI	\$240,000
Saxon, WI	\$200,000

Throughout the process, the Detroit District coordinated closely with local communities in developing the final recommended allocation of these funds. The funds were requested from HQ only as specific needs were known based on condition surveys and contract bid results. With this approach, the exact amount that was needed for each harbor was allocated without having to reprogram small amounts if bids were higher or lower than expected.

### **FY09 Regional Provisions**

The 2009 Energy and Water Development and Related Agencies Appropriations Act included a regional provision for dredging harbors in Michigan. The language directly from the bill reads:

*Michigan Harbor Dredging, Michigan.*-The bill includes \$5,000,000 under this line item to provide for the dredging needs of the State as well as several individual project amounts. All of the harbors and waterways that are eligible for this funding are listed in the table under this heading, including those for which a specific amount is provided. The Corps is directed to propose a dredging program for fiscal year 2009 that would most effectively utilize the scarce funds available for these harbors.

The Bill listed 30 harbors as eligible for the regional funding. Five of the harbors were also given a specific amount of funding in addition to the possibility of receiving funding from the regional provision.

The Detroit District worked closely with customers and stakeholders to identify and prioritize dredging requirements. This communication greatly aided development of the 2009 dredging program, which was designed to maximize benefits to navigation customers and stakeholders. We worked very closely with the Michigan Small Harbors Coalition, the Michigan State Waterways Commission, the Lake Carriers' Association, the American Great Lakes Ports Association, and members of the Michigan delegation to prioritize the 30 eligible harbors based on their needs and consequences of not dredging.

Eleven harbors were prioritized for dredging with the \$5M regional provision (with rescission only \$4.9M was available for allocation). The harbors and the amount allocated are listed below:

Arcadia Harbor	\$30,000 (in addition to \$75,000 named)
Bay Port Harbor	\$60,000
Black River (Gogebic)	\$245,000
Caseville Harbor	\$575,000
Frankfort Harbor	\$60,000 (in addition to \$275,000 named)
Grand Traverse Bay	\$281,000
Leland Harbor	\$160,000
Les Cheneaux Islands Channels	\$1,940,000
Manistee Harbor	\$420,000
Pentwater Harbor	\$45,000 (in addition to \$82,000 named)
Point Lookout Harbor	\$1,084,000

Arcadia, Frankfort, and Pentwater received specific funding amounts in the Bill so the regional provision was used to supplement the named funding to fully dredge the required areas in those three harbors. The funding provided by the Michigan regional dredging provision was effectively used to restore channel functionality to these 11 harbors. Two of the harbors are commercial and nine are recreational. Manistee was in need of dredging but did not have any specific funding for dredging. Without this regional provision, the lack of important coal deliveries to Manistee and the Filer City Generating Station would have had significant adverse impacts on the electric grid stability in northern Michigan.

Les Cheneaux Islands Channels was also in dire need of dredging. The last time this project was dredged was 1971. Waterborne transportation is the sole linkage between these island communities and the mainland. The harbor supports over 400 jobs and was in urgent need of dredging. This regional provision allowed a significant amount of funding to be dedicated to restoring the navigability of the channels and return full functionality to these isolated islands. The navigation channels at all of the 11 harbors that benefited from the FY09 regional provision are important economic catalysts to the local communities.

### **FY10 Regional Provisions**

The 2010 Energy and Water Development and Related Agencies Appropriations Act included two regional provisions: a \$6M regional provision for dredging harbors in Michigan and \$1.924M regional provision for Lake Superior small harbor maintenance.

## **1. Michigan Harbor Dredging - \$6M**

The language directly from the FY10 Energy and Water Development and Related Agencies Act reads:

*Michigan Harbor Dredging, Michigan* - The conference agreement includes \$6,000,000 for this line item to provide for the dredging needs of the State as well as several individual projects. All of the harbors and waterways that are eligible for this funding are listed in the table under this heading, including those for which a specific amount is provided. The Corps is directed to propose a dredging program for fiscal year 2010 that would most effectively utilize the scarce funds available for these harbors.

The Bill listed 32 harbors as eligible for this regional funding. Five of the harbors were also given a specific amount of funding to be included as part of the \$6M.

The Detroit District followed the same process as in FY09, working closely with customers and stakeholders to identify and prioritize dredging requirements. The team also reviewed recent surveys to determine the most critical dredging needs for FY10. The stakeholder coordination greatly aided development of the 2010 dredging program, which was designed to maximize benefits to navigation customers and stakeholders. Stakeholder groups included the Great Lakes Small Harbors Coalition, the Michigan State Waterways Commission, the Lake Carriers' Association, the American Great Lakes Ports Association, and members of the Michigan delegation to prioritize the 32 eligible harbors based on their needs and consequences of not dredging. After conferring with these groups, the Corps proposed one more harbor be added to the list – Whitefish Point. Recent surveys showed that there was only 5 to 6 feet of available draft in the channel. Without dredging in 2010 this harbor of refuge could be closed to traffic in 2010. The Corps received approval to add Whitefish Point to the list of eligible harbors.

The District prioritized 16 harbors for dredging with the \$6M regional provision (with rescission only \$5.9M was available for allocation). The harbors and the amount allocated are listed below:

Arcadia Harbor	\$99,000
Au Sable Harbor	\$320,000
Bay Port Harbor	\$893,000
Bolles Harbor	\$234,000
Leland Harbor	\$195,000
Lexington Harbor	\$265,000
Little Lake Harbor	\$425,000
Manistique Harbor	\$1,750,000
New Buffalo Harbor	\$260,000
Pentwater Harbor	\$52,000
Port Austin Harbor	\$713,000
Port Sanilac Harbor	\$180,000
Portage Lake Harbor	\$183,000
Saugatuck Harbor	\$160,000
White Lake Harbor	\$100,000
Whitefish Point Harbor	\$110,000

Although Menominee Harbor received a named allocation of \$117,000 of the \$6M, the District determined that Menominee Harbor was not in need of dredging. It was last dredged in 2009 and it historically has a very low shoaling rate. Review of the latest condition surveys found that there were no shoals above authorized depth in the navigation channel and the harbor actually had many places that were deeper than authorized depth.

The value of the regional provision is that it provides the flexibility to allocate these funds to a more critical need. The \$6M regional provision in FY10 was again very successful in allowing the dredging funds to be allocated to the most urgent needs in the year of execution. Nearly 400,000 cubic yards of material was dredged with this regional funding. Recent condition surveys and coordination with local communities and stakeholders was critical in determining the best allocation of the funds.

## **2. Lake Superior Small Harbor Maintenance - \$1.924M**

The FY10 Appropriations bill included a line item called Lake Superior Small Harbor Maintenance for \$1.924M (\$1.905M after rescission). There was no specific language associated with the item. The title allows this funding to be used for dredging or maintenance at harbors that have needs. The District completed a comprehensive review of all dredging and maintenance needs at Lake Superior small harbors. It was believed that Bayfield Harbor was in need of dredging so a small amount of funding (\$30K) was expended on investigating the need for dredging there. However, condition surveys showed that there was no dredging need at Bayfield.

Because of the very robust dredging program in FY08 and FY09, the Corps found no dredging needs at small harbors on Lake Superior in FY10. This is a testament to the success of the FY08 and 09 regional provisions and the American Recovery and Reinvestment Act (ARRA). One urgent structural repair need was identified at Port Wing Harbor. The pier head was in need of repair to ensure safe passage into and out of the harbor. This harbor serves as an important harbor of refuge along Lake Superior making safe passage into this harbor critical. The remainder of the regional provision (\$1.875M) allocation was thus applied to this critical need after consultation and coordination with Congressional members and the local community.

## **Summary**

The process and results of the regional provisions provided in the FY08, FY09, and FY10 Appropriations Bills for Great Lakes dredging and maintenance demonstrate that this is an extremely effective means of optimizing the allocation of scarce dredging and maintenance funds to the most critical needs for the greatest return on investment. The Corps followed an open, technically-based process that included consultation with stakeholders, Congressional staff, and local communities to openly discuss needs and the best allocation of funds. Three key positive points that this process revealed include:

- Allowing the flexibility to allocate funds to projects in the year of execution allowed the Corps to direct the funds to the most critical needs, considering shoaling conditions from current condition surveys and lake levels and engaging in detailed discussions with stakeholders who know the current issues and usage impacts. Budget estimates are developed two years in advance of the year of execution. Conditions can change dramatically in those two years.



- Changing shoaling conditions, lake levels, and contractor bids all contribute to having either insufficient or surplus funds on a given project. Often this requires reprogramming or carryover of funds. Providing a regional fund that can be allocated as needs are precisely known minimizes the need to carryover and/or reprogram when funds are appropriated either too much or too little for an individually named project.
- These regional provisions allowed the Corps the opportunity to demonstrate that this process can be performed in an open, fair, and balanced manner with all interested parties having a voice in the discussion of needs and application of funds. Throughout this process, the parties involved understood and cooperated with the overall goals of the regional provisions and had confidence that the decisions were made fairly based on technical data and openly communicated to all.

The results demonstrate that providing funds on a regional basis for Great Lakes Navigation maintenance is a very efficient means to meet critical system needs and optimize scarce dredging and maintenance funds.

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