



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY

BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

December 14, 2015

Environmental Analysis Section

SUBJECT: Toledo Harbor, Lucas County, Ohio - Request for Coastal Management Program Federal Consistency Determination Concurrence for 2016 Maintenance Dredging Project

Mr. James Zehringer
Director, Ohio Department of Natural Resources
2045 Morse Road
Columbus, OH 43229
ATTN: Mr. John Kessler

Dear Mr. Zehringer:

Enclosed for your review is the Public Notice and request for Coastal Management Program Federal Consistency Determination for our scheduled 2016 maintenance dredging operations at Toledo Harbor, Ohio (Enclosures 1 and 2, respectively). This project entails maintenance dredging of an estimated 1,100,000 cubic yards of material from the authorized Lake Approach and River Channel, with placement of the associated dredged material at the existing open-lake placement area in Lake Erie. Also note, in 2016 approximately 60,000 cubic yards of sediment dredged from Toledo Harbor may be placed at the site of the Riverside Confined Disposal Facility (CDF) which is located on the left descending bank of the Maumee River in Toledo, Ohio, assuming funding and environmental approvals are secured by the local partner. The placement of this sediment is in support of the Toledo-Lucas County Port Authority Proposed Center of Innovation for the Beneficial Use of Dredged Sediment. The intent of this non-federal Center of Innovation is to explore options for the beneficial use of dredged sediment for agricultural purposes. The agricultural field improvement project at the Dredged Material Center of Innovation would help local leaders evaluate sediment placement, dewatering, use of interim cover crops or amendments to improve soil, and other operations and maintenance activities necessary to plan for the full-scale implementation of the beneficial use of sediments for agricultural purposes. The USACE would provide federal support to the project only through its placement of a portion of dredged sediment at the project location directly from the dredge scow.

The Public Notice has been prepared in conformance with U.S. Army Corps of Engineers (USACE) regulation, "Practice and Procedure: Final Rule for Operation and Maintenance of Army Corps of Engineers Civil Works Projects involving the Discharge of Dredged Materials into Waters of the United States or Ocean Waters," 33 Code of Federal Regulations (CFR) 337.1.

SUBJECT: Toledo Harbor, Lucas County, Ohio - Request for Coastal Management Program
Federal Consistency Determination Concurrence for 2015 Maintenance Dredging Project

The USACE - Buffalo District, has requested Water Quality Certification for the subject project from the Ohio Environmental Protection Agency (OEPA), or waiver thereof, under Section 401 of the Clean Water Act.

In accordance with Coastal Zone Management Regulations 15 CFR, Part 930.34(a), the USACE has determined that the proposed maintenance dredging and dredged material placement operations required to maintain Toledo Harbor Federal navigation channels would be undertaken in a manner which is consistent to the maximum extent practicable with the State of Ohio Coastal Resources Management Program. The Federal Consistency Determination documents this determination.

We have forwarded a copy of this letter to Mr. Steve Holland, Federal Consistency Coordinator.

Questions pertaining to this matter should be directed to Mr. Jay Miller at (716) 879-4394, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207-3199, or by e-mail at James.Miller@usace.army.mil.

Sincerely,

Martin P. Wargo, PWS
Supervisory Biologist
Environmental Analysis Section

Enclosures

Enclosure 1

Section 404(a) Public Notice

USACE - BUFFALO DISTRICT

DISCHARGES OF DREDGED MATERIAL ASSOCIATED WITH
2016 MAINTENANCE DREDGING OF TOLEDO HARBOR, OHIO



US Army Corps
of Engineers®

Public Notice

Issuing Office: CELRB-PM-EA
Notice No: TOLEDO-16

Published: 14 DEC 2015
Expires: 15 JAN 2016

OPERATION AND MAINTENANCE DREDGING AND DREDGED MATERIAL PLACEMENT

TOLEDO HARBOR

LUCAS COUNTY, OHIO

This Public Notice has been prepared in conformance with U.S. Army Corps of Engineers (USACE) regulation, "Practice and Procedure: Final Rule for Operation and Maintenance of Army Corps of Engineers Civil Works Projects involving the Discharge of Dredged Materials into Waters of the United States or Ocean Waters," 33 Code of Federal Regulations (CFR) 337.1. Its purpose is to specify what dredged/fill materials would be discharged into waters of the United States by implementation of the proposed action, and advise all interested parties of the proposed project and to provide an opportunity to submit comments, or request a public hearing.

The USACE - Buffalo District anticipates the need to dredge and discharge material excavated from the Federal navigation channels of Toledo Harbor, in order to maintain sufficient depth for deep-draft commercial vessels. The attached map (Figure 1) shows the authorized limits and depths of Toledo Harbor Federal navigation channels. Dredging in 2016 will be conducted within the lower end of the River Channel near the Maumee River mouth (between Station 325+00 [old Station 360+00] and the river mouth), and within the upper Lake Approach Channel in the Western Basin of Lake Erie (Basin) through approximately Lake Mile 7 (Station 766+00). Up to one additional foot of material may be removed to ensure authorized depths are obtained and account for inaccuracies in the dredging process.

The 2016 dredging operation at Toledo Harbor is tentatively scheduled to be performed during the period between 1 July and 15 March. A contractor of the Federal government will accomplish the project. Sediments will be removed from the channel bottom by a mechanical dredge and placed into hoppers aboard ship or scow for transport to the designated dredged material placement area. Mechanical excavation and placement methodologies will be used by the contractor performing the maintenance dredging.

The material to be dredged from Toledo Harbor consists primarily of silts and clays. In 2016, an estimated total of 1,100,000 cubic yards (CY) of material will be dredged from the Federal navigation project. The quality of the material has been evaluated using 2004, 2006 and 2010 sediment data in accordance with formal Federal guidance contained in the U.S. Environmental Protection Agency (USEPA)/USACE Great Lakes Dredged Material Testing and Evaluation Manual (1998) and Evaluation of Dredged Material for Discharge into Waters of the U.S.—Testing Manual (1998). This evaluation specifically addresses the potential contaminant-related risks to aquatic life associated with placing the dredged material in open-lake waters. Based on this evaluation, material in the lower end of the River Channel and Lake Approach Channel [River Mile 0.75 (Station

325+00) to the lakeward end of the channel] was toxicologically comparable to sediments at open-lake areas in the Western Basin of Lake Erie. Consequently, material dredged from these reaches of Toledo Harbor has been determined to meet Clean Water Act Section 404(b)(1) Guidelines for open-lake placement. This dredged material will be placed at the existing two-square mile open-lake placement area in the Basin, located three and one-half miles from the Toledo Harbor light at an azimuth of 033°00' (Figure 2). This site has been previously used by the USACE for the placement of Toledo Harbor dredged material. Because the northeast half of this area has become too shallow for dredged material placement, placement will occur within the southwest half.

Concerns that have been raised include the position that the open-lake placement of Toledo Harbor dredged material represents a net increase in sediment loading to the Basin, and results in a substantial increase in turbidity. However, material being placed in the Basin is being dredged from within the adjoining riverine and lacustrine systems. Therefore, the dredging of the River Channel and Lake Approach Channel with the associated placement of material in the existing authorized open-lake placement area constitutes an internal relocation within the aquatic system, rather than external loading. Turbidity associated with the placement of this dredged material should be viewed within the framework of the amount of sediments within the system and entering the Basin from other sources. The amount of Toledo Harbor dredged material annually relocated into the lacustrine system (for this exercise, the amount used is 1,250,000 CY or an estimated 1,450,000 metric tons [MT]) is less than one percent of the estimated annual resuspended sediment load (150,000,000 to 300,000,000 MT) in the Basin, and is less than that contributed by the Maumee River every year (an estimated 1,500,000 cubic yards). Therefore, the open-lake placement of Toledo Harbor dredged material results in short-term, temporary turbidity, and does not represent widespread or substantially increased background turbidity in the Basin.

There has been public concern that the open-lake placement of dredged sediment causes or intensifies harmful algal blooms (HABs) in Lake Erie. To address this concern, USACE sought an externally conducted study in 2013 to answer the question: "What is the Potential for Placement of Toledo Harbor Dredged Material in the Western Lake Erie Basin to Influence Harmful Algal Blooms?" A coordinated field sampling, laboratory testing and modeling program was initiated to monitor physical, chemical, and biological parameters before, during, and after sediment placement and assess the relative influence of sediment placement activities as an internal source of solids/nutrients. Extensive water quality monitoring conducted throughout the 2013 dredging operation indicated that the bulk of the placed sediment (and associated phosphorus content) immediately deposits on the lake bottom, with minimal interaction with the water column. Immediately after placement, only approximately 2.5 percent of the total amount of sediment placed remains in the water column as suspended solids. This small fraction of sediment and associated phosphorus that is released to the water column undergoes exponential decline within the placement area, returning to near background levels within an hour through settling and dispersion. Assessed across the entire dredging season, open-lake placement contributions of total phosphorus and soluble reactive phosphorus represented only a fraction of one percent of the total annual phosphorus loading to western Lake Erie in 2013. These releases are insufficient to stimulate any additional significant growth of algae or significantly impact water quality in the Basin. Once deposited to the lake bottom, phosphorus release from the placed sediment is the same or less than the surrounding lake sediments

and would not represent any additional contribution to the aquatic ecosystem. Additionally, sediment from the placement area resuspend at the same rate as other areas of similar depth in the Basin. As the deposited sediment does not erode at a high or accelerated rate, sediment has accumulated within the placement area as a mound over several years of placement activities. The size of this mound is controlled primarily by consolidation of the placed sediment and underlying lake bottom. The overall conclusion of the 2013 study is that the open-lake placement of dredged sediment from Toledo Harbor does not contribute to the development of HABs in the Basin. A copy of the study is available at: <http://www.lrb.usace.army.mil/Portals/45/docs/PublicReview/R-WLEB-Final-Report.pdf>

Factors such as the considerable annual volume that is removed from the Federal navigation channels, and lack of non-Federal sponsors to cost-share have to date precluded the implementation of any practicable beneficial use alternative for Toledo Harbor dredged material. At this time, there is currently no viable placement area outside the aquatic ecosystem available to USACE that complies with USACE requirements, is accessible, economically feasible, and can accommodate the quantity of dredged material necessary to maintain Toledo Harbor on an annual basis and at a reasonable cost to Federal and non-Federal partners.

Pursuant to Section 401 of the Clean Water Act, Water Quality Certification (WQC), or waiver of WQC, from the Ohio Environmental Protection Agency (OEPA) is required for the discharge of dredged material. Therefore, a copy of this Public Notice has been provided to OEPA requesting WQC (or waiver thereof), for the associated placement of dredged material at the existing open-lake placement area.

The environmental effects of the dredging operation are documented in the *Final Environmental Impact Statement, Operation and Maintenance (O&M), Toledo Harbor, Ohio (1976); Environmental Assessment (EA) and Section 404(b)(1) Evaluation, O&M, Toledo Harbor, Ohio (1989); and EA and Section 404(b)(1) Evaluation, O&M, Dredging and Placement of Dredged Material, Toledo Harbor, Ohio (2009)*. These documents, and supplemental documentation, have been submitted to USEPA. Copies are available for examination at the Buffalo District office.

There are no registered historic properties or properties listed as being eligible for inclusion in the National Register of Historic Places that will be affected by this project. By this notice, the National Park Service is advised that currently unknown archaeological, scientific, prehistorical or historical data may be lost or destroyed by the work to be accomplished.

This office has determined that the proposed project will have No Effect upon any species proposed or designated by the U.S. Department of the Interior as threatened or endangered, nor will the proposed work result in an Adverse Modification of designated critical habitat for any such species. Therefore, unless new information indicates otherwise, no further consultation pursuant to Section 7 of the Endangered Species Act Amendments of 1978 will be undertaken with the U.S. Fish and Wildlife Service.

This work will be undertaken in a manner consistent, to the maximum extent practicable, with

the State of Ohio Coastal Management Program. A Coastal Management Program Federal Consistency Determination has been submitted to the Ohio Department of Natural Resources (ODNR) documenting this determination.

The decision whether to perform dredging will be based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative factors thereof; among these are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

This activity is being coordinated with the following agencies, as well as other appropriate Federal, State and local agencies, Indian nations and organizations:

Ohio Department of Natural Resources
Ohio Environmental Protection Agency
Ohio Historic Preservation Office
U.S. Department of the Interior, Fish and Wildlife Service
U.S. Environmental Protection Agency

Any interested parties and/or agencies desiring to express their views concerning this proposed discharge of dredged material may do so by filing their comments, in writing, no later than 30 days from the date of this notice. Any person who has an interest which may be affected by this discharge may request a public hearing. The request must be submitted in writing to the undersigned within 30 days of the date of this Public Notice. The request must clearly set forth the interest which may be affected, and the manner in which the interest may be affected, by this activity.

Interested parties are encouraged to contact the USACE - Buffalo District with their comments regarding the proposed dredging of Toledo Harbor. Please review this Public Notice and send your comments in writing within 30 days to the following e-mail address:

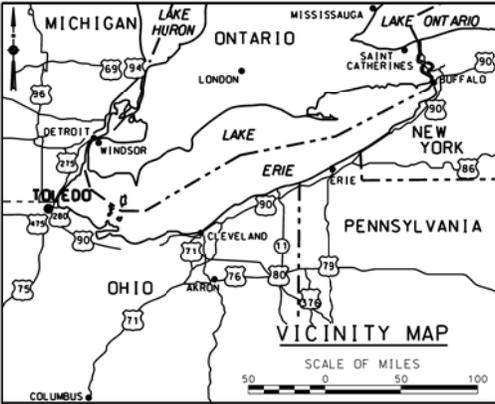
ToledoDredging@usace.army.mil

or via mail to:

U.S. Army Corps of Engineers - Buffalo District
Environmental Analysis Team
1776 Niagara Street
Buffalo, NY 14207-3199

ATTN: Environmental Analysis - Toledo Dredging

This Public Notice is published in conformance with 33 CFR 337.1. All dredging and dredged material discharge will be performed in conformance with Sections 313 and 404 of the Clean Water Act (33 USC 1323 and 1344, respectively).

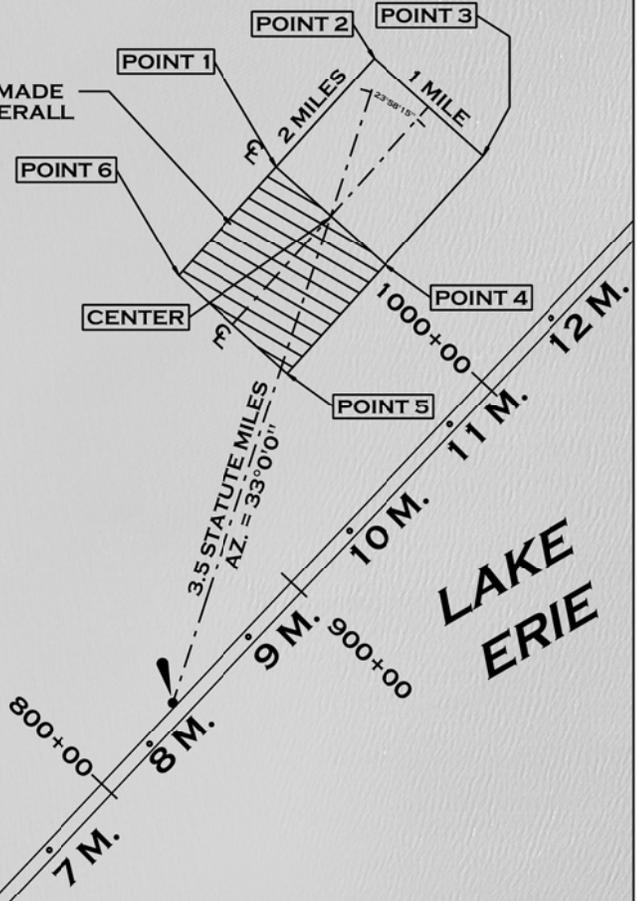


PLACEMENT TO BE MADE IN THIS HALF OF OVERALL PLACEMENT AREA

OPEN LAKE PLACEMENT COORDINATES NAD83 (DD.DDDDDDDDD)

LOCATION IN LAT/LON DD.DDDDDDDDD

POINT	LATITUDE	LONGITUDE
CENTER	41.804641704	83.292647022
POINT 1	41.810680019	83.297998811
POINT 2	41.818686680	83.281856483
POINT 3	41.806609437	83.271156573
POINT 4	41.798604219	83.287297227
POINT 5	41.790596741	83.303433884
POINT 6	41.802671070	83.314137141



LOCATION OF THE PLACEMENT AREA SITE WAS CALCULATED AS FOLLOWS:

1. THE LOCATION OF THE TOLEDO HARBOR LIGHT WAS TAKEN FROM THE U.S.C.G. LIGHT, WHICH MATCHED VERY CLOSELY WITH THE LOCATION OF THE LIGHT FOUND IN THE NOAA'S RASTER CHART FOR TOLEDO.
2. THE AZIMUTH AND DISTANCE WAS RECEIVED FROM THE ENVIRONMENTAL ANALYSIS SECTION AND PLOTTED IN THE CAD FILE.
3. SINCE THE SITE IS NOT ORIENTATED EXACTLY DUE NORTH, THE AZIMUTH OF THE SOUTH SIDE (ROUGHLY PARALLEL TO THE FEDERAL CHANNEL) OF THE PLACEMENT SITE FROM THE SAME RASTER CHART WAS USED TO ESTABLISH THE CORNERS.
4. THE COORDINATES WERE CONVERTED TO LAT/LON FOR INCLUSION INTO THIS MAP.

**TOLEDO HARBOR
OPEN LAKE PLACEMENT SITE**

SCALE OF MILES



U.S. ARMY ENGINEER DISTRICT BUFFALO
OCTOBER 2013

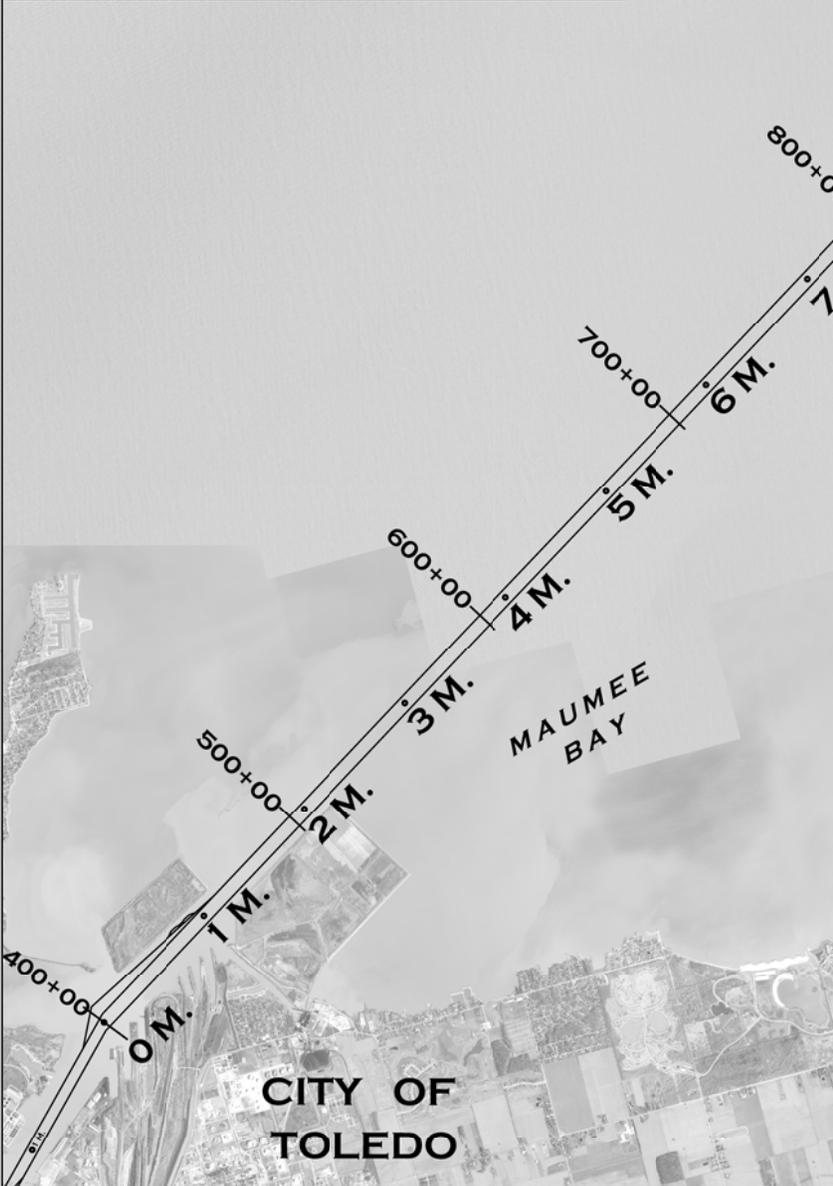


Figure 2 - Toledo Harbor Open Lake Placement Site

**STATE OF OHIO COASTAL MANAGEMENT PROGRAM
FEDERAL CONSISTENCY DETERMINATION**

PROJECT NAME: Toledo Harbor

TYPE OF PROJECT: Operations & Maintenance (Dredging and Dredged Material Placement) and Support to Beneficial Use of Dredged Sediment Project

COUNTY: Lucas

1. PROJECT DESCRIPTION

1.1 Toledo Harbor, Ohio is located in Lucas County on the northwest shore of Lake Erie, approximately 100 miles west of Cleveland, Ohio and 60 miles south of Detroit, Michigan. Deep-draft Federal navigation channels in the harbor are maintained by the U.S. Army Corps of Engineers (USACE)-Buffalo District in support of commercial and recreational navigation.

The USACE - Buffalo District anticipates the need to maintenance dredge the Federal navigation channels of Toledo Harbor and manage the associated dredged sediment, in order to maintain sufficient depths and widths for commercial and recreation vessels. The attached Public Notice describes this project in detail. The Federal navigation project at Toledo Harbor essentially includes a nineteen mile-long Lake Approach Channel in the Western Basin of Lake Erie, and seven mile-long River Channel in the Maumee River (see Figure 1 of the Public Notice). In 2016, an estimated 1,100,000 cubic yards of sediment will be dredged from the authorized Lake Approach and River Channels. The majority of this dredged sediment will be placed at the southwest half of the existing authorized two-square mile open-lake area in the Western Basin of Lake Erie, located three and one-half miles from the Toledo Harbor light at an azimuth of 033° 00' (see Figure 2 of the Public Notice). The dredging operation is tentatively scheduled to be performed during the period between 1 July and 15 March.

In 2016, approximately 60,000 cubic yards of sediment dredged from Toledo Harbor may be placed at the site of the Riverside Confined Disposal Facility (CDF) which is located on the left descending bank of the Maumee River in Toledo, Ohio, assuming funding and environmental approvals are secured by the local partner. The placement of this sediment is in support of the Toledo-Lucas County Port Authority Proposed Center of Innovation for the Beneficial Use of Dredged Sediment. The intent of this non-federal Center of Innovation is to explore options for the beneficial use of dredged sediment for agricultural purposes. The agricultural field improvement project at the Dredged Material Center of Innovation would help local leaders evaluate sediment placement, dewatering, use of interim cover crops or amendments to improve soil, and other operations and maintenance activities necessary to plan for the full-scale implementation of the beneficial use of sediments for agricultural purposes. The USACE would provide federal support to the project only through its placement of a portion of dredged sediment at the project location directly from the dredge scow.

2. EVALUATION

2.1 The USACE - Buffalo District has analyzed the proposed action with respect to the 41 management policies presented in Chapter 5 of the April 2007 State of Ohio Coastal Management Program and Final Environmental Impact Statement. The following policy statements have been determined to be applicable to the proposed action:

2.1.1 Policy 6—Water Quality *[It is the policy of the State of Ohio to maintain and improve the quality of the State's coastal waters for the purpose of protecting the public health and welfare and to enable the use of such waters for public water supply, industrial and agricultural needs, and propagation of fish, aquatic life and wildlife by:*

- I. Assuring attainment of State water quality standards and other water quality related requirements (O.A.C. 3745-1) through:
 - a. controlling discharges into waters of the State by requiring permits to construct facilities and by establishing and enforcing effluent limitations under the National Pollutant Discharge Elimination System (NPDES, §402 CWA, O.R.C. §6111.03);
 - b. administering a permit system to control injection well drilling in compliance with the SDWA and CWA (O.R.C. §6111.043 and 6111.044);
 - c. regulating discharge of dredged or fill material into surface waters including wetlands in accordance with Section 401 of the CWA (O.R.C. §6111.03);
 - d. establishing uniform regulations regarding solid waste disposal sites and facilities (O.R.C. §3734.02 and 3734.05);
 - e. prohibiting the sale or distribution for sale of phosphorous containing household laundry detergents in the Lake Erie Basin (O.R.C. §6111.10);
 - f. preparing a State water quality management plan to assess technical needs for pollution control and institutional mechanisms to enforce controls (O.R.C. §6111.41 and 6111.42); and
 - g. administering a State revolving loan fund program to provide financial assistance for publicly owned wastewater treatment facilities (O.R.C. §6111.02 and 6111.03).
- II. *Coordinating, through the Lake Erie Commission, State and local policies and programs pertaining to Lake Erie water quality; reviewing, and making recommendations concerning, the development and implementation of policies, programs and issues for long-term, comprehensive protection of Lake Erie water resources and water quality that are consistent with the Great lakes Water Quality Agreement and Great Lakes Toxic Substances Control Agreement (O.R.C. §1506.21).*
- III. *Using the Lake Erie Protection Fund (LEPF) to establish a firm scientific base for implementing a basin-wide system of water quality management for Lake Erie and its tributaries; supporting research to improve the scientific knowledge on which Lake Erie aquatic resource protection policies are based (O.R.C. §1506.23).]*

Based on bulk physical, chemical and bioassay data, sediments in the lower end of the River Channel and Lake Approach Channel [River Mile 0.75 (Station 360+00) to the lakeward end of the channel] and the upper River Channel [River Mile 5 (Station 138+00) to the upstream limit of the channel (River Mile 6.75 / Station 33+36.61)] are similar in character to bottom sediments at the open-lake reference area in the Western Basin of Lake Erie. Accordingly, sediment

dredged from these areas of the harbor meets U.S. Environmental Protection Agency (USEPA)/USACE guidelines for open-lake placement. Elutriate test data indicate that placement of the dredged sediment at the open-lake area will comply with State water quality standards (WQSS) for the Protection of Aquatic Life in Lake Erie. Therefore, the majority of this dredged sediment will be placed at the authorized open-lake area.

During the course of the dredging and open-lake dredged sediment placement operation, varying degrees of sediments would be re-suspended. The generation of turbidity and variation in dissolved oxygen levels in the water column would be the primary physical effects associated with these activities. These impacts should be minor, temporary and localized.

Effluent discharge from the facility would be regulated as a fill to the waters of the U.S. under the Clean Water Act and would also need to be evaluated by the state for compliance with applicable state water quality standards.

The USACE's support to the Dredged Material Center of Innovation project is limited to providing dredged sediment associated with the annual maintenance dredging of the federal navigation channels that has been found suitable for open-lake placement. The environmental impacts of return water and runoff generated by the operation of the Dredged Material Center of Innovation would be evaluated by the Toledo-Lucas County Port Authority implementing and operating the facility. Even though the management of return water from the placement site is outside of the USACE's project scope, effluent discharge from a placement facility would be regulated as a fill into waters of the U.S. under the Clean Water Act, and would thus need to be in compliance with applicable state water quality standards. Compliance with Sections 401, 402, and 404 of this Act for the Dredged Material Center of Innovation project is the responsibility of the Toledo-Lucas County Port Authority.

Section 401 Water Quality Certification (WQC) has been requested from the Ohio Environmental Protection Agency (OEPA) for the placement of dredged material at the open-lake area.

2.1.3 Policy 17—Dredging and Dredged Material Disposal *[It is the policy of the State of Ohio to provide for the dredging of harbors, river channels and other waterways and to protect the water quality, public right to navigation, recreation and natural resources associated with these waters in the disposal of the dredged material by:*

- a. regulating, through the Ohio Environmental Protection Agency water quality certification, the discharge or disposal of dredged material (O.R.C. §6111.03[p] and O.A.C. 3745-1);*
- b. requiring a lease for State-administered submerged lands through the Department of Natural Resources before initiating the confined disposal of dredged material in the waters or on lands underlying the waters of Lake Erie (O.R.C. §1506.11);*
- c. regulating commercial dredging of mineral resources (O.R.C. §1505.07 and O.R.C. §1505.99); and*
- d. coordinating interdisciplinary reviews of dredging projects at Ohio's Lake Erie ports and providing technical and funding assistance to help select and implement environmentally sound dredging and dredged sediment management practices.]*

In 2016, an estimated 1,100,000 cubic yards of sediment will be dredged from the Toledo Harbor Federal navigation project. Sediments will be removed from the channel bottom by a mechanical or hydraulic dredge, and placed into hoppers aboard ship or scow for transport to the placement areas. The method of dredging will be determined by the contractor performing the work. In previous years, clamshell bucket (mechanical), pipeline and hopper (hydraulic) dredges have been used to complete the required work. This material will be dredged from the authorized Lake Approach and River Channels and the majority will be placed at the existing two-square mile open-lake area in the Western Basin of Lake Erie. Dredged material discharge will occur in the southwest half of this area. Section 401 WQC has been requested from OEPA for the placement of dredged material at the open-lake area. In addition, approximately 60,000 cubic yards of dredged sediment would be placed into the pre-existing cells built within the Riverside CDF as part of the Toledo Port Authority's Dredged Material Center of Innovation.

Regarding environmentally sound dredged material management practices, the Ohio Department of Natural Resources requested the USACE to initiate a Section 204 (of the Water Resources Development Act [WRDA] 1992, as amended) study to investigate the feasibility of Habitat Restoration Units (HRU) in the Maumee River and Maumee Bay which would involve the beneficial use of Toledo Harbor dredged material for their construction. This request served to justify the 100 percent Federally funded Feasibility Study (FS) under Section 204 WRDA. However, no feasible alternatives were identified that could be implemented for less than the \$5 million Federal cost limit. Projects whose costs are in excess of the Section 204 limitations require a General Investigation authority feasibility study and subsequent Congressional authorization for construction. The project was transitioned in 2011 to a General Investigation (GI) under the Western Lake Erie Basin (WLEB) Section 441 of WRDA 1990 Authority and was allocated \$400,000 in Federal funds in FY11. Presently, the feasibility study will not progress further until a non-Federal cost share sponsor is identified who desires to cost-share the feasibility study to select beneficial use alternatives which may include HRUs. Furthermore, the non-Federal sponsor should exhibit a commitment to execute a Project Partnering Agreement to cost-share and continue the selected alternative to construction. Additionally, future progress of the study will require future allocation of Federal funds.

2.1.4 Policy 19—Lake Erie Ports *[It is the policy of the State of Ohio to promote and provide for maritime commerce and related economic development along the Lake Erie shore by:*

a. providing assistance to, and assisting in the procurement of Federal funds for port development activities for local governments and port authorities that have the powers to plan, improve, acquire, enlarge, operate, maintain and finance port activities and projects; and

b. encouraging the development of comprehensive port facility and expansion master plans and improvement projects through financial assistance from the Ohio Department of Transportation.]

The proposed maintenance dredging would be consistent with the promotion of maritime commerce and related economic development at Toledo Harbor.

2.1.5 Policy 26—Preservation of Cultural Resources *[It is the policy of the State of Ohio to provide for the preservation of cultural resources to ensure that the knowledge of Ohio's history and pre-history is made available to the public and is not willfully or unnecessarily destroyed or lost, by:*

- a. protection of cultural resources on or eligible for State and National registers of historic places (O.R.C. §149.51 through 149.55);
- b. regulating recovery of submerged abandoned property through permits (O.R.C. §1506.32);
- c. establishing and enforcing Lake Erie submerged lands preserves (O.R.C. §1506.31).]

There are no registered historic properties listed in or eligible for listing the National Register of Historic Places that will be affected by the dredging and open-lake placement of dredged sediment. Since the dredging and open-lake placement areas have been historically impacted by these activities, the likelihood of encountering unknown cultural resources is low. In the event that unrecorded historic or archaeological remains are encountered during the course of the dredging operations, the State Historic Preservation Office (SHPO) will be duly notified and appropriate measures will be taken to preserve their integrity.

The placement of dredged sediment in support of the Dredged Material Center of Innovation impact on cultural resources has been evaluated in accordance with Engineer Regulation (ER) 1105-2-50 and 36 CFR Part 800. The offloading of sediment into the containment cells at the Dredged Material Center of Innovation would not result in the physical destruction or damage to all or part of any property, alteration of any property, removal of any property from its historic location, neglect of any property, the transfer, lease, or sale of any property out of federal ownership, or the change of the character of any property's use or of physical features within the property's setting that contribute to its historic significance. There is the potential for a temporary increase in visual, atmospheric or audible elements due to the presence and operation of sediment offloading equipment. Any increase in such elements would be temporary in nature. The completed project would not change the aesthetics of the surrounding viewshed as the historic use of the placement area is a confined disposal facility. The USACE placement of dredged sediment into the Riverside CDF would not require ground disturbing activity as all material would be placed above grade. Consultation with the OHPO, National Park Service, and tribal interests was initiated via the NEPA public scoping process. An OHPO Project Summary Form has been submitted to OHPO with a finding of No Adverse Effect to historic properties for evaluation and concurrence.

2.1.6 Policy 27—Fisheries Management *[It is the policy of the State of Ohio to assure the continual enjoyment of the benefits received from the fisheries of lake Erie and to maintain and improve these fisheries by:*

- a. regulating the taking of fish (O.R.C. §1531.08 and O.A.C. 1501.31);
- b. prosecuting persons responsible for stream litter and for water pollution resulting in fish kills (O.R.C. §1531.29 and 1531.02);
- c. protecting fish habitat through Ohio EPA's Section 401 water quality certification authority (O.R.C. §6111.03[o] and 6111.03[p] and O.A.C. 3745-1 and 3745-32);
- d. *considering the protection of fish habitat through the review of State and Federal permit applications;*
- e. *establishing State wildlife areas for fish and wildlife habitat (O.R.C. §1531.06);*
- f. *surveying fish populations and trends and conducting other fishery research studies;*

g. *providing access to the fishery; and*

h. *providing technical and general information about the Lake Erie fisheries.]*

Dredging and dredged sediment placement activities would cause temporary and localized disturbance to local fish communities that would be unavoidable. Some fish may tend to avoid the area during the dredging and open-lake placement operations, but would return quickly after the activities cease. Some fish may also be attracted to the dredging-related activities. These impacts would be temporary and localized. Major factors that may influence the response of fish to these activities would be turbidity, dissolved oxygen levels, and benthic organisms suspended in the water column.

The maintenance dredging of Toledo Harbor Federal navigation channels would be scheduled to occur during the period between 1 July and 15 March. This work period is consistent with the existing “State In-Water Work Restrictions” for Maumee River and Bay recommended by the ODNR Division of Wildlife, and would serve to avoid any potential significant adverse impacts to warmwater fish spawning activities.

A 2007 study entitled “Assessment of Potential Impacts of Bucket Dredging Plumes on Walleye Spawning Habitat in Maumee Bay, Ohio” was completed by the U.S. Army Engineer Research and Development Center (USAERDC) in coordination with ODNR. This investigation demonstrated that dredging-related plumes in the Lake Approach Channel did not migrate outside the Toledo Harbor Lake Approach Channel or encroach on any potential walleye spawning habitat during the August study period. The physics governing sediment particle release and settlement do not change from month to month. Since typical hydrodynamic conditions in the Western Basin of Lake Erie in July are not substantially different than those observed in August, this suggests that dredging-related plumes generated during the month of July also would not significantly migrate from the channel configuration. Based on the results of this study, it is also highly unlikely that dredging the Lake Approach Channel in November and December would result in any significant adverse impacts to lake whitefish. Very high current speeds would be required to cause dredging-induced plumes to migrate outside of this channel in November and December when commercial fishing for whitefish occurs. Further, turbidity generated by dredging is dwarfed by the conditions to which this species is exposed through the combination of natural and anthropogenic activities within the Basin, including Fall and Winter storm events that culminate in much more widespread and prolonged increases in turbidity. A 2012 laboratory study entitled “The Effects of Suspended Sediment on Walleye (*Sander vitreus*) Eggs” found that suspended sediment exposures to walleye eggs mimicking sediment resuspension during dredging did not result in significantly reduced hatch success or evidence any sublethal effects through gross morphological observation. A follow-up study completed in 2013 entitled “Suspended Sediment Effects on Walleye (*S. vitreus*)” reaffirmed these conclusions of the 2012 study, and found that suspended sediment exposures to walleye eggs, newly hatched larvae and fingerlings mimicking sediment resuspension during dredging did not result in significantly reduced hatch success or fingerling survival, or evidence any gill lamellae abnormalities. Collectively, these studies concluded that walleye eggs and fingerlings are relatively tolerant of suspended sediment concentrations likely to be encountered during dredging in the Great Lakes region.

The open-lake placement area was situated to avoid fish spawning grounds. During dredged sediment placement operations, the modes of impact indicate that adverse impacts to fish are minor and short-term. The increase in suspended sediments and turbidity resulting from the open-lake placement of Toledo Harbor dredged sediment is very small in comparison to ambient conditions, and is therefore unlikely to trigger any significant adverse effects to fish. Indigenous fish are naturally exposed and have likely adapted to naturally occurring and much more extended elevated suspended sediment events (such as during storm or high runoff events) relative to episodic open-lake placement events. At the open-lake placement area, discharge activities place mud on mud-bottom habitat; therefore, there is no resulting significant change to bottom substrate or its existing aquatic habitat values. The sediment settles within a few hours and becomes subject to the same resuspension forces typically affecting the surrounding lake bottom. Impacts on fish over the full range of possible effects include either an avoidance or attraction to the area by fish, or no noticeable effect. Some fishes have been observed to be attracted to open-lake placement operations because they have a tendency to feed on the benthic macroinvertebrates contained and released from the dredged sediment. Many fishes have a wide tolerance for turbidity, and fish behavior in response to a dredged sediment placement event depends on the species. The placement of dredged sediment at the open-lake area may result in some mortality to demersal fish eggs (e.g., from broadcast spawning species) existing on the lake bottom in very close proximity to the actual placement of dredged sediment due to suffocation from burial or siltation, and/or oxygen deficiency at the sediment-water interface. However, studies and modeling show that short- and long-term turbidity impacts associated with the open-lake placement of Toledo Harbor dredged sediment are negligible to minor. Therefore, it would not result in any measurable reduction of light penetration into the water column, or adversely affect phytoplankton and aquatic plant production and fish. Given the dredging period, limited spatial area of impact and natural population variations of these types of species, this type of impact would not culminate in any long-term, adverse impacts to any fish population. The open-lake placement of Toledo Harbor dredged sediment has a very low likelihood of causing turbidity-related adverse effects on fish, including commercially and recreationally important species such as walleye and yellow perch.

2.1.7 Policy 28—Fisheries Research and Interstate Cooperation *[It is the policy of the State of Ohio to cooperate in Great Lakes basin wide fisheries management efforts and to continually research better fisheries use and management.]*

ODNR has provided support to USACE research efforts focusing on the effects of suspended sediments on walleye in the Western Basin of Lake Erie.

2.1.8 Policy 29—Wildlife Management *[It is the policy of the State of Ohio to provide for the management of wildlife in the coastal area to assure the continued enjoyment of benefits received from wildlife by:*

a. protecting all wildlife including nongame and endangered species (O.R.C. §1531.02, 1531.08 and 1531.25);

b. regulating the taking of wildlife (O.R.C. Chapter 1533 and O.A.C. 1501:31);

c. establishing State wildlife areas and providing recreation opportunities;

- d. providing food, cover and habitat for wildlife; and*
- e. providing non-game wildlife research and education funding.]*

There may be a short-term avoidance or attraction to dredging and open-lake placement operations by aquatic-based birds such as gulls, terns and waterfowl. There would be no measureable effect on populations of migratory birds. Based on the review of the available environmental data, we have determined that the dredging and open-lake placement operations will not affect any species proposed or listed by the U.S. Department of the Interior or ODNR as threatened or endangered, nor will it affect the designated critical habitat of any such species.

U.S. Fish and Wildlife Service through consultation has indicated that the site of the Dredged Material Center of Innovation lies within the range of the federally endangered Indiana Bat, the federally threatened northern long-eared bat, and the federally endangered Kirtland's warbler. As suitable habitat does not exist within the site of the Dredged Material Center of Innovation and tree removal would not be required to initiate sediment placement operations, there would be no disturbance to potential Indiana bat, long-eared bat, and Kirtland's warbler habitat as a result of the sediment placement.

2.1.9 Policy 33—Visual and Aesthetic Quality *[It is the policy of the State of Ohio to protect the visual and aesthetic amenities of Lake Erie and its shoreline to enhance the recreational, economic, cultural and environmental values inherently associated with the coastal area by:*

- a. prohibiting the dumping of litter and refuse into or along the waters of Lake Erie and its tributaries, and maintaining law enforcement activities to apprehend violators (O.R.C. §1531.29 and 3767.32);*
- b. enforcing State water quality standards (O.R.C. Chapter 6111, O.A.C. 3745-1-04);*
- c. preserving aesthetic resource areas of Statewide significance through the nature preserve, park development and historic preservation programs.]*

The discharges of dredged sediment would comply with State WQSs. The presence of dredging equipment, impacts on water quality such as turbidity and reductions in water clarity, and air emissions would detract from the aesthetic quality of the project area. Such impacts would be minor, localized and short-term. The aesthetic quality of the dredging and open-lake placement areas would return to prevailing conditions shortly after completion of the dredging-related activities. The site of the Dredged Material Center of Innovation is currently maintained as a CDF and yard waste composting facility; therefore, the placement of sediment into the containment cells located at the site would not constitute a significant change to the current visual and aesthetic quality of the site.

3. CONCLUSION

In accordance with Coastal Zone Management Regulations 15 CFR, Part 930.34(a), the USACE has determined that the proposed maintenance dredging and placement operations required to maintain Toledo Harbor Federal navigation channels would be undertaken in a manner which is consistent to the maximum extent practicable with the State of Ohio Coastal Management Program.