

STATE OF OHIO COASTAL MANAGEMENT PROGRAM
CONSISTENCY DETERMINATION

PROJECT NAME: Maumee River and Toledo Outer Harbor

TYPE OF PROJECT: Operations and Maintenance

(Dredging and Dredged Material Discharge)

COUNTY: Lucas

1. PROJECT DESCRIPTION

- 1.1 Toledo Harbor is located on the northwest shore of Lake Erie approximately 100 miles west of Cleveland, Ohio and 60 miles south of Detroit, Michigan. The Federal channels and structures are maintained by the U.S. Army Corps of Engineers (USACE), Buffalo District in support of commercial and recreational navigation at the deep-draft harbor.
- 1.2 The USACE, Buffalo District anticipates the need to dredge and discharge material excavated from the Federal navigation channels of the Toledo Harbor project, in order to maintain sufficient depth for commercial and recreation vessels. Included in the project are the Outer Harbor Channel (Lake Approach Channel) and Inner Harbor Channel (Maumee River Channel). An estimated 850,000 cubic yards of material will be dredged and disposed of this year from the Federal navigation project. Approximately 300,000 cubic yards of material will be dredged from the Maumee River and Lake Approach Channels landward of Lake Mile (LM) 2, and 550,000 cubic yards of material will be dredged from the Lake Approach Channel lakeward of LM 2. The LM 2 demarcation is shown in Figure 1.
- 1.3 The dredging operation in the Lake Approach Channel is tentatively scheduled to be performed during the period between April 1 and November 30. The Maumee River Channel dredging operation is tentatively scheduled to be performed during the period between June 15 and November 30.

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 March 1997 State of Ohio Coastal Management Program and Final Environmental Impact Statement. The following eight 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).]*

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 discharge sites. The method of excavation will be determined by the Contractor performing the maintenance dredging. During the course of the dredging and disposal operation, contaminated bottom sediments would be resuspended in the water column. In order to predict the release of contaminants and the impacts on local water quality, elutriate testing was performed on the dredged material. The attached tables show the testing results. In addition, Section 401 Water Quality Certification has been requested from the Ohio Environmental Protection Agency (OEPA).

2.1.2 Policy 10 - Area of Concern Remedial Action Plans *[It is policy of the State of Ohio to coordinate the development and implementation of remedial action plans for Ohio's four Lake Erie Basin areas of concern as identified in the International Joint Commission's (IJC) Reports of Great Lakes Water Quality.]*

A Stage 1 Remedial Action Plan has been completed for the Maumee River Area of Concern. The process was coordinated by the Toledo Metropolitan Area Council of Governments (TMACOG) and supported by the OEPA.

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.]

A maximum total of 850,000 cubic yards of material will be dredged and discharged in 2003 from the Federal navigation channels. Approximately 300,000 cubic yards of material will be dredged from the Maumee River and Lake Approach Channels landward of LM 2 and 550,000 cubic yards of material will be dredged from the Lake Approach Channel lakeward of LM 2. Using 2000 sediment data, the quality of material was carefully assessed in accordance with joint U.S. Environmental Protection Agency (USEPA)/USACE protocols for the testing and evaluation of Great Lakes dredged material. Sediments in the Lake Approach Channel lakeward of LM 2 meet Federal guidelines, and are therefore suitable for open-lake disposal. Based on this assessment, it is proposed that material dredged from the Lake Approach Channel lakeward of LM 2 be discharged at the existing two-square mile open-lake disposal area in Lake Erie located three and one-half miles from the Toledo Harbor light at an azimuth of 033°00' (Figure 2). In response to local concerns, dredged material discharge will be restricted to the northeast half of this site. This site has been previously used by the USACE for the disposal of Toledo Harbor dredged material. All material in the Maumee River and Lake Approach Channel, landward of LM 2, has been determined to be unsuitable for open-lake disposal. Therefore, this material will be placed in the existing Confined Disposal Facility (CDF) No. 2 located near the mouth of Maumee River. The USACE, Buffalo District has requested Section 401 Water Quality Certification from the OEPA.

2.1.4 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 as being eligible for inclusion in the National Register of Historic Places that will be affected by this project. Since the dredge and discharge operations would be restricted to those areas which 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.

2.1.5 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.]

Some degree of disturbance to local fish communities would be unavoidable. Fish may tend to avoid the project area during the actual dredging and discharge operation, but would return quickly after the activities cease. Dredging and dredged material discharge of the Lake Approach Channel and Maumee River Channel would be scheduled to occur during the period between April 1 and November 30 and June 15 and November 30, respectively, in order to avoid any significant adverse impacts on local fishery resources and activities. Last year, ODNR requested that the dredging in the Lake Approach Channel be restricted to after June 15 in an effort to minimize any potential impacts to walleye spawning activities in the Maumee Bay and the Western Basin. Given the large quantity of material that has to be dredged from the Lake Approach Channel, this presents a major time constraint that would likely precipitate some significant contractual and cost increases relative to the dredging project. In an effort to determine whether the dredging activities have the potential to significantly adversely affect Walleye spawning activities, the USACE, Buffalo District is currently pursuing a study in partnership with the Great Lakes Dredging Team Windows Advisory Team (WAT). The Buffalo District's goal is to commence this investigation in 2003. As a standard practice, the Contractor would be required to keep construction activities under surveillance, management and control to minimize interference with, disturbance to and damage of local fisheries. USACE personnel would monitor their work.

2.1.6 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.]

Based on the review of the available environmental data, we have determined that the proposed work 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.

2.1.7 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);

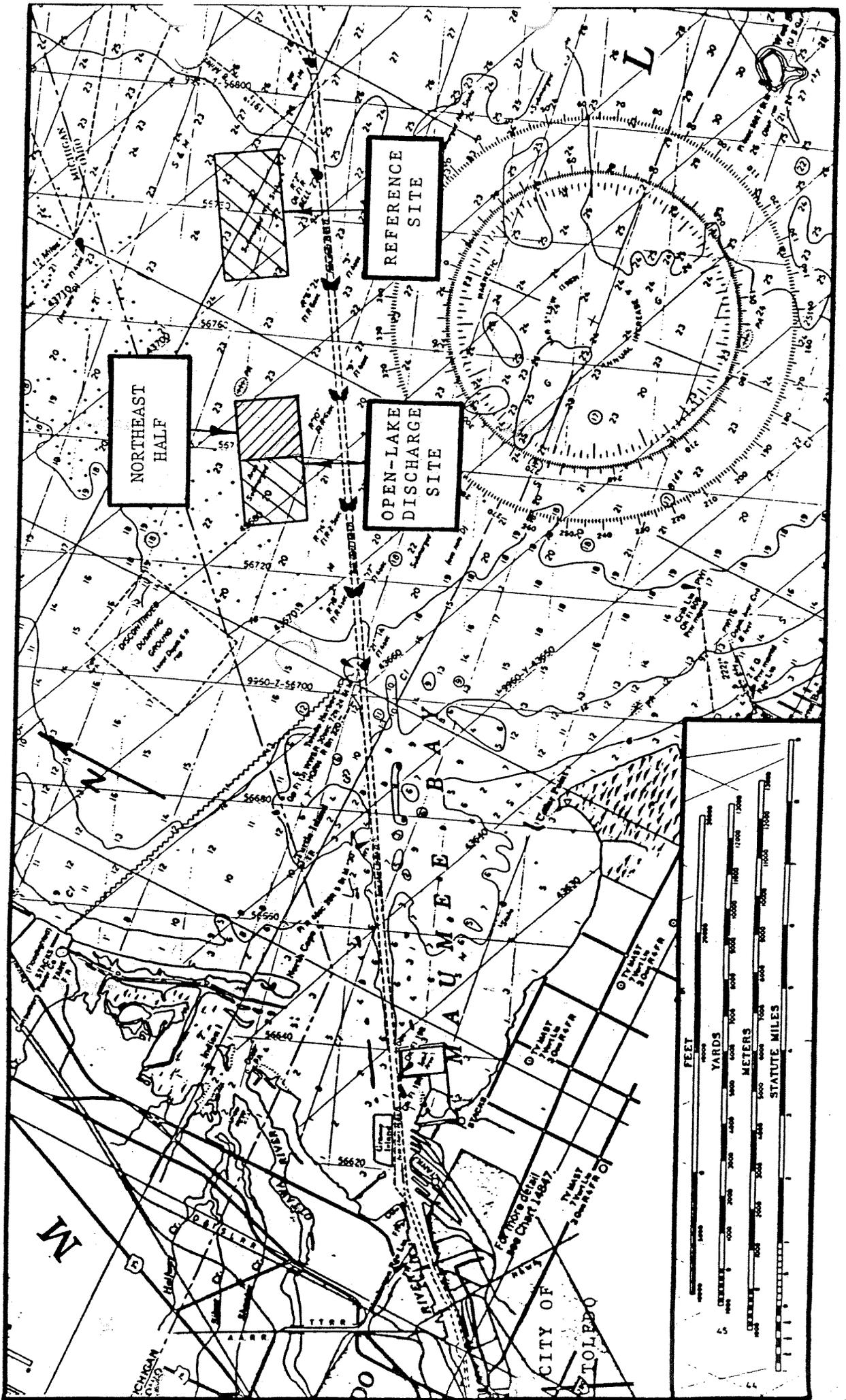
c. preserving aesthetic resource areas of Statewide significance through the nature preserve, park development and historic preservation programs.]

The presence of dredging equipment and the short-term impacts on air and water quality would temporarily detract from the aesthetic quality of the harbor area. However, completion of the proposed maintenance dredging project would maintain sufficient depth for deep-draft commercial vessels and the harbor will return to its prevailing conditions shortly after completion of the dredging activities.

3. CONCLUSION

3.1 In accordance with Coastal Zone Management Regulations 15 CFR, Part 930.34(a), the USACE has determined that the proposed action would be undertaken in a manner which is consistent to the maximum extent practicable with the State of Ohio Coastal Management Program.

FIGURE 2. Toledo Harbor, Ohio, Open-lake Discharge Site (Reference Site is for Comparison Purposes).



Analytical Data for Metals in Elutriated Water in the Maumee River

METALS-Elutriated	Water	RM-7	RM-6	RM-5	RM-4	RM-3	RM-2	RM-1
ANALYTE	UNITS							
Aluminum, Al	ug/L	690	620	550	590	830	1700	630
Antimony, Sb	ug/L	J 0.50	0.70	J 0.40	J 0.40	J 0.50	J 0.40	J 0.50
Arsenic, As	ug/L	9.2	11.0	8.5	17.0	9.5	9.6	8.0
Barium, Ba	ug/L	47.0	44.0	52.0	42.0	50.0	100	2400
Beryllium, Be	ug/L	U 2.0						
Cadmium, Cd	ug/L	0.10	0.10	0.10	J 0.10	J 0.10	J 0.20	0.10
Calcium, Ca	mg/L	47.0	49.0	60.0	47.0	43.0	42.0	41.0
Chromium, Cr	ug/L	U 3.0	3.4	3.8				
Cobalt, Co	ug/L	U 6.0						
Copper, Cu	ug/L	U 3.0	16.0	24.0	15.0	24.0	32.0	17.0
Iron, Fe	ug/L	410	600	620	940	830	3700	810
Lead, Pb	ug/L	2.3	4.8	4.1	3.7	6.2	19.0	5.7
Magnesium, Mg	mg/L	12.0	12.0	15.0	12.0	11.0	10.0	10.0
Manganese, Mn	ug/L	440	380	1000	660	780	760	380
Mercury, Hg	ug/L	U 0.030						
Nickel, Ni	ug/L	U 12.0						
Potassium, K	mg/L	4.5	3.7	5.3	3.9	4.8	4.4	6.8
Selenium, Se	ug/L	U 1.8						
Silver, Ag	ug/L	U 5.0						
Sodium, Na	mg/L	11.0	11.0	12.0	11.0	11.0	10.0	20.0
Thallium, Tl	ug/L	U 0.040						
Vanadium, V	ug/L	U 6.0						
Zinc, Zn	ug/L	U 3.0	13.0	20.0	21.0	25.0	79.0	1000

U = Analyte was not detected. The value represents the EPA Qualifier formula based on Method Detection Limit, dilution factor and % solids.
 J = Analyte was detected but the value is an estimate within the range between the Reporting Limit (U) and zero.

Analytical Data for Metals in Elutriated Water in the Lake Channel

METALS-Elutriated	USACE	LM-0	LM-1	LM-2	LM-3	LM-4	LM-5	LM-6	LM-7	LM-8	LM-9
ANALYTE	UNITS										
Aluminum, Al	ug/L	380	3000	450	450	110	1100	170	520	310	990
Antimony, Sb	ug/L	J 0.40	J 0.60	J 0.20	J 0.40	J 0.20	J 0.30	J 0.20	J 0.30	J 0.30	J 0.20
Arsenic, As	ug/L	9.9	5.8	6.4	5.7	14.0	11.0	13.0	3.9	J 2.6	J 0.20
Barium, Ba	ug/L	36.0	100	39.0	45.0	40.0	51.0	44.0	48.0	40.0	42.0
Beryllium, Be	ug/L	U 2.0									
Cadmium, Cd	ug/L	J 0.10	J 0.20	J 0.10	J 0.20	J 0.30	0.30	J 0.10	0.040	J 0.10	J 0.10
Calcium, Ca	mg/L	66.0	47.0	50.0	54.0	65.0	65.0	68.0	61.0	52.0	47.0
Chromium, Cr	ug/L	U 3.0	4.8	U 3.0	3.5	J 3.1	4.5				
Cobalt, Co	ug/L	U 6.0									
Copper, Cu	ug/L	U 3.0	48	U 3.0	J 8.0	U 3.0					
Iron, Fe	ug/L	300	1900	450	400	400	1500	210	330	430	450
Lead, Pb	ug/L	J 0.60	31	J 0.50	J 0.50	2.7	J 1.2	J 0.30	J 0.40	J 0.40	J 0.60
Magnesium, Mg	mg/L	16.0	12.0	12.0	14.0	17.0	16.0	16.0	15.0	12.0	10.0
Manganese, Mn	ug/L	980	560	580	1000	1900	1500	1000	1100	810	760
Mercury, Hg	ug/L	U 0.030									
Nickel, Ni	ug/L	U 12.0									
Potassium, K	mg/L	5.3	6	5.1	4.2	4.6	5.9	4.7	3.9	3.4	3.2
Selenium, Se	ug/L	U 1.8									
Silver, Ag	ug/L	U 5.0									
Sodium, Na	mg/L	11.0	10.0	10.0	11.0	10.0	12.0	11.0	10.0	9.4	9.2
Thallium, Tl	ug/L	J 0.040	0.060	U 0.040							
Vanadium, V	ug/L	U 6.0									
Zinc, Zn	ug/L	U 3.0	50	U 3.0	U 3.0	6.5	U 3.0	3.1	4.5	3.9	4.7

U = Analyte was not detected. The value represents the EPA Qualifier formula based on Method Detection Limit, dilution factor and % solids.
 J = Analyte was detected but the value is an estimate within the range between the Reporting Limit (U) and zero.

Analytical Data for Metals in Elutriated Water in the Lake Channel

METALS-Elutriated	USACE	LM-10	LM-11	LM-12	LM-13	LM-14	LM-15	LM-16
ANALYTE	UNITS							
Aluminum, Al	ug/L	580	440	800	350	430	530	190
Antimony, Sb	ug/L	J 0.20	J 0.40	J 0.30	0.30	J 0.40	0.60	0.50
Arsenic, As	ug/L	J 0.20	J 1.0	U 0.20	4.4	4.2	3.8	4.5
Barium, Ba	ug/L	40.0	38.0	42.0	38.0	41.0	33.0	37.0
Beryllium, Be	ug/L	U 2.0						
Cadmium, Cd	ug/L	J 0.10	0.20	0.30	0.10	0.10	0.10	0.10
Calcium, Ca	mg/L	50.0	53.0	49.0	49.0	48.0	42.0	44.0
Chromium, Cr	ug/L	J 4.3	U 3.0					
Cobalt, Co	ug/L	U 6.0						
Copper, Cu	ug/L	J 3.5	U 3.0	U 3.0	U 3.0	14.0	13.0	U 3.0
Iron, Fe	ug/L	310	340	480	170	190	210	210
Lead, Pb	ug/L	J 0.50	J 1.6	J 1.9	0.50	J 0.50	2.0	1.0
Magnesium, Mg	mg/L	12.0	13.0	11.0	11.0	12.0	8.8	9.1
Manganese, Mn	ug/L	736	250	780	120	290	21.0	210
Mercury, Hg	ug/L	U 0.030						
Nickel, Ni	ug/L	U 12.0						
Potassium, K	mg/L	3.3	2.3	2.9	2.4	2.0	1.8	1.8
Selenium, Se	ug/L	U 1.8						
Silver, Ag	ug/L	U 5.0						
Sodium, Na	mg/L	9.1	9	9.8	9.1	9	9.3	9.4
Thallium, Tl	ug/L	U 0.040	U 0.040	U 0.040	U 0.040	J 0.040	U 0.040	U 0.040
Vanadium, V	ug/L	U 6.0						
Zinc, Zn	ug/L	9.1	U 3.0	U 3.0	U 3.0	21.0	12.0	12.0

U = Analyte was not detected. The value represents the EPA Qualifier formula based on Method Detection Limit, dilution factor and % solids.

J = Analyte was detected but the value is an estimate within the range between the Reporting Limit (U) and zero.

Analytical Data for Polynuclear Aromatic Hydrocarbons in Elutriated Water in the Maumee River

PAHS Elutriated	USACE	RM-7	RM-6	RM-5	RM-4	RM-3	RM-2	RM-1
ANALYTE	Units							
2-Methylnaphthalene	ug/l	U 2.0						
Anthracene	ug/l	U 2.0						
Benzo(a)anthracene	ug/l	U 2.0						
Benzo(a)pyrene	ug/l	U 2.0						
Acenaphthene	ug/l	U 2.0						
Benzo(b)fluoranthene	ug/l	U 2.0						
Benzo(ghi)Perylene	ug/l	U 2.0						
Benzo(k)fluoranthene	ug/l	U 2.0						
Chrysene	ug/l	U 2.0						
Dibenzo(a,h)anthracene	ug/l	U 2.0						
Fluoranthene	ug/l	U 2.0						
Fluorene	ug/l	U 2.0						
Acenaphthylene	ug/l	U 2.0						
Indeno(1,2,3-cd)pyrene	ug/l	U 2.0						
Naphthalene	ug/l	U 2.0						
Phenanthrene	ug/l	U 2.0						
Pyrene	ug/l	U 2.0						

U = Analyte was not detected. The value represents the EPA Qualifier formula based on Method Detection Limit, dilution factor and % solids.

J = Analyte was detected but the value is an estimate within the range between the Reporting Limit (U) and zero.