



Mission Statement

“The ECWMD Advances Economic and Recreational Use of the Waterways”

2024 Communicator

This Communicator is being sent to property owners along the East Chicago waterway being assessed an annual user fee and will be posted on our website at www.in.gov/ecwmd/.

About the East Chicago Waterway Management District (District or ECWMD)

ECWMD is a special use district created in 1994 in accordance with Indiana State law (I.C. 8-10-9) to, among other things, manage and supervise the industrial, commercial, and recreational development of the waterways in the City of East Chicago. ECWMD’s jurisdictional boundary is formed by an imaginary line one-half (1/2) mile distant from the center line of any waterway in all directions. In 2010, the ECWMD began assessing annual user fees to fund activities/projects to accomplish its statutory purposes. For more information on the ECWMD, please visit our website at www.in.gov/ecwmd/.

Because the ECWMD is an Indiana government entity, the State Board of Accounts (SBOA) performs periodic audits of its finances. The most current SBOA review was filed on April 14, 2024, for the period of 2019 through 2023. We are happy to report that the SBOA review concluded with no adverse findings to declare. A copy of the SBOA review report may be found on ECWMD’s website at www.in.gov/ecwmd/ or the SBOA’s website at www.in.gov/sboa.

The following is an update of ECWMD’s three marquee projects:

- 1. East Chicago Waterways Environmental Clean-up Project**
- 2. Navigational Dredging Project**
- 3. Canal Street Bridge Dolphin Construction Project**

1. East Chicago Waterway Clean-up Project

Decades of industrial and municipal discharges have contaminated sediments in the Grand Calumet River (GCR), Indiana Harbor Canal (IHC), and the Lake George Canal (LGC). Past sediment testing has detected contaminants ranging from ammonia, arsenic, cyanide, E-coli,

July 19, 2024

PCB's, oil and grease, lead, PAHs, and pesticides to name a few. The contamination of the waterways has disrupted economic development and recreational use for decades.

Clean-up Project Summary – 2013 through 2022

2013 Great Lakes Legacy Act Project (GLLLA) Agreement – ECWMD and EPA

In December 2013, the District and the U.S. Environmental Protection Agency (USEPA) entered into a Project Agreement to conduct a Remedial Investigation, Feasibility Study and Remedial Design for clean-up of the GCR/IHC/LGC through its GLLA Program. Under the GLLA, USEPA can provide federal funding and project work when non-federal partners (NFP) provide cash, work, or in-kind contributions. In 2013, six major project areas were originally identified which have recently been expanded to 7 major project areas with the addition of the GCR Junction Marsh. The seven major areas of the Remedial Design are depicted in Figure (1):

- 1) Grand Calumet River West Junction (East Chicago)
- 2) Grand Calumet River East Junction (East Chicago)
- 3) Grand Calumet River North Junction (Indiana Harbor Ship Canal, East Chicago)
- 4) Grand Calumet River Junction Marsh (East Chicago)
- 5) Lake George Canal – East (East Chicago)
- 6) Lake George Canal – Middle (East Chicago & Hammond) and
- 7) Lake George Canal – West (Hammond) AR/BP is managing this section of the canal.

During these initial phases, the Project Team consisted of the District, USEPA, and TetraTech (who was hired by the District to provide the engineering services.) The Remedial Investigation and Feasibility Study are completed, and the Remedial Design is forecasted to be completed by the end of 2024.

The State and Community/Stakeholder Acceptance was obtained during the public comment period. Feedback from stakeholder meetings, public meetings and the public comment period were considered in the evaluation of the final cleanup plan.

Due to limited funding and various project constraints, the Remedial Design and Remedial Action could not be completed for the entire project area all at once; therefore, the Remedial Action will be completed for specific areas of the project separately as funding becomes available and project constraints can be properly managed.

2015 GLLA Project Agreement, 1st Amendment – ECWMD, Atlantic Richfield, BP, and EPA

In December 2015, the 2013 Project Agreement between the District and USEPA was amended to add Atlantic Richfield Company (AR) and BP Products North America, Inc. (BP) as non-

federal partners which allowed AR/BP to begin capturing the cost of ongoing source control activities that qualify as in-kind contribution.

2018 GLLA Project Agreement, 2nd Amendment – ECWMD, AR, BP, and EPA

On November 8, 2018, the GLLA Project Agreement was again amended (with signatories ECWMD, AR, BP and EPA) to include the remediation of the Lake George Canal (LGC) East Section and Lake George Canal (LGC) Middle Section (see Figure 2 and written summary below). This GLLA Project Agreement amendment included projects along the waterways to be carried out by the project partners. The cost of these projects will count towards the non-federal partners' local share. These projects include the installation of a Barrier Wall System (BWS) along the northern boundary of the South Tank Farm (STF) adjacent to the south side of the LGC East branch in East Chicago and an underground pipeline removal project, to name a few. The underground pipeline removal project was completed in the summer of 2021.

The total project budget was originally estimated at \$26 million, (see Attachment A, EPA News Release).

The GLLA Barrier Wall System Design and Construction Project Summary

As part of AR's objective to remove and further mitigate historic contamination on the former ECI Refinery in the upland parcels, AR designed and constructed the BWS along the northern boundary of the STF parcel adjacent to the LGC East branch of the Canal. The BWS project included installation of a steel Sheet Pile Wall (SPW) as well as design and construction of components associated with the future groundwater management system (GWMS). The SPW will stabilize the bank and will help prevent subsurface oil from migrating from the upland parcels into the waterway.

Design work on the BWS project began in 2019 and was completed in the first half of 2023. The project partners held three public review sessions to inform the public and allow public feedback on the design and construction of the BWS. The first two public review sessions were held at the 30% and 90% design phases, respectively. The third public meeting was held before the start of construction, during the District's March 16, 2023 public board meeting. At that meeting, the District board of directors approved the project to proceed to construction. AR procured domestic steel for the construction of the BWS. Mobilization started in the first quarter of 2023, and construction of the SPW was completed in the first half of 2024, which included approximately 2,100 linear feet of SPW along with its support features. The GWMS is currently at 60% and is scheduled to be completed at a later date once the Army Corps of Engineers completes its sediment removal project in the LGC-east section. When combined with the sediment dredging and sediment removal work that EPA and the Army Corps of Engineers plan to undertake in the canal, the BWS project is expected to significantly improve the quality of sediment, water and habitat in the Lake George Canal waterway.

Summary of Remediation Scope of Work - LGC East Section and LGC Middle Section

The LGC-East Section – The proposed remediation plan includes dredging/removal of approximately 75,000 cubic yards of sediment and the placement of a cap on a small area located on the west-end of the LGC-East Section of the Canal near the railroad bridge. Targeted sediment will be environmentally dredged to a pre-determined elevation using either hydraulic or mechanical means. Containment curtains, oil booms, or similar equipment will be used during dredging to contain sediment and oil sheen within the immediate vicinity of the dredging operation. The 1st phase of dredging which was completed in December 2020 removed 23,804 cubic yards of contaminated sediment. Now that the SPW has been installed, the Corps is planning to conduct the 2nd phase of the dredging which includes approximately 45,000 cubic yards and is scheduled to be done in 2025.

The LGC-Middle Section – The remedial design for the LGC-Middle includes the installation of 12 acres of an engineered cap to contain contaminated sediment in-place and prevent future contaminant releases. The final cap design was completed in 2021 and provides for a remedy that's protective of human health and the environment along the LGC. Remediation construction began in March of 2022, and was completed in the summer of 2023. Monitoring and maintenance activities related to the cap construction and restoration efforts started in the fall of 2023 and are scheduled to continue through 2026.

2019 GLLA Project Agreement, 3rd Amendment – ECWMD, AR, BP, ArcelorMittal, and EPA

On November 13, 2019, the GLLA Project Agreement was again amended to capture future in-kind work from an ArcelorMittal (now Cleveland-Cliffs) Supplemental Environmental Project (SEP) to perform dredging in the Indiana Harbor Ship Canal (Harbor Dredging Project SEP) and additional source control efforts from BP's Land Bridge Project. The total project budget for the activities covered by the 3rd Amendment to the Project Agreement is \$35.1 million.

The Harbor Dredging Project SEP was originally estimated to produce approximately \$8.1 million in cost share credit, but the current forecast is approximately \$5 million, and this dredging is scheduled to be done in 2025. The District may use the in-kind credits generated by the dredging work to help complete additional sediment remediation in the Grand Calumet River and IHC Area of Concern (AOC) within the City of East Chicago consistent with the Feasibility Study and Remedial Design efforts performed pursuant to the 2013 Project Agreement. The Harbor Dredging Project will be funded by Cleveland-Cliffs Inc. which recently acquired ArcelorMittal and has assumed ArcelorMittal's environmental liabilities.

The Project Agreement estimated cost of the AR/BP Land Bridge Project is \$900,000. This project will be funded by AR/BP and will serve as in-kind credit for AR/BP's use as match in a potential future project in the west section of the Lake George Canal.

2021 GLLA Project Agreement, 4th Amendment – ECWMD, AR, BP, ArcelorMittal/Cleveland-Cliffs, and EPA

On August 19, 2021, the GLLA Project Agreement was again amended to document the changes in scope, costs and schedule to the 3rd Project Agreement Amendment and to also include completing the remedial design for the three Grand Calumet River (GCR) junction reaches. The total project budget for the work to be performed pursuant to the 4th Project Agreement Amendment is \$70.7 million.

The fourth amendment includes installation of a deeper and more extensive sheet pile wall/barrier wall and removal of contaminated soil from an area of the STF land in the area of the SPW.

The GCR remedial design includes proposed work in four sections of the waterway – the GCR-West Branch, the GCR-East Branch, the Indiana Harbor Canal Branch, and the GCR Junction Marsh, see Figure (3). The remediation construction of the GCR junction reaches is expected to be undertaken under a separate/new GLLA project agreement between ECWMD and EPA. This project was originally proposed to be constructed in two phases; however, due to changes in circumstances, including available funding, the project proposal was re-submitted on April 30, 2024 and the plan is now to remediate the entire area in one phase. See the next section for a summary of the current proposed project.

2024 GLLA Grand Calumet River (GCR) and Junction Marsh Sediment Remediation Project;

The project proposal was re-submitted on April 30, 2024, and includes all four sections—the GCR-West, GCR-East, IHC and the GCR Junction Marsh. The current overall project forecast is \$74.2 million. The District will contribute 35% of the overall project cost, estimated at \$26 million, through credits generated by in-kind projects identified in the existing cost share agreement between the District and AR/BP, or through prior years dredging work generated by Cleveland Cliffs’ Harbor Dredging Project SEP. The Great Lakes Legacy Act funds will contribute the remaining 65%, for an estimated total of \$48.2 million. The capital cost breakdown for each major area, component, and percentage share is shown in Table 1.

The District gave a presentation of the project to EPA’s Technical Review Committee on May 2, 2024, and as of this writing, EPA has given the project team the green light to start working on the Project Agreement (PA). We are forecasting completing the PA by October of 2024 and starting construction work in 2025, with work continuing through the end of 2026.

Scope of work summary:

- GCR-West Section – Dredge and dispose 22,000 cubic yards (approximately 2 feet) of sediment, which includes the East Chicago Sanitary District outfall channel, followed by the construction of a 10,500 cubic yards cap over the remaining sediment. The cap will consist of a mixture of organoclay and sand, covered by an armor layer of larger stone. The final cap surface will roughly match the current sediment elevation. The GCR-West project includes the restoration of a 1-acre wetland shelf.
- GCR-East Section – Construction of 15,750 cubic yards of sediment cap over the existing sediment. The cap will consist of a mixture of organoclay and sand covered by an armor layer of larger stone.
- IHC Section – Dredge and dispose of 42,000 cubic yards of dredged sediment which includes 1,000 cubic yards of sediment that contains PCBs >50 mg/kg, followed by the construction of a 36,000 cubic yards cap over the remaining sediment. The cap will consist of a mixture of activated carbon and sand covered by an armor layer of larger stone.
- GCR Junction Marsh – The restoration of 10 acres of wetlands. The current plan includes the excavation of approximately 2.5 feet of sediment and then backfilling it with clean sand. Open water areas will be provided for waterfowl and remaining areas planted with native species.

Table 1, Total Project Budget	
Project Component	Project Component Cost
GCR- West: Dredge, Cap, Wetland Shelf	\$9,624,000
GCR- East: Sediment Cap	\$5,543,000
IHC - Dredging, including PCB Hot Spot, Sediment Cap	\$21,427,000
Junction Marsh - Excavate, Backfill, Native Plants	\$11,614,000
Total Remediation Costs, 65%, to be provided by EPA	\$48,208,000
Total Project Cost	\$74,166,154
NFP Responsibility, 35%, to be provided by the District	\$25,958,154

For additional information, you may find a copy of the April 30, 2024 project proposal and the slides from the presentation to EPA’s Technical Review Committee on the District’s website.

Remediation and Funding for the Other Sections of the East Chicago Waterways

The Project Team continues to work diligently to leverage and secure funding to complete the clean-up/remediation for the entire East Chicago waterway. Funding efforts and sources we continue to explore other than the AR/BP cost share agreement and Cleveland Cliffs SEP mentioned above include:

- Local industries/stakeholders as partners – industries/stakeholders that have ongoing work or future work that benefit the waterway clean-up objectives may count towards in-kind contributions. If the project benefits the waterway and qualifies as in-kind contribution towards the overall work in the AOC, the industry/stakeholder can contribute its project costs to leverage more federal clean-up work in the waterway by submitting cost documentation of the qualified work to EPA for review. No additional work or cost is required of the industry/stakeholder and in-kind contributions are considered voluntary.
- On December 11, 2019, the District along with EPA and IDEM led a presentation at a Lakeshore Chamber of Commerce luncheon that summarized the ongoing GLLA project activities and efforts and included a solicitation of potential future GLLA partnerships to area businesses. As of this writing, AR/BP and Cleveland-Cliffs are the only local industry/stakeholders that have partnered on this project allowing qualifying work along the waterway to count towards in-kind credit.

If you are interested or know someone who may be interested in entering a partnership agreement with the District or know of ongoing or future projects/activities that may count towards in-kind contribution, please contact Fernando M. Treviño, ECWMD Executive Director, at (mobile) 219-741-7714, fmtconsulting@aol.com; or Scott Cieniawski, Section Supervisor, U.S. EPA – Great Lakes National Program Office, cieniawski.scott@epa.gov, 312.353.9184.

- Local Industries with past or ongoing GLLA projects that may have a cost share balance after project completion that may be transferred to our project.
- User fees collected by the District.
- Reimbursement monies and credits received from the Army Corps of Engineers for past payments made by the District for the construction of the CDF.
- Cost share credit balance remaining from the above District projects that may be carried over for remediation of other parts of the waterway.

Several Expected Long-term Benefits of Clean Waterways

- A reduction of toxics released into the Lake Michigan
- A reduction of human health and ecological risks
- Improved aquatic habitat
- Improved water quality
- Improved conditions for fish and wildlife – clean environmental conditions will allow wildlife to thrive – birds, fish, and vegetation.
- Improved aesthetics in and near the waterways
- Increased opportunities for business development and recreational use.
 - Studies of similar projects indicate a potential return of investment in the range of 6 to 1, including increasing property values.
 - A clean canal/river will enhance recreational opportunities and use.
 - The projects will remove restrictions on fish and wildlife consumptions, improving recreational opportunities for fisheries and recreational fishing.

2. Navigational Dredging Project

Due to the presence of contaminated sediment in the canal and a lack of a suitable disposal facility, the Indiana Harbor Ship Canal (IHSC) had not been dredged since 1972. The contaminated sediment in the canal is not suitable for open water disposal into Lake Michigan, nor is it suitable for unconfined upland disposal and it has no beneficial use. The consequence of the inability to dredge for such a long period of time is a buildup of sediment in the canal which impacts the efficiency of deep draft commercial shipping. To provide a suitable disposal site, the Army Corps of Engineers (Corps) designed and constructed a Confined Disposal Facility (CDF) located in East Chicago, Indiana.

The navigation dredging project is designed to dredge and dispose of sediment in a way that is safe to human health, improves the environment, and is economically beneficial. The commercial benefit of the navigational dredging project will be a “deeper” canal, enabling a more economical and cost-effective means for deep draft commercial shipping through the Indiana Harbor Ship Canal. The navigational dredging will have fortuitous environmental benefits resulting from a cleaner canal which will be taken into consideration in the final cleanup design.

Following the completion of the CDF construction in 2011, the Corps began dredging the IHSC in the fall of 2012 and continued annually thereafter through 2020. Dredging of the federal channel reaches was completed in December of 2020. The Corps has dredged a total of approximately 1.7 million cubic yards of sediment through 2020 (see Figure 4).

In 2021, the Corps began the construction of a second dike lift of the CDF, which increased its capacity from 2.4 million cubic yards to approximately 4.8 million cubic yards. The construction for the dike’s second lift was recently completed in June of 2024. There were no dredging activities during the dike lift construction; however, now that the second dike lift construction is completed, the Corps plans to resume “maintenance” dredging in early September of this year, 2024. The Corps contracted Roen Salvage to perform the dredging activities. An estimated

60,000 to 95,000 cubic yards will be dredged in 2024 and approximately 100,000 cubic yards in 2025.

The District serves as the local sponsor of the CDF and may serve as a local sponsor for companies and private owners who wish to have the Corps perform dredging at their docks and/or property or who perform their own dredging and want to dispose of their sediment in the CDF. Costs affiliated with these dredging activities and storage in the CDF are paid by the company/private owners whose dredged sediment is placed in the CDF. The District also communicates with the Corps the concerns and issues voiced by the local community and stakeholders related to the dredging and CDF construction/maintenance activities. For additional information on the navigational dredging project, please visit the Corps' website at <https://indianaharbor.evs.anl.gov/>.

3. Canal Street Bridge

Canal Street Bridge Dolphin Project

Background: In the early 1970's, the Canal Street Bridge that crossed the Indiana Harbor Ship Canal at Canal Street was demolished; however, at the conclusion of the demolition, the bridge's concrete abutments were not removed. As a result of the bridge abutments having been left in place, the Corps and U.S. Coast Guard contacted the City of East Chicago proposing the City address the navigation obstruction caused by the bridge abutments. The District and City of East Chicago entered into a Memorandum of Understanding (MOU) that provided that the District would take the lead to manage and address the bridge abutments left behind.

The District hired AECOM to provide engineering services and to serve as the owner's representative on the project. After evaluating several options, AECOM recommended installing two navigation dolphins equipped with navigational lights in the waterway, which will serve as guides to help ships navigate safely through the concrete abutments, see Figure 5. The design was subsequently presented to and approved by the Corps and the City's Planning Commission.

The project went out for construction bids and was awarded to Thatcher Foundations, Inc., from Gary, Indiana. The dolphins were successfully constructed in November of 2023, for a total cost of approximately \$734,000.

Canal Street Bridge Underwater Obstruction

The US Army Corps of Engineers, sent a letter dated May 2, 2024, to the City of East Chicago, notifying and ordering the City to remove an underwater obstruction that was discovered at the bottom of the waterway near the former Canal Street Bridge. The letter referenced the Canal Street Bridge Dolphin project, suggesting that this new obstruction was related to the permits obtained for the dolphin project. The District and City entered into an MOU, whereby the District agreed to take the lead on the Corps' order and respond to the Corps' letter on behalf of the City.

Based on the District's investigation and review of the matter, the District concluded and responded to the Corps that there was no equitable basis for the Corps to order the City to address this obstruction for the following reasons:

1. The original source, and the manner in which the obstruction came to be located where it is, are unknown;
2. The permit and/or authorization issued for the Canal Street Dolphin Project is not connected to the presence of this obstruction, and therefore references to those permit conditions are not relevant;
3. The owner of the obstruction is not known and may be difficult or impossible to determine.

If you have any questions, concerns, or issues with the Dredging Project, CDF project/activities, the clean-up efforts, or the Canal Street Bridge Projects, or if you would like to learn more about the possibility of dredging material on or near your property, please contact Fernando M. Treviño, ECWMD Executive Director, at (mobile) 219-741-7714, or fmtconsulting@aol.com. You may also visit us at www.in.gov/ecwmd/.

Sincerely,



Fernando M. Treviño
ECWMD, Executive Director



[John Fekete \(Jul 18, 2024 10:36 CDT\)](#)

John Fekete
ECWMD, President of the Board

cc: The Honorable Mayor Anthony Copeland
Sandra Favela, Chief of Staff, City of East Chicago
Val Gomez, City Controller, City of East Chicago
ECWMD Board of Directors
Ellen Gregory, ECWMD Board Attorney
Scott Cieniawski, USEPA
Adam Mittermaier, USEPA
Ben O'Neil, USEPA
Bradly Benson, USEPA
Natalie Mills, Army Corps of Engineers/USEPA, Project Manager
Vaughn Coolman, Army Corps of Engineers, Project Manager
Carl Wodrich (IDEM)
Michael Spinar (IDEM)
Eric Larson (Atlantic Richfield)



U.S. ENVIRONMENTAL PROTECTION AGENCY
NEWS RELEASE
WWW.EPA.GOV/NEWSROOM

CONTACT: Allison Lippert, 312-353-0967, lippert.allison@epa.gov

EPA announces \$26 million cleanup of Grand Calumet River in Northwest Indiana

EAST CHICAGO / HAMMOND, IND. (May 20, 2019) — The U.S. Environmental Protection Agency (EPA) announced a \$26 million cleanup will begin this month on Lake George Canal in the cities of East Chicago and Hammond, Indiana. The waterway is part of the Grand Calumet River Area of Concern on Lake Michigan, identified by the United States and Canada as one of 43 toxic hotspots in the Great Lakes basin. Work will be funded through a cost-sharing partnership with the East Chicago Waterway Management District (ECWMD), Atlantic Richfield Company and BP Products North America. EPA anticipates the cleanup will be completed in 2020.

“Through this public-private partnership, EPA, East Chicago Waterway Management District, Atlantic Richfield and BP will work together to remove more than a century’s legacy contamination, improve habitat and boost economic growth along the Grand Calumet River in Northwest Indiana,” said **EPA Region 5 Administrator / Great Lakes National Program Manager Cathy Stepp**. “This massive cleanup is a crucial step forward in restoring the river and clearly demonstrates the progress being made under the Great Lakes Restoration Initiative.”

Approximately 60,000 cubic yards of contaminated sediment will be dredged from the Lake George Canal. Any material that may remain will be capped and controlled, as needed.

“Mayor Copeland of East Chicago, Congressman Visclosky, ECWMD Board of Directors, Atlantic Richfield and BP, and EPA have been outstanding partners in the cleaning of our waterways and in the team’s hard work and effort to see this project through to fruition,” said **ECWMD Executive Director Fernando M. Treviño**.

“Atlantic Richfield Company and BP Products North America appreciate the opportunity to partner with the U.S. EPA and the East Chicago Waterway Management District on the completion of this important project,” said **Chris Greco, Portfolio Manager, Remediation Management Services Company**. “We believe it benefits the community and helps create additional opportunities in East Chicago.”

The Grand Calumet River flows 13 miles through the heavily industrialized cities of Gary, East Chicago and Hammond. The river is recognized as one of the most contaminated in the nation and consists mostly of drainage from nearby cities and industries. Historical industrial activities such as steelmaking, meatpacking and oil refining contaminated the river’s sediment with heavy metals,

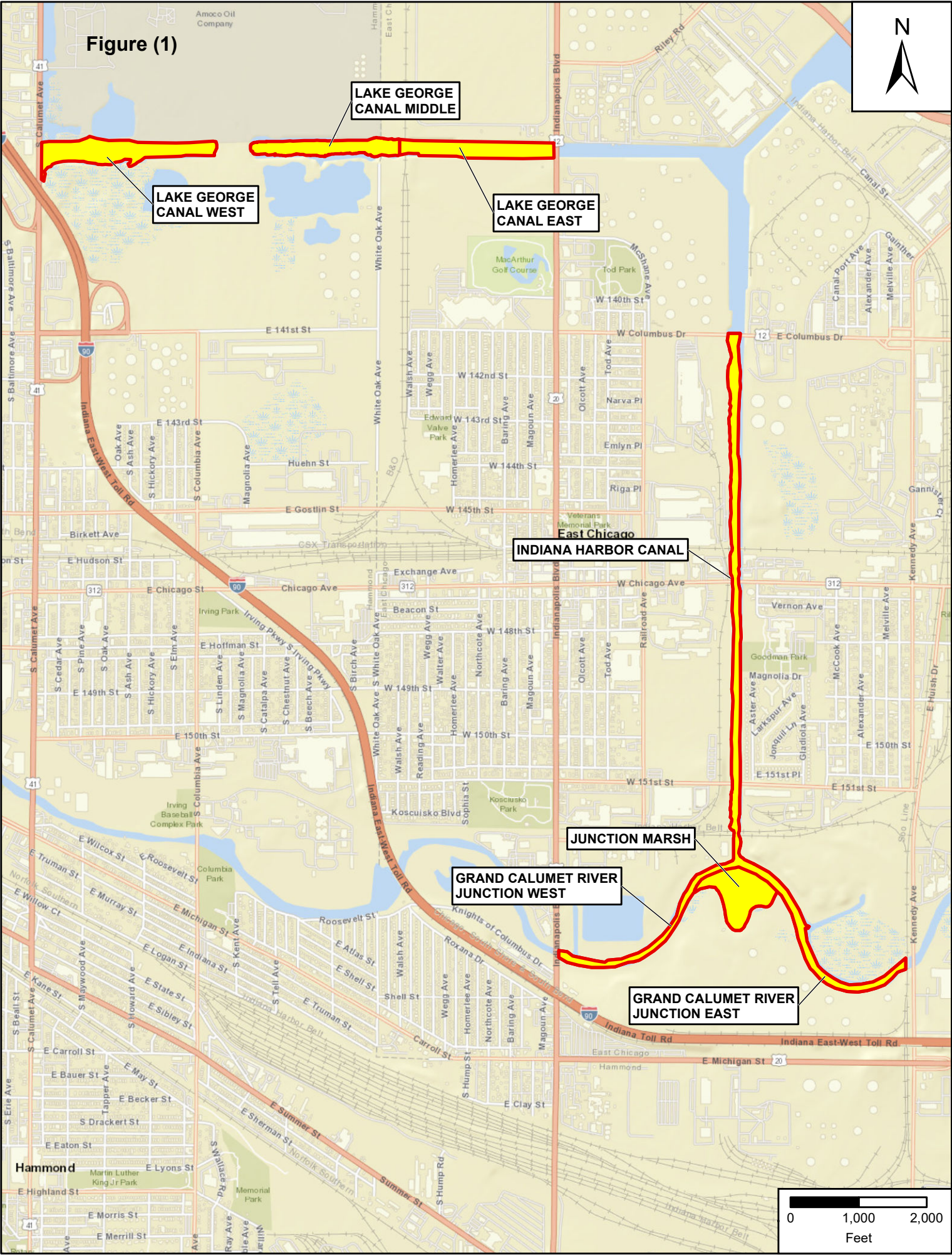
polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and oil and grease. It is the only Area of Concern that was originally considered impaired on all fourteen beneficial uses under the bi-national Great Lakes Water Quality Agreement.

Tomorrow, EPA Great Lakes National Program Office Director Chris Korleski will join community members and stakeholders at Seidner Dune and Swale Nature Preserve for the seventh annual Grand Calumet River Stewardship Day co-hosted by The Nature Conservancy and Illinois-Indiana Sea Grant.

The GLRI was launched in 2010 to accelerate efforts to protect and restore the Great Lakes. Federal agencies have funded more than 4,700 projects totaling over \$2.4 billion to address the most important Great Lakes priorities, including: cleaning up highly-contaminated “areas of concern,” reducing nutrient runoff, combating invasive species and restoring habitat.

For more information: <https://www.epa.gov/great-lakes-aocs/grand-calumet-river-aoc>

Figure (1)



LAKE GEORGE CANAL MIDDLE

LAKE GEORGE CANAL WEST

LAKE GEORGE CANAL EAST

INDIANA HARBOR CANAL

JUNCTION MARSH

GRAND CALUMET RIVER JUNCTION WEST

GRAND CALUMET RIVER JUNCTION EAST

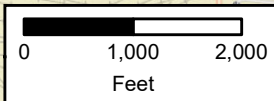
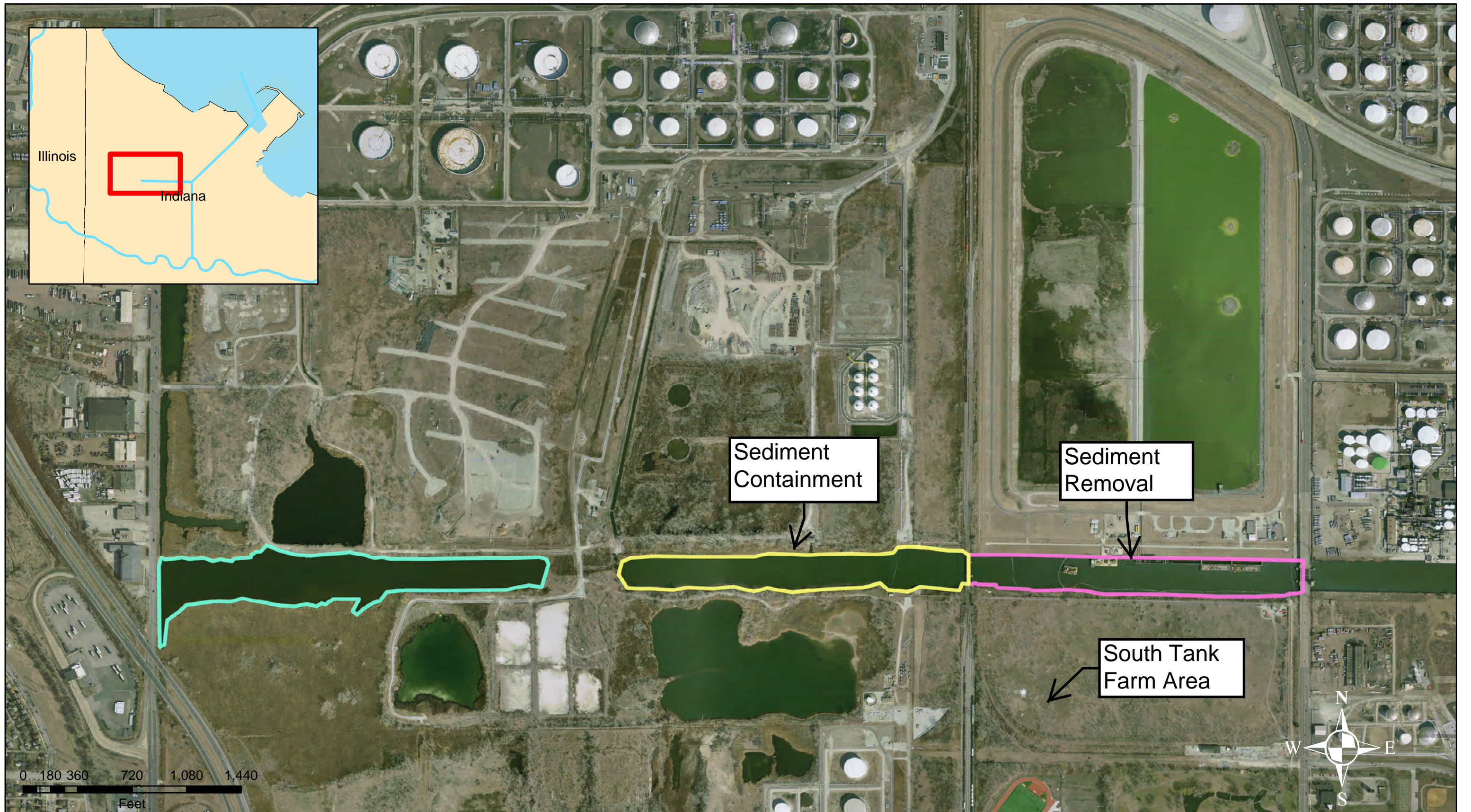
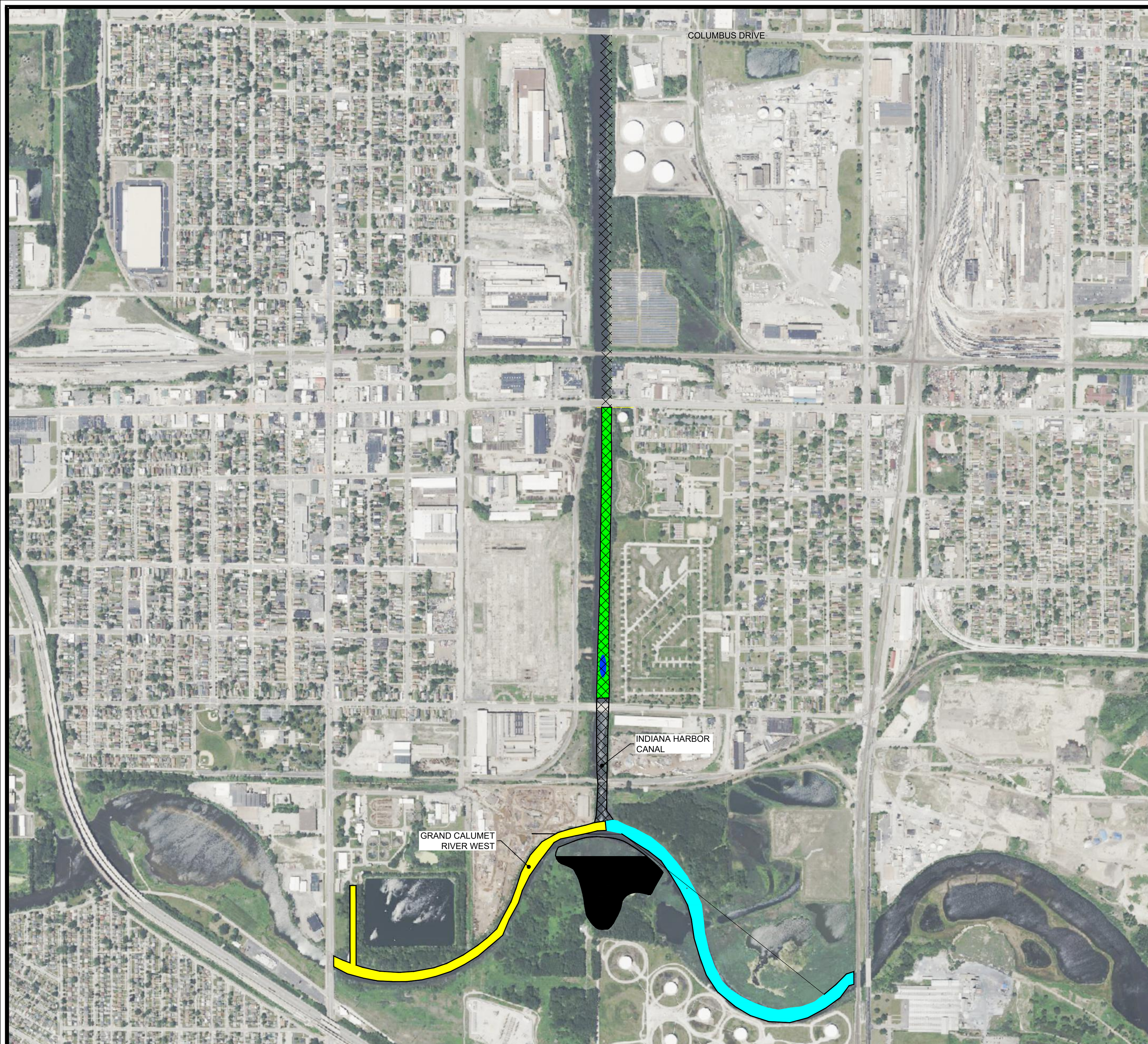








Figure (2)



G:\S103S9263 Grand Cal Junction\dwg\Fig3-Phase1Effort-zoomed in.dwg



LEGEND

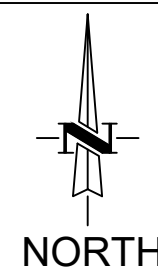
-  GCR-W DREDGE AND CAP
(DREDGE: 22,000 CY, CAP: 10,500 CY)
-  GCR-E CAP (15,750 CY)
-  IHC NON TSCA DREDGE ONLY (40,100 CY)
-  IHC TSCA DREDGE ONLY (941 CY)
-  IHC CAP (36,000 CY)
-  JUNCTION MARSH RESTORATION (47,600 CY)

REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED	JW
DRAWN	MB
CHECKED	SDD
DATE	5/8/2024



Tetra Tech Inc.
 1 S. Wacker Dr. Ste. 3700
 Chicago, Illinois 60606
 (312) 201-7700



GRAND CALUMET and INDIANA HARBOR CANAL
 REMEDIAL DESIGN
 EAST CHICAGO WATERWAY MANAGEMENT DISTRICT
 EAST CHICAGO, INDIANA 46312

VERIFY SCALE
 BAR IS ONE (1) INCH ON ORIGINAL DRAWING.
 0 1"
 IF NOT ONE (1) INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

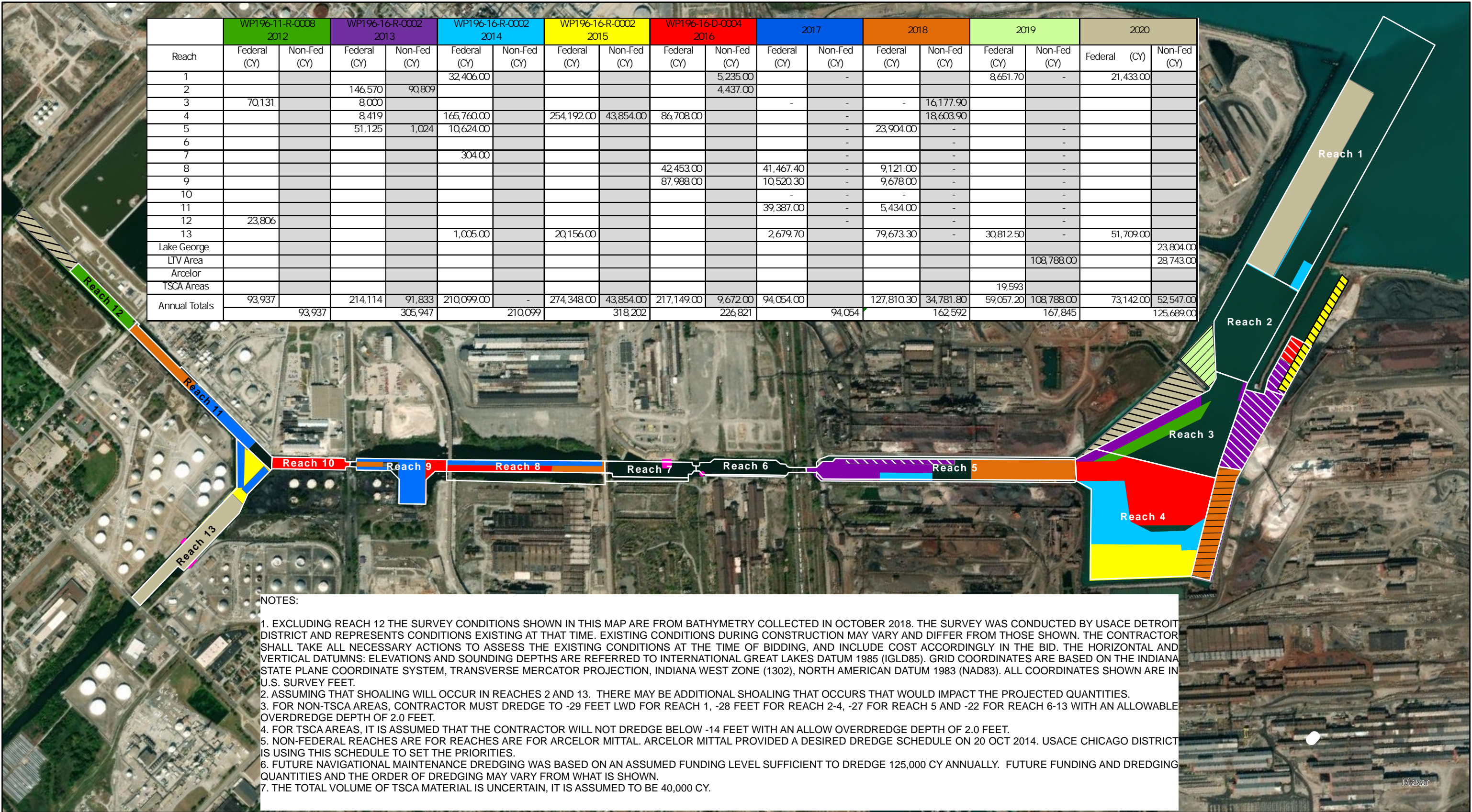
SCALES:
HORIZONTAL SCALE:
NA
VERTICAL SCALE:
NA

GRAND CALUMET RIVER and
 INDIAN HARBOR CANAL
 REMEDIAL DESIGN

PROJECT NO.
 10357657
 DRAWING NO.
 FIGURE 3

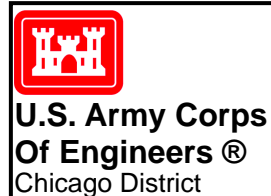
Figure (4) U.S. Army Corps of Engineers Dredging Map

Reach	WP196-11-R-0008 2012		WP196-16-R-0002 2013		WP196-16-R-0002 2014		WP196-16-R-0002 2015		WP196-16-D-0004 2016		2017		2018		2019		2020	
	Federal (CY)	Non-Fed (CY)	Federal (CY)	Non-Fed (CY)	Federal (CY)	Non-Fed (CY)	Federal (CY)	Non-Fed (CY)	Federal (CY)	Non-Fed (CY)	Federal (CY)	Non-Fed (CY)	Federal (CY)	Non-Fed (CY)	Federal (CY)	Non-Fed (CY)	Federal (CY)	Non-Fed (CY)
1					32,406.00				5,235.00						8,651.70		21,433.00	
2			146,570	90,809					4,437.00									
3	70,131		8,000											16,177.90				
4			8,419		165,760.00		254,192.00	43,854.00	86,708.00					18,603.90				
5			51,125	1,024	10,624.00								23,904.00					
6																		
7					304.00													
8									42,453.00	41,467.40			9,121.00					
9									87,988.00	10,520.30			9,678.00					
10										39,387.00			5,434.00					
11																		
12	23,806																	
13					1,005.00		20,156.00			2,679.70			79,673.30		30,812.50		51,709.00	
Lake George LTV Area																108,788.00		23,804.00
Arcelor																		28,743.00
TSCA Areas															19,593			
Annual Totals	93,937		214,114	91,833	210,099.00	-	274,348.00	43,854.00	217,149.00	9,672.00	94,054.00		127,810.30	34,781.80	59,057.20	108,788.00	73,142.00	52,547.00
		93,937		305,947		210,099		318,202		226,821		94,054		162,592		167,845		125,689.00



NOTES:

1. EXCLUDING REACH 12 THE SURVEY CONDITIONS SHOWN IN THIS MAP ARE FROM BATHYMETRY COLLECTED IN OCTOBER 2018. THE SURVEY WAS CONDUCTED BY USACE DETROIT DISTRICT AND REPRESENTS CONDITIONS EXISTING AT THAT TIME. EXISTING CONDITIONS DURING CONSTRUCTION MAY VARY AND DIFFER FROM THOSE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY ACTIONS TO ASSESS THE EXISTING CONDITIONS AT THE TIME OF BIDDING, AND INCLUDE COST ACCORDINGLY IN THE BID. THE HORIZONTAL AND VERTICAL DATUMS: ELEVATIONS AND SOUNDING DEPTHS ARE REFERRED TO INTERNATIONAL GREAT LAKES DATUM 1985 (IGLD85). GRID COORDINATES ARE BASED ON THE INDIANA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR PROJECTION, INDIANA WEST ZONE (1302), NORTH AMERICAN DATUM 1983 (NAD83). ALL COORDINATES SHOWN ARE IN U.S. SURVEY FEET.
2. ASSUMING THAT SHOALING WILL OCCUR IN REACHES 2 AND 13. THERE MAY BE ADDITIONAL SHOALING THAT OCCURS THAT WOULD IMPACT THE PROJECTED QUANTITIES.
3. FOR NON-TSCA AREAS, CONTRACTOR MUST DREDGE TO -29 FEET LWD FOR REACH 1, -28 FEET FOR REACH 2-4, -27 FOR REACH 5 AND -22 FOR REACH 6-13 WITH AN ALLOWABLE OVERDREDGE DEPTH OF 2.0 FEET.
4. FOR TSCA AREAS, IT IS ASSUMED THAT THE CONTRACTOR WILL NOT DREDGE BELOW -14 FEET WITH AN ALLOW OVERDREDGE DEPTH OF 2.0 FEET.
5. NON-FEDERAL REACHES ARE FOR REACHES ARE FOR ARCELOR MITTAL. ARCELOR MITTAL PROVIDED A DESIRED DREDGE SCHEDULE ON 20 OCT 2014. USACE CHICAGO DISTRICT IS USING THIS SCHEDULE TO SET THE PRIORITIES.
6. FUTURE NAVIGATIONAL MAINTENANCE DREDGING WAS BASED ON AN ASSUMED FUNDING LEVEL SUFFICIENT TO DREDGE 125,000 CY ANNUALLY. FUTURE FUNDING AND DREDGING QUANTITIES AND THE ORDER OF DREDGING MAY VARY FROM WHAT IS SHOWN.
7. THE TOTAL VOLUME OF TSCA MATERIAL IS UNCERTAIN, IT IS ASSUMED TO BE 40,000 CY.



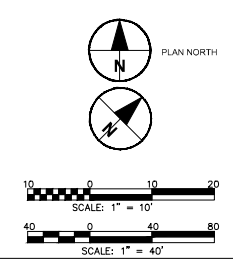
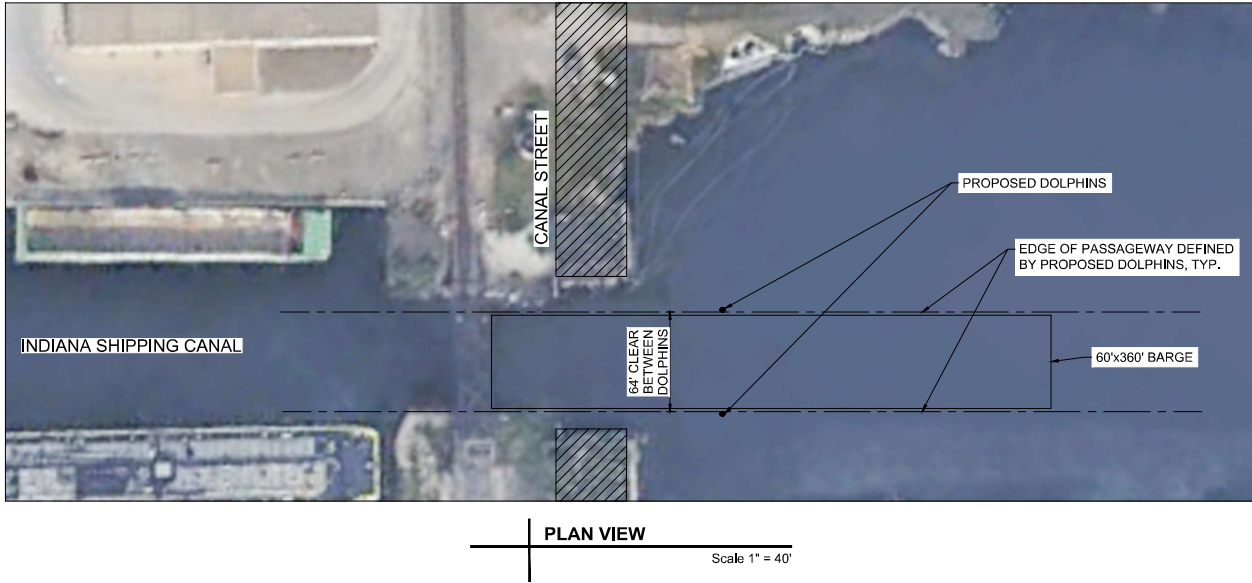
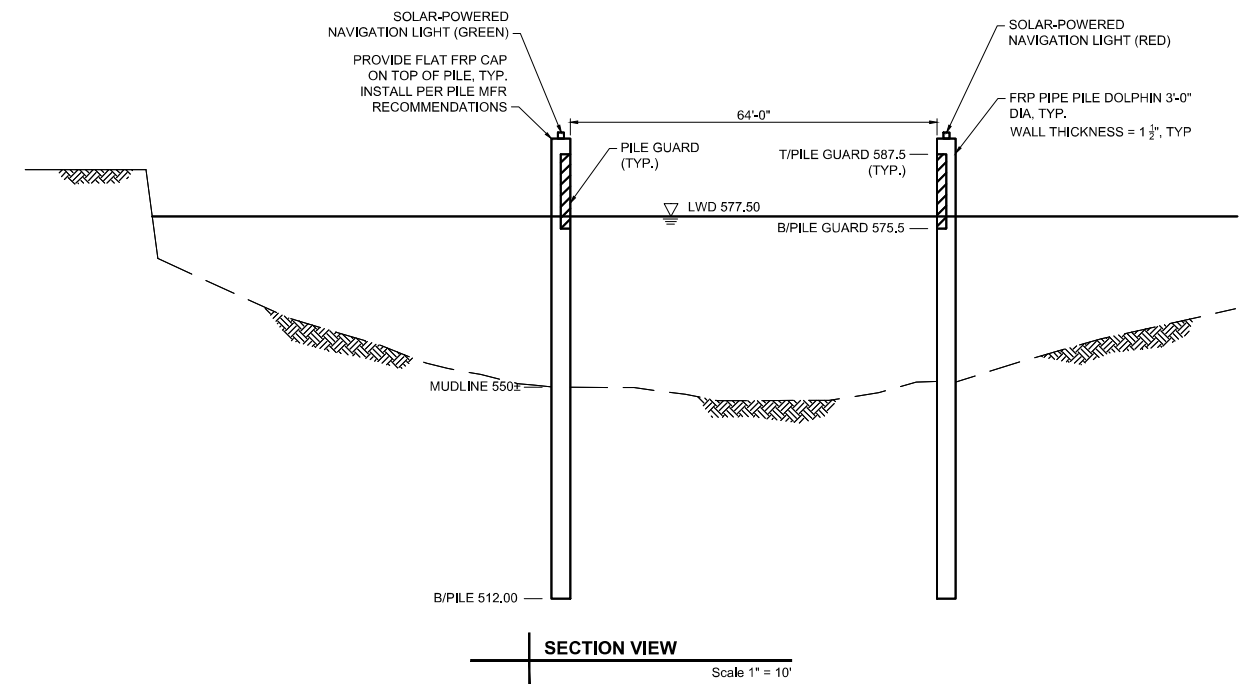
Legend					
2012, Federal	2014, Federal	2016, Non-Federal	2018, Federal	2019, Non-Federal	2020, Non-Federal
2013, Non-Federal	2015, Federal	2016, Federal	2018, Non-Federal	2019 - TSCA	
2013, Federal	2015, Non-Federal	2017, Federal	2019, Federal	2020, Federal	

Indiana Harbor For Official Use Only
Dredging Volumes by Year May 2022

0 500 1,000 2,000 3,000 4,000

Feet
 Chicago District, U.S. Army Corps of Engineers

File name: L:\LEGACY\USCHG1F5001\PROJECTS\ASUPP\RESV\PROJECTS\CURRENT\60276\LEC\W\MC_L\BUT\900_L\CAO\20-SHEETS\FIGURE5.DWG Last saved by: CHARLES CANCIO L:\LEGACY\USCHG1F5001\PROJECTS\ASUPP\RESV\PROJECTS\CURRENT\60276\LEC\W\MC_L\BUT\900_L\CAO\20-SHEETS\FIGURE5.DWG Designer: Checker: Approved: ARCH D 24 x 36"



AECOM

PROJECT
 Indiana Ship Canal
 at Canal Street Bridge
 Dolphins

CLIENT
 East Chicago Waterway
 Management District

CONSULTANT
 AECOM
 303 E. Wacker Drive
 Suite 1300
 www.aecom.com

FIGURE 5