



#### Mission Statement

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

### **2023 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/](http://www.in.gov/ecwmd/).

#### **About the East Chicago Waterway Management District (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/](http://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 September 30, 2019, for the period of 2015 through 2018. 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/](http://www.in.gov/ecwmd/) or the SBOA’s website at [www.in.gov/sboa](http://www.in.gov/sboa).

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#### **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 14, 2023

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 Agreement – ECWMD and EPA*

In December 2013, the East Chicago Waterway Management District (the District) and the U.S. Environmental Protection Agency (USEPA) entered into a Project Agreement to conduct a Remedial Investigation (RI), Feasibility Study (FS) and Remedial Design (RD) for clean-up of the GCR/IHC/LGC through its Great Lakes Legacy Act (GLLA) Program. Under the GLLA, USEPA can provide federal funding and project work when non-federal sponsors provide cash, work, or in-kind contributions. In 2013, six major project areas were originally identified which has recently been expanded to 7 major project areas with the addition of the GCR Junction Marsh. The seven major areas of the RD 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)

The Project Team during these initial phases, consisted of the District, USEPA, and TetraTech who was hired by the District to provide the engineering services. The RI and FS are completed and the RD is forecasted to be completed by the of end of 2023.

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, the RD and Remedial Action (RA) cannot be completed for the entire project area all at once; therefore, the RA will be completed for specific areas of the project separately as funding becomes available.

#### *2015 GLLA Project Agreement, 1<sup>st</sup> Amendment – ECWMD, Atlantic Richfield, BP, and EPA*

In December 2015, the 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 project partners which allowed AR/BP to begin capturing ongoing source control activities that qualify as in-kind contribution.

2018 GLLA Project Agreement, 2<sup>nd</sup> 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 includes projects along the waterways carried out by the non-federal project partners that can count towards the non-federal partners' local share such as the installation of a sheet pile wall along the South Tank Farm (STF) located on 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 began in 2019 and was completed by the end of the summer 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

Atlantic Richfield Company is currently working on the Barrier Wall System (BWS) installation along the STF of the former Energy Cooperative Inc. site.

Design work on the BWS project began in 2019 and was completed in the first half of 2023. There were three scheduled public review activities for the sheet pile wall design. The first public review was conducted at the 30% design phase which was held in early 2020. The second public review was conducted at the 90% design phase when Atlantic Richfield and their design engineering firm, Wood presented a summary of the design at the District's May 19, 2022, board meeting. The fact sheet and presentation slides presented at the May 19, 2022, board meeting were also made available on the District's website. The public was provided the opportunity to review and provide comments to the 90% design through May 31, 2022. Hard copies were available at both East Chicago Public Libraries during the comment period. The third public meeting was recently held, before the start of construction, during the District's March 16, 2023, public board meeting, where the District board of directors approved the project to proceed to construction. Atlantic Richfield procured domestic steel for the construction of the BWS. Mobilization started in the first quarter of 2023. As of June 2023, 1,300 linear feet of a total of 2,100 linear feet of steel has been installed. The BWS is scheduled to be completed by the early 2024.

The objective of the project is to remove and further mitigate historic contamination on the former ECI Refinery in the upland parcels. When combined with the sediment dredging and sediment removal work that EPA and the Army Corps of Engineers will undertake in the canal, the 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 current 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 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 1<sup>st</sup> phase of dredging removed 23,804 cy's of contaminated sediment in December 2020. The 2<sup>nd</sup> phase of the dredging is anticipated to be completed in 2024 after the STF Sheet Pile Wall is installed.

The LGC-Middle Section – The current proposed remediation plan includes the placement of approximately 12 acres of an engineered cap which will isolate 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. The sediment remediation cap construction is scheduled to be completed by July 2023 and the eco-restoration is expected to be completed by early 2024.

### 2019 GLLA Project Agreement, 3<sup>rd</sup> Amendment – ECWMD, AR, BP, ArcelorMittal, and EPA

On November 13, 2019, the Project Agreement was again amended to capture in-kind work from an ArcelorMittal Harbor Dredging Project (now Cleveland-Cliffs) and additional source control efforts from BP's Land Bridge Project. The total project budget for the 3<sup>rd</sup> Project Agreement is \$35.1 million.

The Harbor Dredging Project is estimated to produce an estimated \$8.1 million in cost share credit. We anticipate using the in-kind work produced from 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 FS and RD efforts performed during the initial 2013 Project Agreement. The Harbor Dredging Project will be funded by ArcelorMittal. Cleveland-Cliffs Inc. recently acquired ArcelorMittal's and has taken over its environmental liabilities.

The estimated cost of the BP's 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, 4<sup>th</sup> Amendment – ECWMD, AR, BP, ArcelorMittal/Cleveland-Cliffs, and EPA

On August 19, 2021, the project agreement was again amended to document the changes in scope, costs and schedule to the 3<sup>rd</sup> project agreement amendment and also includes completing the remedial design for the GCR three junction reaches. The total project budget for the 4<sup>th</sup> Project Agreement amendment is \$70.7 million.

The amendment includes a deeper and more extensive sheet pile wall/barrier wall and removing contaminated soil from an area of the STF land along the Sheet Pile Wall.

The GCR remedial design completion includes 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 (1). The remediation construction of the GCR junction reaches is expected to be undertaken under a separate/new project agreement between ECWMD and EPA. On March 9, 2022, the ECWMD submitted a \$42 million project proposal to EPA’s Great Lakes Legacy Act program office, for the “Grand Calumet River (GCR) Sediment Remediation Project – Phase I, GCR-West and Indiana Harbor Canal” and is summarized below.

2022 Grand Calumet River (GCR) Sediment Remediation Project – Phase I, GCR-West and Indiana Harbor Canal, Summary

The current Phase I, GCR-West and Indiana Harbor Canal Project includes the complete remediation of the GCR-West Branch, removal of contaminated sediment in the IHC including an area of high PCB concentration at the south end of the IHC, and restoration of the Junction Marsh, previously referred to as the Shell/East Chicago riverine wetland, located immediately south of the confluence of the GCR-West and GCR-East Branches (see Figure 3).

The current Phase I Remediation Scope of Work summary:

- GCR-West – removal of approximately 22,000 cubic yards of contaminated sediment including the East Chicago Sanitary District outfall channel, followed by construction of approximately 5 acres of cap material, and construction of a 1-acre wetland shelf.
- IHC – removal of approximately 42,000 cubic yards of contaminated sediment, that includes 41,000 cubic yards of sediment with PCB concentrations less than 50 mg/kg and 1,000 cubic yards of sediment with PCB concentrations greater than 50 mg/kg.
- Junction Marsh – restoration of approximately 10 acres. The conceptual plan includes the excavation of approximately 2.5 feet of sediment and then backfilled with clean sand. Open water areas are provided for waterfowl and remaining areas will be planted with native species. Coordination with Junction Marsh property owners are ongoing.

The current total estimated project cost (in 2023 dollars) of the Phase I project is \$44.6 million. The District will contribute 35% of the overall project cost, estimated at \$15.6 million through in-kind projects. The District will provide its 35% cost share portion from Cleveland Cliffs’ (formerly ArcelorMittal) Supplemental Environmental Project (SEP) which is currently valued at approximately \$20.7 million. The Great Lakes Legacy Act funds will contribute 65% for an estimated total of \$29,000,000. The capital cost breakdown for each major area and component for Phase I is shown in Table 1. We are forecasting to finalize the Phase I Project Agreement with EPA in 2023 and start construction in 2024.

The Phase II work will include the complete restoration of both the GCR-East Branch and the IHC. The GCR-East will have an engineered cap constructed from Kennedy Ave. to the confluence where it will connect to the GCR-West cap that will be completed in Phase I. The IHC will also have an engineered cap constructed over all sediment from the GCR confluence, north to Columbus Drive where the IHC becomes part of the federally authorized navigation channel. Areas neither dredged or capped in Phase I do not pose a resuspension/recontamination risk to other areas within the project area. The schedule for Phase II Remediation is yet to be determined.

Table 1. GCR Junction Reaches, Phase I Remediation, Capital Cost Breakdown

<b>Junction Reach Area</b>	<b>Major Components</b>	<b>Approximate Cost</b>
West Branch GCR	Dredge, Cap, Wetland Shelf	\$8,100,000
IHC	Dredging, including PCB Hot Spot	\$11,400,000
Junction Marsh	Excavate, Backfill, Native Plants	\$9,500,000
	<b>Total Project Capital Costs</b>	<b>\$29,000,000</b>

### **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 sources we continue to explore 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, 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 ArcelorMittal/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](mailto:fmtconsulting@aol.com); or Scott Cieniawski, Section Supervisor, U.S. EPA – Great Lakes National Program Office, [cieniawski.scott@epa.gov](mailto: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 District.
- Reimbursement monies and credits that may be owed by 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 ECWMD/AR/BP 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 and ecological risks
- Improved aquatic habitat
- Improved water quality
- Improved conditions for fish and wildlife
- Improved aesthetics – clean environmental conditions will allow wildlife to thrive – birds, fish, and vegetation.
- Increase 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 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 or 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 designed and constructed a Confined Disposal Facility (CDF) located in East Chicago, Indiana. The current CDF Phase 1 total capacity is 2.4 million cubic yards; however, due to Dam Safety free-board requirements, the CDF's able disposal capacity is limited to 1.9 million cubic yards of dredged contaminated sediments.

The 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).

The Corps is in the process of constructing a second lift (Phase 2) to the existing CDF dikes which will increase the CDF capacity to approximately 4.8 million cubic yards. There will be no dredging activities during the dike raising construction which started in 2021 and is scheduled to be completed by the spring of 2024. The Corps currently plans to resume "maintenance" dredging in 2024 after the 2<sup>nd</sup> dike lift is completed.

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 their sediment in the CDF. Costs affiliated with these dredging activities and storage in the CDF are paid by the company/private owners. The District also communicates with the Corps the concerns and issues voiced by the local community and stake holders related to the dredging and CDF construction/maintenance activities. For additional information on the navigational dredging project, please visit the Corps' website at [www.lrc.usace.army.mil/Missions/CivilWorksProjects/IndianaHarbor.aspx](http://www.lrc.usace.army.mil/Missions/CivilWorksProjects/IndianaHarbor.aspx)

## **3. Canal Street Bridge Dolphin Project**

Background: In the early 1970's, the Canal Street Bridge that crossed the Indiana Harbor Ship Canal 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



Army Corps of Engineers and 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 included provisions where the District would take the lead to manage and address the bridge abutments left behind.

The District hired AECOM to provide engineering services and represent the District on the project. After reviewing various options, AECOM recommended installing two dolphins in the waterway, which will serve as waterway bumper posts, to help ships navigate safely through the concrete abutments, see Figure 5. The design was presented to and approved by the United States Army Corps of Engineers and the City's Planning Commission. AECOM's engineering scope of services also included finalizing the design drawings and bidding specifications, permitting, and construction bidding. AECOM will also serve as the owner's representative including quality control during construction of the dolphins.

The project went out for construction bids in the first half of 2023. The District subsequently awarded the construction project to Thatcher Foundations, Inc., from Gary, Indiana, for a total lump sum price of \$719,000. The current project schedule forecasts the completion of the dolphin construction during the 4<sup>th</sup> quarter of 2023.

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If you have any questions, concerns, or issues with the Dredging Project, CDF project/activities, the clean-up efforts, or the Canal Street Bridge Dolphin Project 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](mailto:fmtconsulting@aol.com). You may also visit us at [www.in.gov/ecwmd/](http://www.in.gov/ecwmd/).

Sincerely,



Fernando M. Treviño  
ECWMD, Executive Director

  
John Fekete (Jul 12, 2023 14:43 CDT)

John Fekete  
ECWMD, President of the Board

cc: 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, Project Manager  
Mike Nguyen, Army Corps of Engineers, Project Manager  
Carl Wodrich (IDEM)  
Eric Larson (BP)

July 14, 2023



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

CONTACT: Allison Lippert, 312-353-0967, [lippert.allison@epa.gov](mailto: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

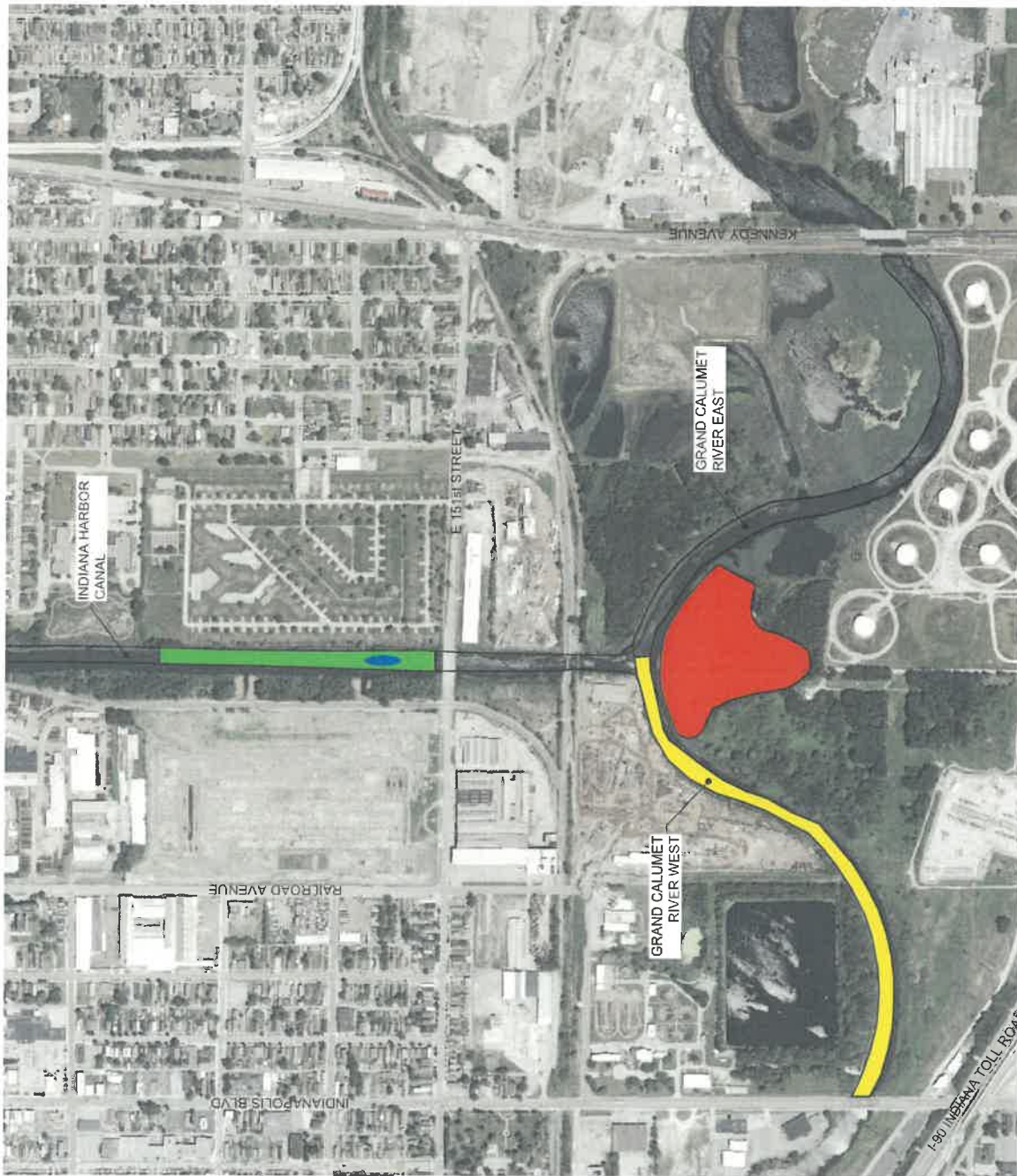
GRAND CALUMET RIVER  
JUNCTION EAST

0 1,000 2,000  
Feet





**Figure (3)**  
**GCR Phase I Remediation Summary**

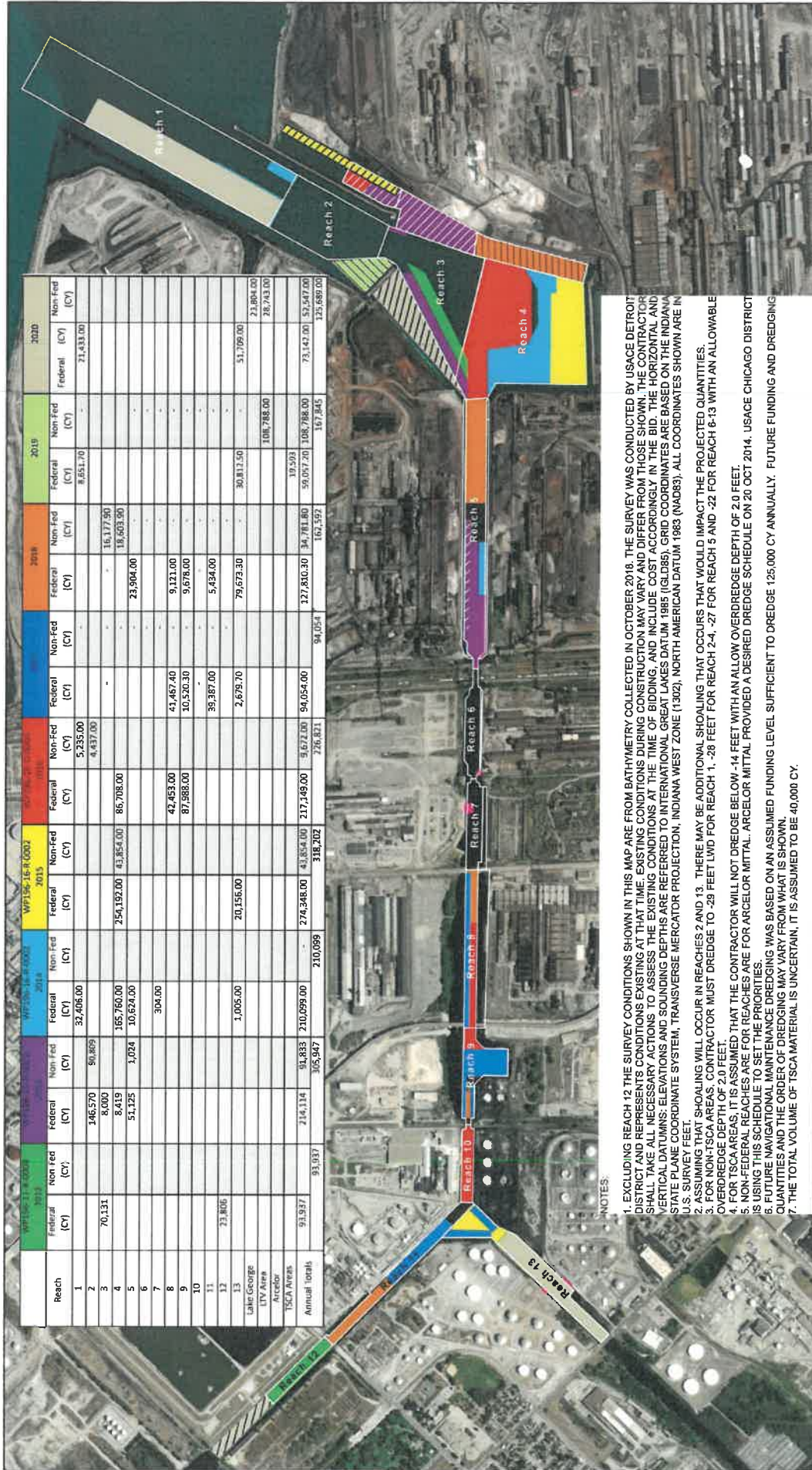


**LEGEND**

- IHC NON TSCA DREDGE ONLY (41,000 CY)
- IHC TSCA DREDGE ONLY (1,000 CY)
- GCR-W DREDGE AND CAP (DREDGE: 22,000 CY, CAP: 10,500 CY)
- JUNCTION MARSH RESTORATION (40,000 CY)



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



NOTES:

- 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. REACH 12 SURVEY CONDITIONS EXISTING AT THAT TIME. EXISTING CONDITIONS DURING CONSTRUCTION MAY VARY AND DIFFER FROM THOSE SHOWN. THE CONTRACTOR SHALL VERIFY ALL THESE SURVEY CONDITIONS AT THE TIME OF BIDDING, AND INCLUDE COST ACCORDINGLY IN THE BID. THE HORIZONTAL AND VERTICAL DATUMS, ELEVATIONS AND SLOPES REFERRED TO INTERIOR 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.
- ASSUMING THAT SHOALING WILL OCCUR IN REACHES 2 AND 13. THERE MAY BE ADDITIONAL SHOALING THAT OCCURS THAT WOULD IMPACT THE PROJECTED QUANTITIES.
- FOR NON-TSCA AREAS, CONTRACTOR MUST DREDGE TO -29 FEET LWL FOR REACH 1, -28 FEET FOR REACH 24, -27 FOR REACH 5 AND 22 FOR REACH 6-13 WITH AN ALLOWABLE OVERDREDGE DEPTH OF 2.0 FEET.
- FOR TSCA AREAS, IT IS ASSUMED THAT THE CONTRACTOR WILL NOT DREDGE BELOW -14 FEET WITH AN ALLOW OVERDREDGE DEPTH OF 2.0 FEET.
- 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.
- 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.
- THE TOTAL VOLUME OF TSCA MATERIAL IS UNCERTAIN, IT IS ASSUMED TO BE 40,000 CY.

**U.S. Army Corps  
Of Engineers®**  
Chicago District

**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

**Legend**

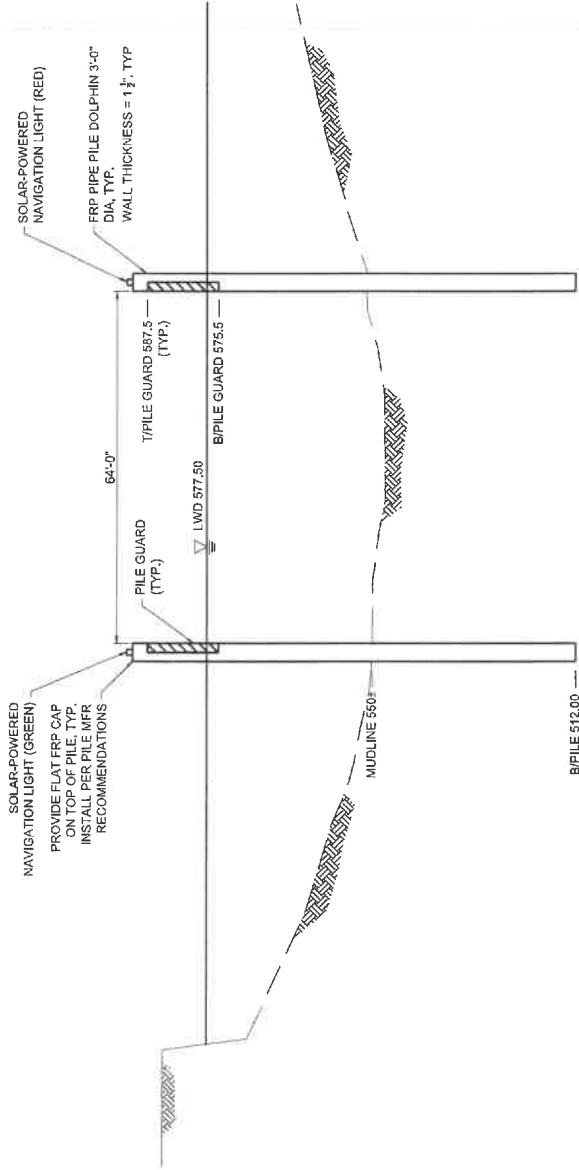
	2012, Federal		2014, Federal		2016, Non-Federal		2018, Federal		2019, Non-Federal		2020, Non-Federal
	2013, Non-Federal		2015, Federal		2016, Federal		2018, Non-Federal		2019 - TSCA		2020, Federal
	2013, Federal		2015, Non-Federal		2017, Federal		2019, Federal				



**PROJECT**  
Indiana Ship Canal  
at Canal Street Bridge  
Dolphins

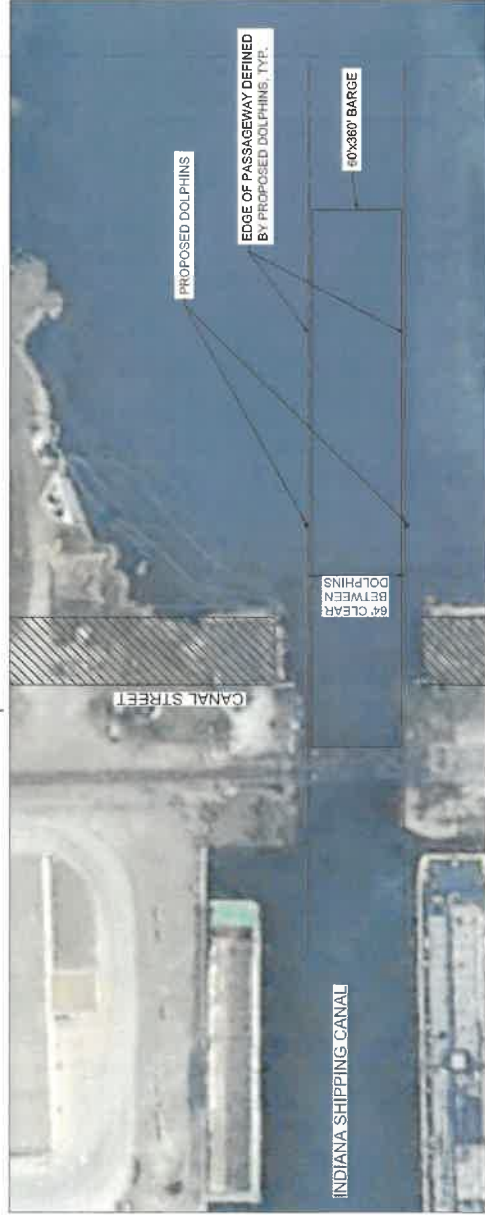
**CLIENT**  
East Chicago Waterway  
Management District

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



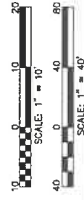
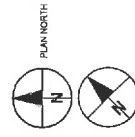
**SECTION VIEW**

Scale 1" = 10'



**PLAN VIEW**

Scale 1" = 40'



**FIGURE 5**