United States Environmental Protection Agency

Great Lakes Restoration Initiative (GLRI)

The GLRI accelerates efforts to protect and restore the largest system of fresh surface water in the world – the Great Lakes. Since 2010 the GLRI has provided funding to 16 federal organizations to strategically target the biggest threats to the Great Lakes ecosystem and to accelerate progress toward achieving long term restoration goals.

For more information, visit: www.glri.us

Great Lakes Legacy Act (GLLA)

Under the GLLA, the federal government provides up to 65% of the cost of projects to address contaminated sediments in AOCs, while the remaining portion comes from cities, states, and businesses. As of 2022, GLLA partnerships have cleaned up 32 sites within 12 Areas of Concern and remediated about 6.2 million cubic yards of contaminated sediment.

Legacy Act cleanups have been a springboard for communities to build a foundation for future growth by transforming former contaminated hot spots into attractive locations with thriving ecosystems and expanded opportunities for education and recreational uses. Areas that were obstacles to economic growth are now valuable waterfront assets.

For more information, visit: www.epa.gov/great-lakes-aocs/great-lakes-legacy-act

Contact EPA

For more information, questions or to apply for a Legacy Act project, visit https://www.epa.gov/great-lakes-aocs/applying-great-lakes-legacy-act-funding or contact:

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Grand Calumet River Eastern Five Miles Project Update

Great Lakes Legacy Act Project
Gary, Indiana May 2024

The U.S. Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) has entered into a Great Lakes Legacy Act (GLLA) Project Agreement with the United States Steel Corporation (USS) to conduct a sediment investigation and feasibility study for the Eastern Five Miles of the Grand Calumet River (GCRE5M) and the Marquette Lagoons. These areas are located within the Grand Calumet River Area of Concern (AOC) in northern Lake County, Indiana. In the Summer of 2024, the EPA and USS will conduct sampling in the Grand Calumet River, Marquette Lagoons, and ponds located in the Buffer Areas between USS and the Indiana Dunes National Park. The project goals are: (1) to determine the nature and extent of sediment contamination, (2) assess potential risks from this contamination based on collected data, and (3) evaluate potential clean up alternatives, if necessary, to protect people and the environment. This project will contribute to removing six of the 12 remaining Beneficial Use Impairments (BUIs) applicable to the Grand Calumet AOC (listed on the next page) and eventual delisting.

Figure 1. Layout of the Grand Calumet River AOC. The Eastern Five Miles of the river is outlined in red. Project waterways are highlighted in blue.

Site Background

In the 20th century, the area surrounding the Grand Calumet River experienced an influx of steel mills, foundries, chemical plants, oil refineries, meat packing industries, and pharmaceutical industries. Prior to the 1972 Clean Water Act, these industries released industrial waste, and some nearby cities discharged untreated sewage, into the river. In addition, non-point sources of contaminants – when water from rain and snowmelt carries pollutants into waterways – affected water quality in the river.

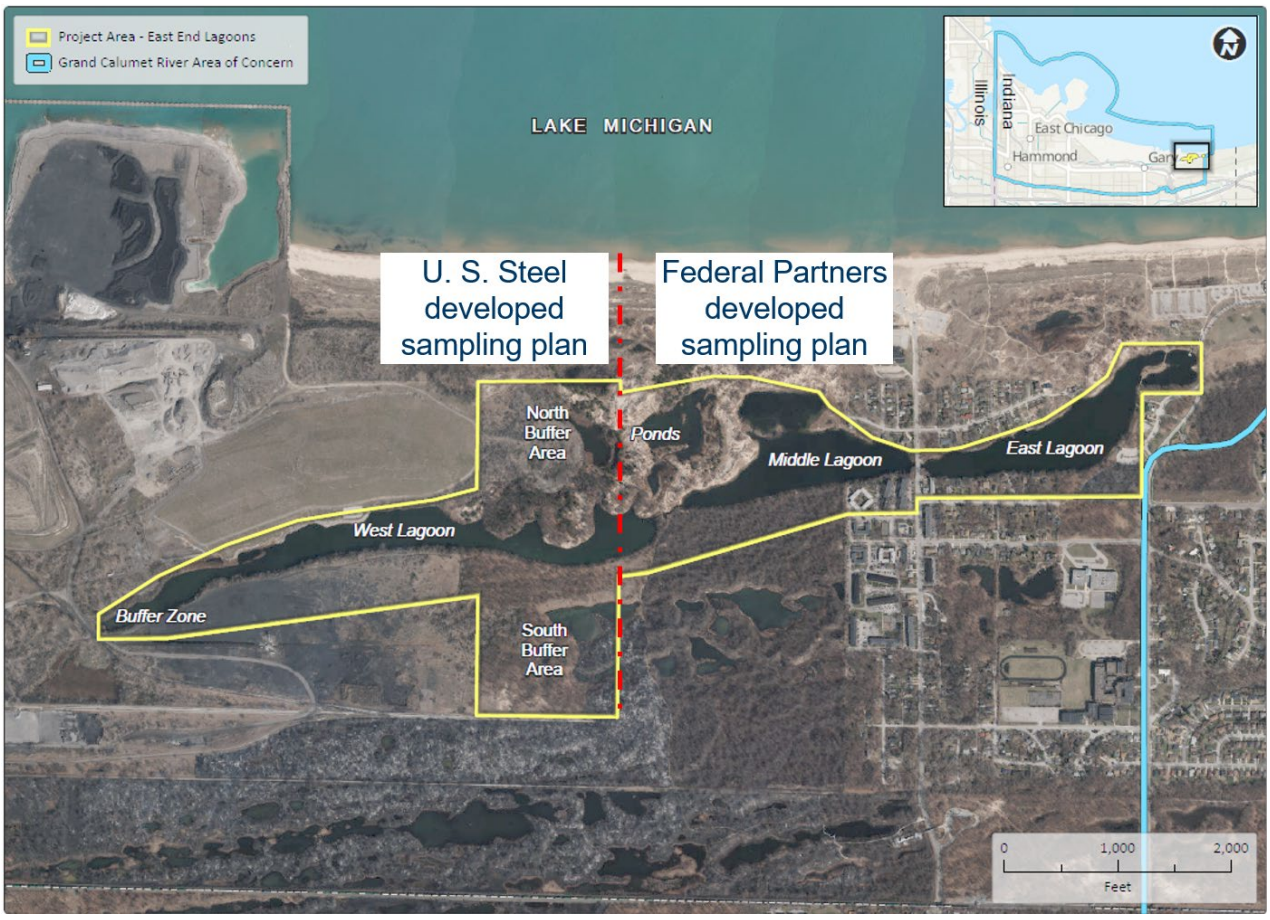

Figure 2. Layout of the Marquette Lagoons and Buffer Areas. USS, in partnership with U.S. EPA, will lead the sampling of the West Lagoon and Buffer Areas.

Beneficial Use Impairments (BUIs)

BUIs refer to any chemical, physical, or biological changes to the Great Lakes System that lead to the loss of important ecosystem services for plants, animals, and people. Although 12 BUIs remain within the Grand Calumet River AOC, the AOC-wide BUIs applicable to this project area include the following:

- Restrictions on fish and wildlife consumption
- Degradation of fish and wildlife populations
- Fish tumors or other deformities
- Bird or animal deformities or reproduction problems
- Degradation of benthos (organisms living at the bottom of bodies of water)
- Loss of fish and wildlife habitat

Cleanup Activities on the Grand Calumet River Eastern Five Miles

The Grand Calumet River and connected waterways were designated as an AOC under the Great Lakes Water Quality Agreement of 1987, largely due to legacy pollutants, which can remain in the environment for extended time periods. Pollutants found at the bottom of the Grand Calumet River include polychlorinated biphenyls (PCB), polycyclic aromatic hydrocarbons (PAHs), heavy metals, oils, and tars.

USS previously conducted cleanup activities in the project area as part of its Resource Conservation and Recovery Act (RCRA) Corrective Action Program through a U.S. EPA Administrative Order. This work included extensive sediment dredging, construction of a passive dewatering system disposal area (called a Corrective Action Management Unit or CAMU), removal of over 200 drums in the West Lagoon, and installation of a remediation system along this section of the Grand Calumet River. Despite this work, recent sediment studies have indicated remnant contamination capable of causing adverse environmental impacts likely remains.

Current Status

In the Summer of 2024, you may see EPA and USS field crews or their contractors conducting sediment and soil sampling activities in the Grand Calumet River, Marquette Lagoons and Buffer Areas as part of this project. The EPA will lead sampling in the river and the East and Middle Marquette Lagoons. USS, in partnership with the EPA, will lead the sampling of the West Marquette Lagoon and Buffer Areas on its property. The East and Middle Marquette Lagoons border the Indiana Dunes National Park.

What is the Resource Conservation and Recovery Act (RCRA) Corrective Action Program?

RCRA is the principal federal law in the U.S. governing the disposal of solid and hazardous wastes. RCRA gives U.S. EPA authority to legally enforce requirements for waste management.

The RCRA Corrective Action program requires facilities that treat, store or dispose of hazardous wastes to investigate and clean up hazardous releases into soil, groundwater, surface water and air.

Corrective action is principally implemented through RCRA permits and orders. RCRA permits issued to treatment, storage and disposal facilities must include provisions for corrective action as well as financial assurance to cover the costs of implementing those cleanup measures.

For more information on RCRA Corrective Action, visit: https://www.epa.gov/hw/learn-about-corrective-action

Sampling will help define the nature and extent of sediment contamination, address data gaps from previous sampling events, and provide bathymetry and basic geotechnical data. Bathymetry is a survey of the riverbed surface to help engineers better understand variations in depth. Geotechnical data will help define the type, quantity, properties, and location of any impacted sediment to be removed, if necessary.

For more information on remediation and restoration projects on the Grand Calumet River AOC, visit: https://www.epa.gov/great-lakes-aocs/remediation-and-restoration-projects-grand-calumet-river-aoc

Figure 3. An example of sediment sampling on a vibracore vessel. Source: https://www.affiliatedresearchers.com/vibracore-sediment-sampling-projects/

Figure 4. An example of sediment sampling using a core sampler. Source: http://www.forestry-suppliers.com/product_pages/products.php?mi=70121