

## Fordson Island Debris Removal and Habitat Restoration

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### Project Overview

**Reason for project:** The overall goal was to initiate the restoration of the natural onshore and offshore habitat in the oxbow around Fordson Island.

**Date initiated:** August 2010

**Project duration:** 21 months

### Project Location

**Location:** Rouge River, Dearborn/Detroit, MI

**Site Name(s):** Fordson Island Oxbow

**General description of location:** In the oxbow around Fordson Island, a six acre island in the Rouge River.

Vessels were in the channel, on the banks of the island and on the banks of the adjacent shoreline.

**Average Site Depth:** 2 ft.

**Habitat/Substrate Type Impacted:** soft bottom, wild celery (*Vallisneria americana*). Shoreline dominated by reed canary grass (*Phragmites australis*).

**Jurisdictions:** Cities of Dearborn (island) and Detroit (adjacent land), Wayne County, State of Michigan



### Project Narrative

**History:** The approximately six acre Fordson Island was created in 1917 by the dredging and channeling of the Rouge River to the Ford Motor Company - River Rouge Plant, which is located approximately 1,800-feet upstream. The Ford Motor Company was contracted during World War I to build submarine chasers (known as Eagle Boats) at the plant. The dredging provided a deeper channel allowing these newly constructed boats a means to travel down the Rouge River into the deeper water of the Detroit River. This excavation removed the adjoining properties to the north and east, and created the unique feature of this land – the island is located within the limits of the City of Dearborn, but land access is provided via a bridge from the City of Detroit.

The original river channel remains as an Oxbow along the western and southern shores of the island. The flow within the oxbow channel has practically ceased due to sand and silt deposits. The secluded nature of the channel became a popular place to abandon boats and other debris until the channel became too shallow for navigation.

After the channel was completed in 1922, several people purchased lots on the island and constructed riverfront homes. The residents lived on the island from approximately 1922 until approximately 1989. In 1989, the City of Detroit removed the last five remaining residents through a special program.

Heavy industry and urban development in the surrounding area has transformed much of the native landscape into impervious surfaces, such as roads, parking lots, rooftops and turf areas. The island contains over 2,500-feet of shoreline frontage along the Rouge River, which represents one of the few remaining – and likely the most significant in area – available habitats in this portion of the Rouge River.

**Why was the project initiated:** Friends of the Rouge (FOTR), a nonprofit organization focused on the Rouge River, discovered the abandoned vessels in 2007 when they began organizing public kayak



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tours on this industrial stretch of the Rouge River. Tour participants were fascinated and horrified by the large number of derelict vessels abandoned in the oxbow. Fordson Island and the oxbow contain some of the last remaining natural habitat within this highly industrialized area. FOTR had been organizing an annual cleanup along the shoreline in conjunction with Southwest Detroit Environmental Vision and residents along the oxbow had built a dock and small park and connected strongly to the river. The vessels were an eyesore and prevented habitat restoration. The US Army Corps had developed a plan for the restoration of the island and the long term plan was to make this area a passive recreation nature park. FOTR identified an opportunity to apply for funding with public-sector partner, the Detroit Wayne County Port Authority (DWCPA).

**Who initiated the project:** Friends of the Rouge.

**Lead agency or organization:** Detroit Wayne County Port Authority (DWCPA) and AKT Peerless.

**Other collaborators/stakeholders involved:** Friends of the Rouge, Southwest Detroit Environmental Vision, Detroit Riverkeeper, Friends of the Detroit River, City of Detroit Department of Environmental Affairs, AKT Peerless, Michigan Department of Environmental Quality, Detroit Riverfront Conservancy, University of Michigan-Dearborn, City of Dearborn, U.S. Coast Guard, U.S. Army Corps of Engineers, Faust Corporation, Marine Pollution Control, Waste Management, U.S. Industrial Technologies Inc.

**Funding source(s):** NOAA GLRI Marine Debris Program Grant with match funding provided by DWCPA, AKT Peerless, FOTR and contractors.

### Threats from ADV

**Environmental:** Three vessels had fuel tanks containing gasoline mixed with water.

**Critical habitats involved:** The oxbow provides spawning habitat for centrarchids and northern pike and a resting and feeding spot for migratory waterfowl and birds. It is literally an island of habitat in the midst of a vast industrial area and therefore provides the only habitat for miles around.

**Public safety and health:** The vessels were partially submerged and dangerous.

**Navigation:** The oxbow is navigable by small boats with a shallow draft only under high water conditions.

**Commerce:** see above

**Aesthetic:** The vessels were a terrible eyesore.

**Other threats:** The debris was an attractive nuisance for neighborhood children and invited additional illegal dumping.

### Summary of Removal

**Number of vessels:** 20

**Primary vessel type:** Recreational, fishing and house boats

**Primary hull type:** Wood, fiberglass and steel

**Average vessel size:** 9 to 32 ft.

**Acres restored via removal:** 0.5

**Approximate removal costs:** \$12,000

**Additional debris removed:** 18 tires, 2 boat houses, 13 fuel tanks



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**Vessel removal summary:** Between May 23 and June 9, 2011, AKT Peerless and FOTR oversaw the removal of 18 boats from six sections along the western shoreline of Fordson Island. The Faust Corporation (Faust) completed the removal activities and Marine Pollution Control (MPC) provided in-stream assistance and pollution prevention services during removal activities. Prior to removal of the boats, Faust created access to all boats by removing heavy vegetation along the shoreline. Care was taken not to remove more vegetation than necessary or damage large trees. MPC installed containment booms upstream and downstream of the removal area. Waste Management delivered approximately four 30-yard roll-off boxes for disposal of boats and debris.

On May 23, 2011, boat and debris removal activities began on the northern portion of the Project Area, and moved to the south as work progressed. The removed boats ranged in size from nine feet to 32 feet in length, and were constructed of wood, fiberglass and steel. Several of the boats were partially submerged and were removed in pieces. The boats were crushed and the resulting debris was placed in 30-yard roll off boxes. Waste Management transported over eight 30-yard roll off boxes containing crushed boats and debris to Woodland Meadows Landfill in Wayne, Michigan. When possible, Faust salvaged the available metal from the boats, and transported this material to a metal recycling facility. Following the completion of the boat removal activities MPC removed the containment booms and demobilized from the Project Area.

On June 1, 2011, AKT Peerless oversaw the removal of two boat houses. The first boat house was located on the northern portion of the removal area and was constructed of wood and metal (Boat House 1). The second boat house was located on the southern portion of the removal area and was constructed of steel (Boat House 2). Boat House 1 was disposed in a 30-yard roll off and Boat House 2 was staged on-site and later salvaged by Faust.

Approximately 13 fuel tanks were discovered in the removed boats. With the exception of three, these fuel tanks were not intact and contained only water. Three fuel tanks were discovered that contained a gasoline/water mixture. The first gasoline containing fuel tank was discovered on Boat #2, a blue/white fiberglass boat, on May 23, 2011. This tank was removed from Boat #2 and transferred to a Visqueen staging area on land. The contents of the tank were transferred via pump to a 55-gallon drum for subsequent disposal.

On May 26, 2011, the second and third fuel tanks containing gasoline were discovered during the removal of Boat #13 (a red, white, and blue, fiberglass house boat). The contents of these fuel tanks were transferred to 55-gallon drums. In total, four 55-gallon drums containing a gasoline/water mixture were staged on site until the project was completed. AKT Peerless retained U.S. Industrial Technologies Inc. (USIT) to characterize, transport, and dispose of these drums.

### **Project Removal Actions**

**Start date:** May 23, 2011

**End date:** June 9, 2011

**Removal options considered:** The shallow channel with dense vegetation made this a difficult removal, and removal with excavator was the best available option. The presence of a marine hauling company on the island that was the best bid for a contractor improved the logistics.



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**Environmental Considerations:** Marine Pollution Control was contracted to take care of any potential spills during the removal. They placed booms at either end of the oxbow and stationed their cleanup vessel in the oxbow during removal.

**Removal Methods:** Vessels were removed using heavy equipment based on the island for most of the boats and based on the adjacent shore for two of the boats. The larger steel vessels were cut into pieces prior to removal. One of the boats had the water pumped out until it could be floated to shore and dismantled.

**Authorities used to take Possession of Vessels:** None of the vessels had current licenses and those that did were expired beyond the time period for the state to retain records. The project team created a press release, distributed a neighborhood mailing, interviewed nearby residents, reviewed numbers with the Michigan State Police and U.S. Coast Guard and held a public meeting. Only one owner was found who then gave permission for the removal of the two named vessels (The Other Rudder and Yo Baby Yo).

**Permits Required:** USACE permit and Historical Review.

**Salvage Contractor(s):** Faust Corporation

**Contractor Selection Process:** Three bids were received.

**Vessel Disposal Process/Issues:** Waste Management provided roll-off containers and hauled and disposed of waste in a landfill; Faust Corporation cut up the steel and took it to a recycler, U.S. Industrial Technologies disposed of fuel after it was transferred to 55 gallon drums.

## Project Challenges

**Environmental:** Partial or whole submersion, thick vegetation or buried, it was difficult to determine the number of vessels and whether there were any fuels or other contaminants. The oxbow is connected to the Rouge River shipping channel and into the Detroit River and Lake Erie, so any leaks could contaminate a wide area.

**Geographical:** The shallow channel and thick vegetation prevented the use of a barge or any other large vessel to assist with the removal. The partial submersion of many of the vessels made it difficult to determine how to remove them.

**Weather/Seasonal:** This was the largest challenge. Project approval delayed the work into fall and winter weather prevented the start until spring. High rain events in the spring elevated water levels and delayed the work further.

**Funding:** The NOAA grant made this work possible along with 50% local match.

## Lessons learned:

The removal of abandoned boats and debris from a shallow channel along a densely vegetated island was a difficult task. The Project Team did not have the benefit of reviewing documentation associated with previously completed and similar projects because such projects did not exist. The Project Team offers the following list of Lessons Learned in the hopes of supporting future projects with this information.

- **Identification of Boat Owners** – Our Project Team made several attempts to identify the owners of abandoned boats in the Project Area. We were concerned with the potential liability



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associated with removing and disposing of boats with unknown ownership histories. In order to combat this issue, the Project Team (1) created press releases, (2) distributed a neighborhood mailing, (3) interviewed nearby residents, (4) reviewed registration numbers with the Michigan State Police and U.S. Coast Guard, and (5) held public meetings. Our recommendation for future projects would be to follow a similar protocol.

- **Permitting** – Due to the unusual nature of this project, there was some early confusion regarding the appropriate agency that would regulate the removal action. Initially, the Project Team was told that no permitting was necessary since sediments in the channel wouldn't be removed. However, during the weather delay, the Project Team was informed that the U.S. Coast Guard would require review and approval of the project by the State Historic Preservation Office and USCG. The Project Team was able to complete these activities during the weather delay; however, these review and approvals could have caused significant delays otherwise. Our recommendation for future projects would be to verify the permitting process well in advance of the project, and request approvals in writing to avoid miscommunication.
- **Weather** – There is no accounting for weather. This project received funding approval very late in the Fall and wasn't able to begin removal activities until the Spring due to Winter weather delays. We also encountered record high water levels during boat removal due to a significant storm event in the Spring. Our recommendation for future projects would be to prepare for delays due to weather by having contingencies in contracts with contractors.

### Contact Information:

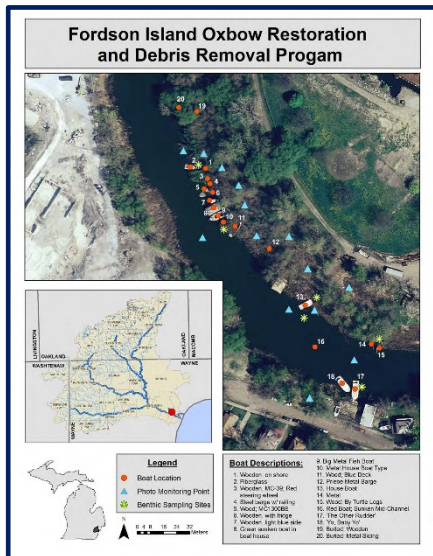
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## Images:



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### Vessels Removed

Vessel name	Vessel Type	Time abandoned	Incident	Length	Hull material
1			Abandoned	17	wood
2		2001 license	Abandoned	17	fiberglass
3			Abandoned		wood
4	barge		Abandoned	30	steel
5			Abandoned	20	wood
6			Abandoned	20	wood
7			Abandoned	20	wood
8			Abandoned	17	fiberglass
9	Fish boat		Abandoned	30	steel
10	houseboat	1997 license	Abandoned	30	steel
11			Abandoned	20	wood
12	barge		Abandoned		steel
13	houseboat		Abandoned	30	fiberglass
14			Abandoned		steel
15			Abandoned		wood
16			Abandoned	17	fiberglass
The Other Rudder			Abandoned	30	fiberglass
Yo, Baby Yo		1997 license	Abandoned	20	wood
19			Abandoned		wood
20			Abandoned		steel