An aerial photograph of Green Bay, Wisconsin, showing the shoreline and surrounding land. The water is a deep blue, and the land is a mix of green and brown. The title is overlaid on the top half of the image.

# **Moving the Needle in Green Bay: Collaboration to Restore the World's Largest Freshwater Estuary**

Brie Kupsky  
Green Bay Program Coordinator  
Office of Great Waters



This region is among the most diverse,  
productive, and economically thriving  
freshwater systems in the world





Infographic courtesy UW-Extension

- *Wisconsin's dairy industry generates ~\$45B annually, ~10% of that from Brown County*
- *Wisconsin's outdoor recreation generates \$7.8B annually, \$900M generated through GB and Lake Winnebago sport fishery and Wolf River recreation*



*Image courtesy Brown County Dairy  
Promotion*



*Image courtesy Green Bay Press  
Gazette*



*Image courtesy Photodynamix*





*Paper Mill Effluent on Fox River: 1973*

**FISH UNABLE TO  
EXIST IN EAST  
AND FOX RIVERS**



**The shorelines of death**

Great Lakes a lingering hazard to many animals' health

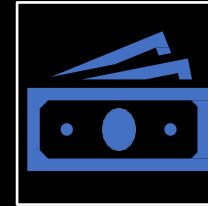
*Green Bay Press Gazette - 1927*

*Appleton Post Crescent - 1990*

# Lower Fox River PCB Cleanup Project: Completed in 2020



8,200,000 cubic yards of contaminated sediment remediated from the river from 2009-2020.



\$1B cleanup paid for by Responsible Parties



Over 140 workers on site daily for over 10 years, bringing in new talent and enhancing local economy

# Key Partners





# Duck Creek Delta and Cat Island Chain



1938



2020





(c) Jacob Woulf



Photo courtesy Tom Prestby



Photo courtesy Amy Wolf and  
Bob Howe

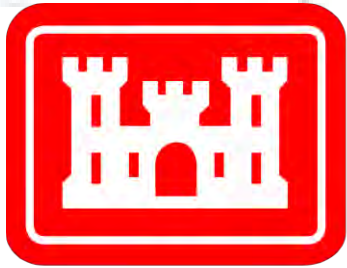
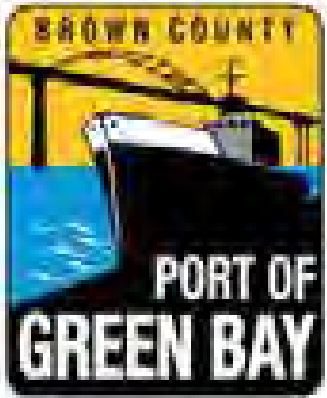




*Photo courtesy Fox 11 and WLUK*



# Key Partners

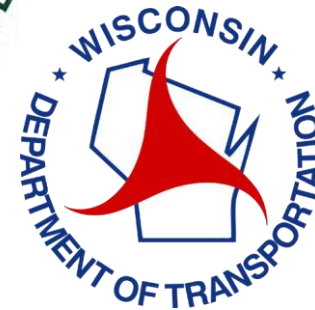


**US Army Corps  
of Engineers®**

**Great Lakes  
RESTORATION**



**Cofrin Center for Biodiversity**  
UNIVERSITY of WISCONSIN-GREEN BAY



**CLEAN BAY  
BACKERS**







# Lower Fox River Watershed Recovery Plan



- Implementation Action Plan
- Funding Strategy
- Shared Measurement
- Shared Decision Making

*“Never forget that you live at the mouth of the largest freshwater estuary in the world...and never forget the great responsibility you bear for that.” – Jack Day*

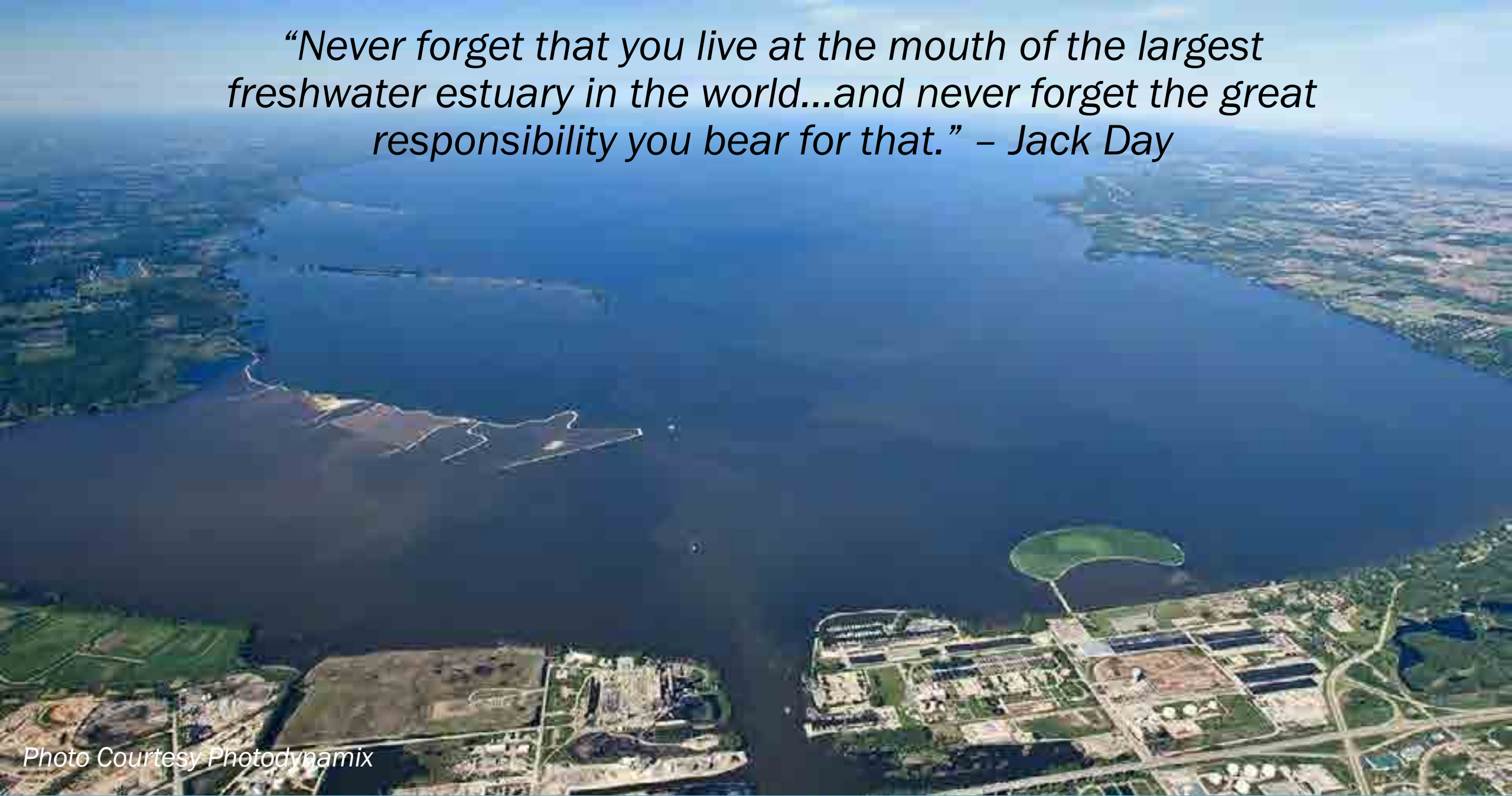


Photo Courtesy Photodynamix



# CONNECT WITH US

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/WIDNRTV



"WILD WISCONSIN:  
OFF THE RECORD"

# REUSE, RESTORE, REPLENISH – BENEFICIAL USE OF DREDGED SEDIMENT IN THE LOWER GREEN BAY/ FOX RIVER AOC

June 26<sup>th</sup>, 2023

Patrick J. Kennedy

Project Manager

USACE, Chicago District

patrick.j.kennedy@usace.army.mil

GLRI Inter-Agency Economy Act Agreement  
Focus Area 1 – Toxic Substances and AOCs



Source: Fox River MROA



Northfork Illinois, Chicago IL



Cal Island, Green Bay, WI



U.S. ARMY



US Army Corps  
of Engineers



ERDC



WISCONSIN  
DEPT. OF NATURAL RESOURCES



# Fox River/Green Bay Natural Resource Damage Assessment & Restoration

Green Bay Field Office  
Betsy M. Galbraith, Deputy Field Supervisor  
Minnesota-Wisconsin Ecological Services

Rush Lake. Photo courtesy of Ducks Unlimited

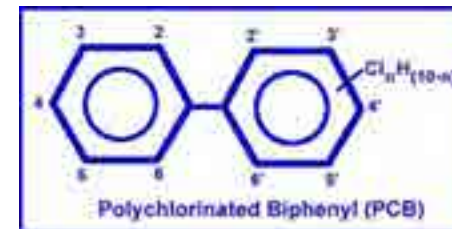




# Degradation of the Lower Fox River & Green Bay Ecosystem



- “Hardest working river in the country”
- Designated Area of Concern (AOC); 11 BUIs
- Impaired by excessive nutrient and phosphorous loading
- PCBs



Restore



Replace

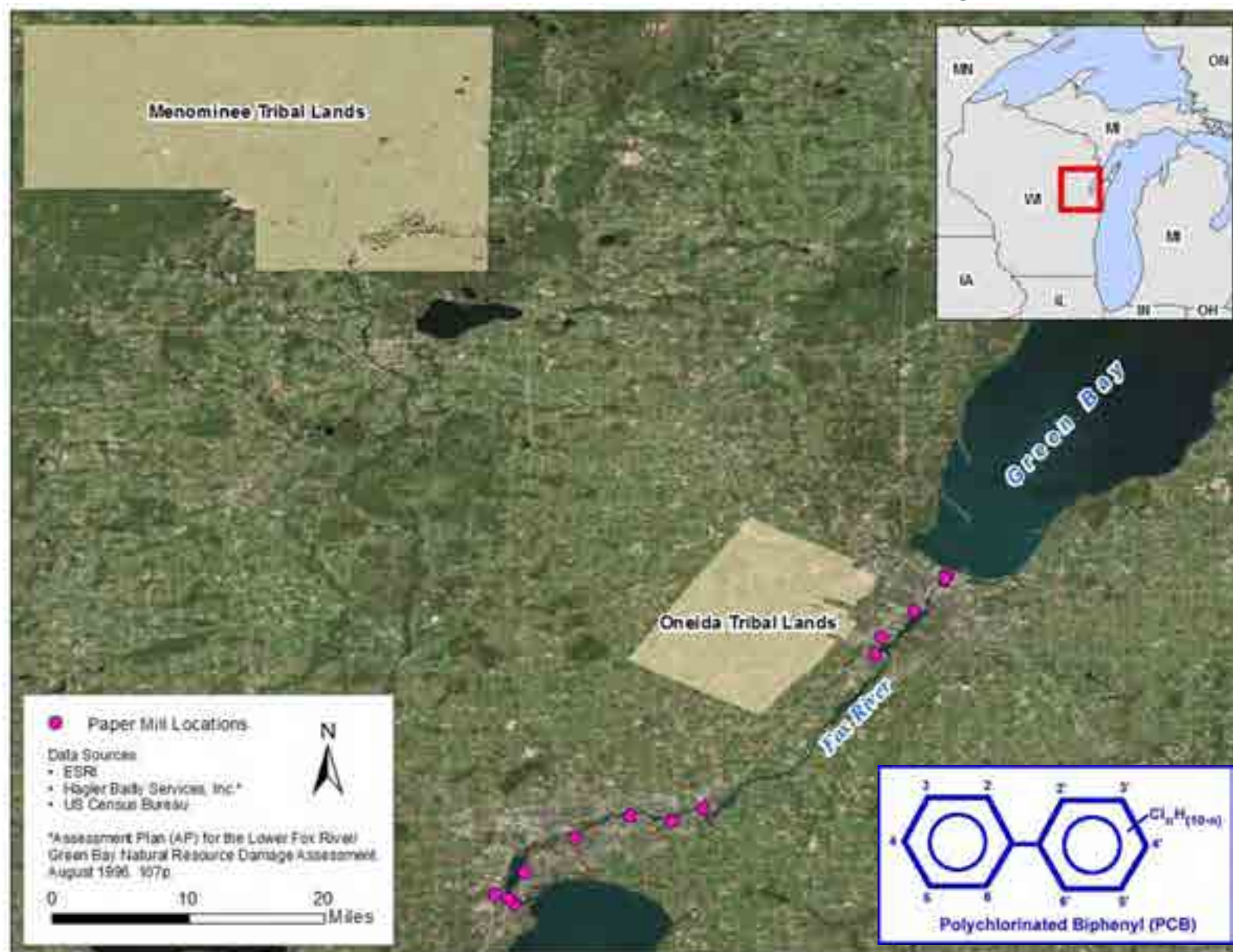


Acquire





# What is the Fox River/Green Bay NRDAR?



Restore



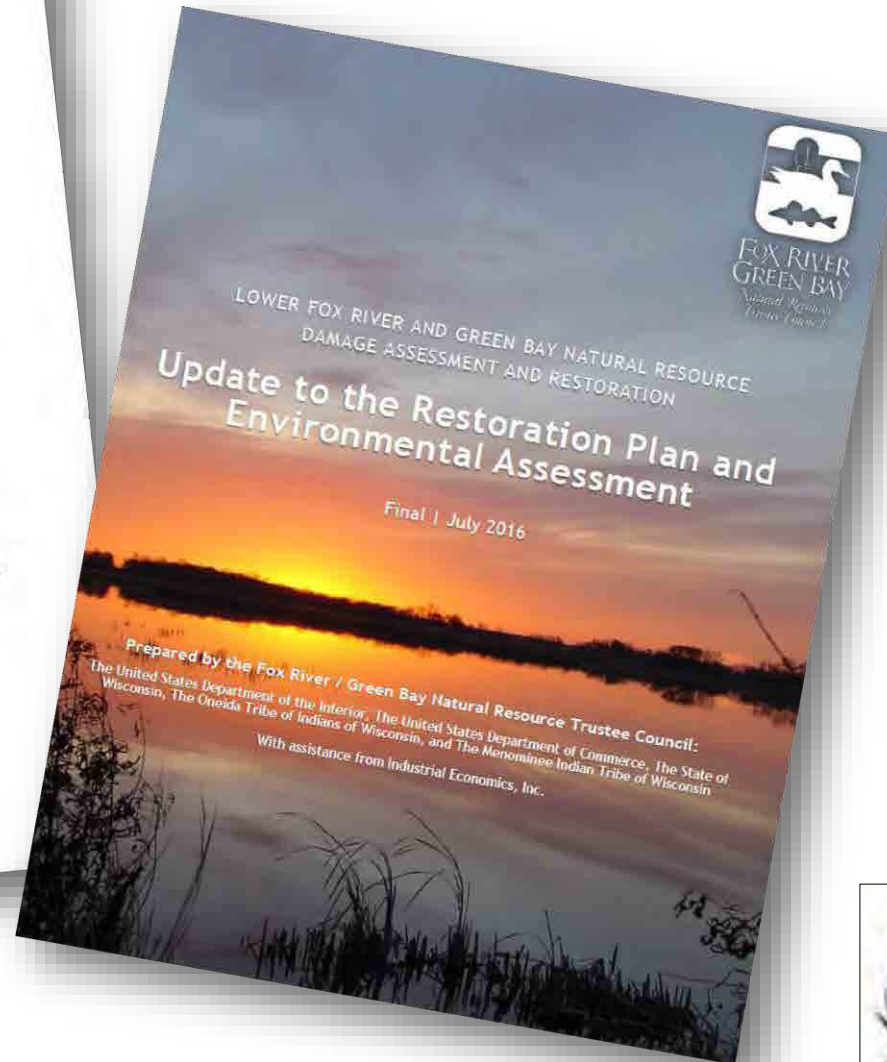
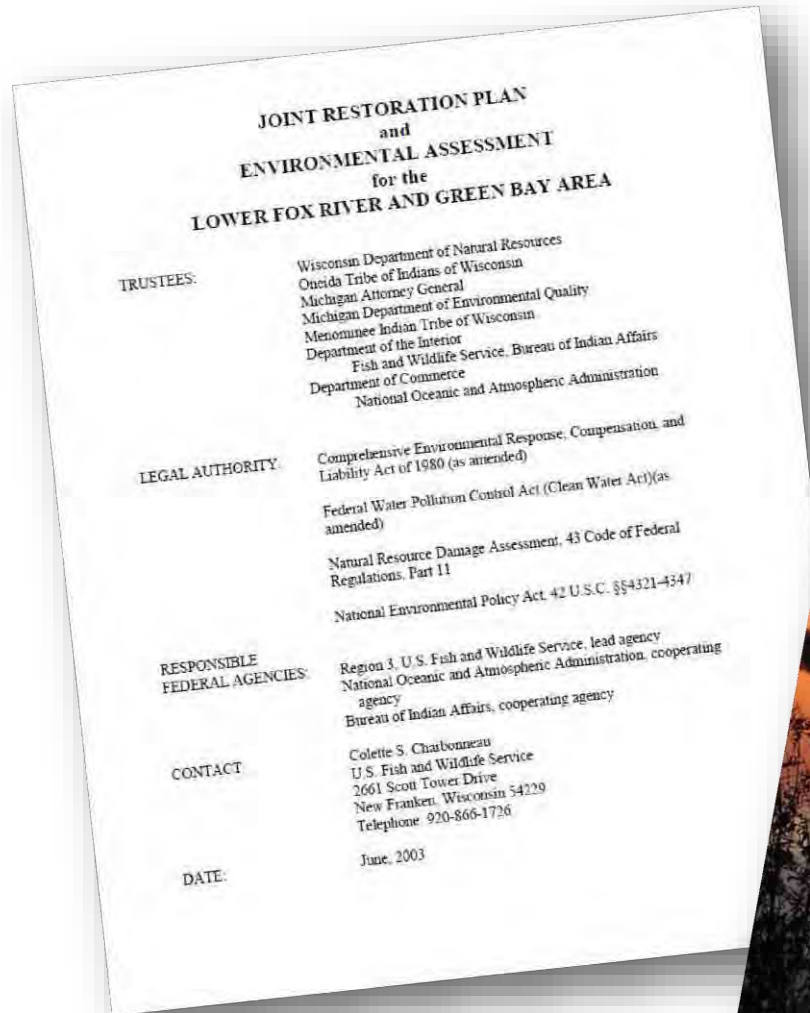
Replace



Acquire



# Restoration Plans – 2003 & 2016



Restore



Replace



Acquire







# Lower Fox River/Green Bay Council



A good mind. A good heart. A strong fire.

## Trustees

**Tehassi Hill**  
Tribal Chairman  
Oneida Nation

**Lori Nordstrom**  
ARD – Ecological  
Services  
Region 3, US FWS

**James Zellmer**  
Env. Division  
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WI DNR

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Betsy Galbraith  
US FWS

**Dave Boyarski**  
Josh Martinez  
WI DNR

**Jeremy Pyatskowit**  
Environmental  
Services Dept  
Menominee Tribe

## Technical Team

Since 2002, over 220 projects initiated!

Over 22,800 acres preserved or restored

+ fisheries, recreational &  
cultural benefits

Over \$52 million in NRDA  
settlement funds spent

Over \$60 million in  
partnership funds leveraged

(As of Dec 31, 2021)

Restore



Replace



Acquire







# Aquatic, Nearshore, and Riparian Habitat Improvement Fishery Resource Enhancements Public Use Enhancements



*Sensiba State Wildlife Area. Trina Soyk.*





*Photo credit: Ben Young, June 2020*



