# The Use of Science for Fisheries Restoration in the Huron-Erie Corridor

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NCER, Chicago, IL, July 31, 2013

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# Acknowledgements / Partners


- BASF Corp.
- Department of Fisheries and Oceans, Canada
- DTE Energy
- Essex Region Conservation Authority
- Great Lakes Fishery Commission
- JJR LLC
- Michigan DNR
- Michigan Sea Grant
- Michigan Wildlife Conservancy
- National Atmospheric and Oceanic Administration
- Ontario Ministry of Natural Resources
- University of Michigan
- U.S. Army Corps of Engineers
- U.S. EPA Great Lakes Program Office
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- Walpole Island First Nation


USGS/USFWS Science Support Program

# Lake Sturgeon Facts

- Largest fish in the Great Lakes.
- They can live 120+ yrs.
- They have been known to reach 2.5 meters in length and weigh between 45 and 140 kg.
- Spring spawner at water temperatures of 9-16° C.
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- Seek out fast moving, well oxygenated water and coarse rock rubble.
- They take 15-20 years to reach sexual maturity.
- Females spawn once every 4-7 years.

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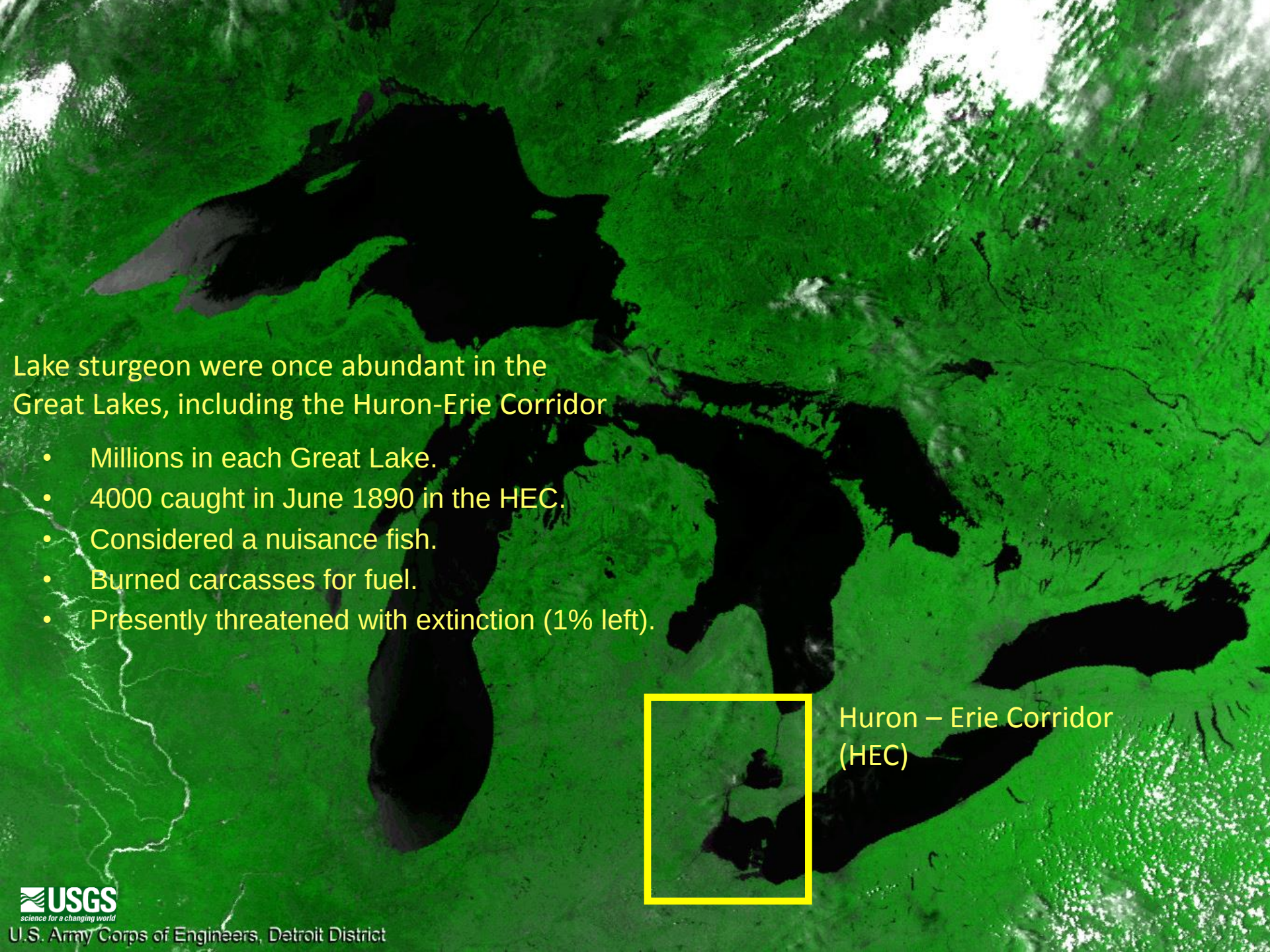
Lake sturgeon were once abundant in the
Great Lakes, including the Huron-Erie Corridor
• Millions in each Great Lake.
• 4000 caught in June 1890 in the HEC.
• Considered a nuisance fish.
• Burned carcasses for fuel.
• Presently threatened with extinction (1% left).
Huron – Erie Corridor
(HEC)
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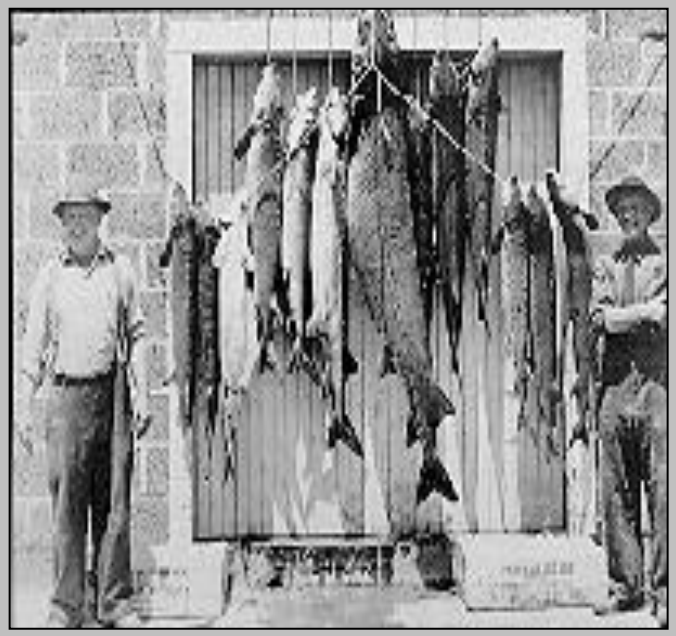
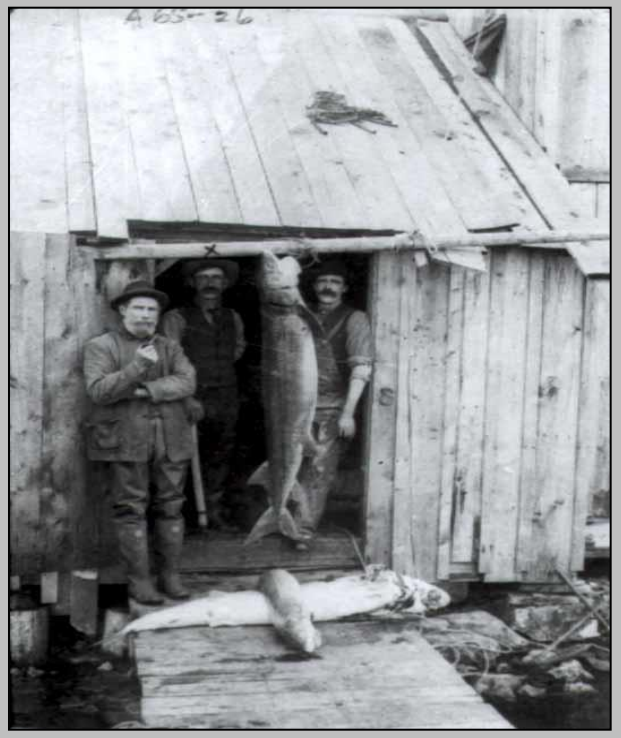
# Millions Were Caught



**Massive overfishing for flesh, oil & eggs**



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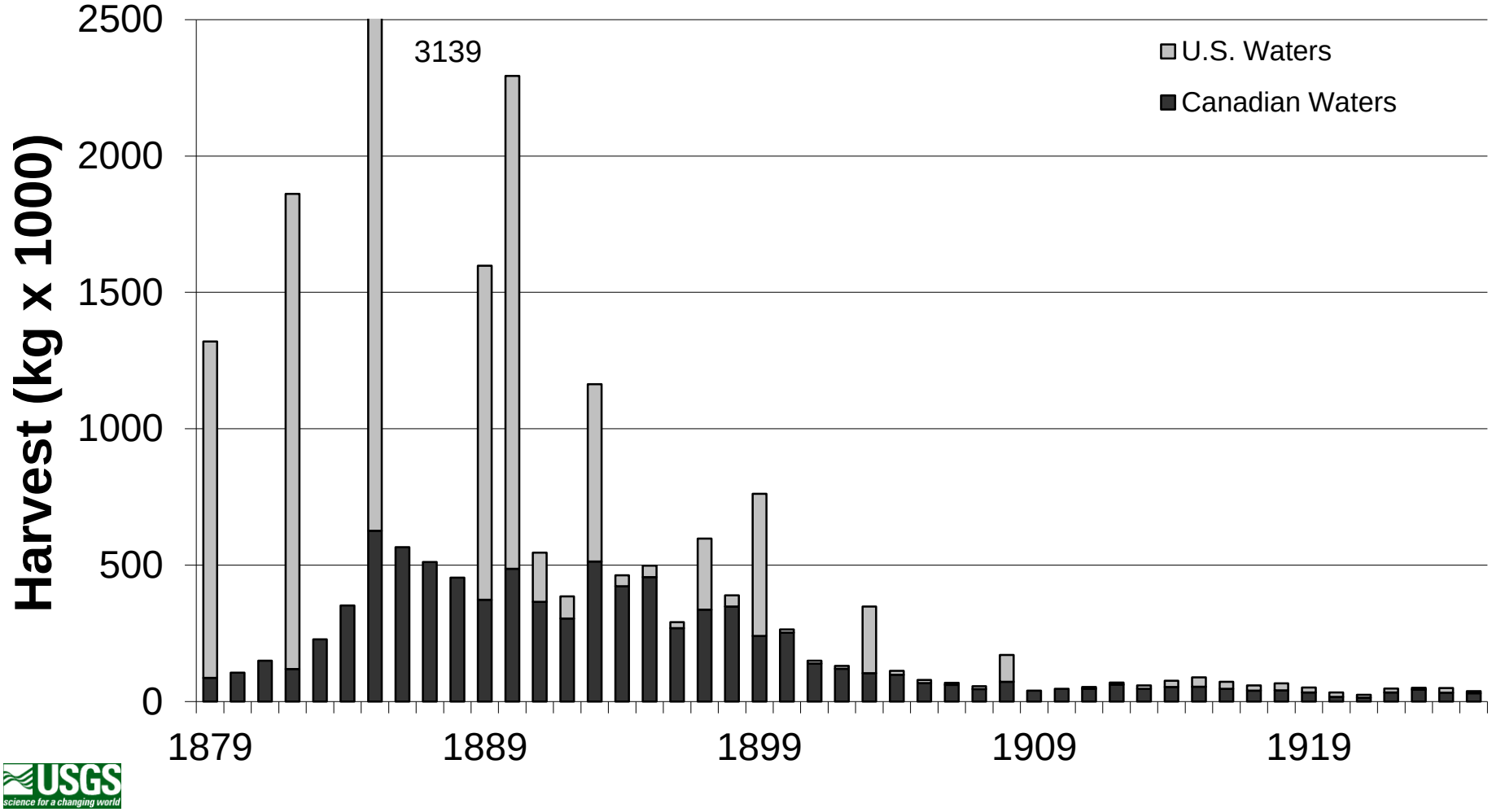
# Lake Sturgeon Annual Harvest

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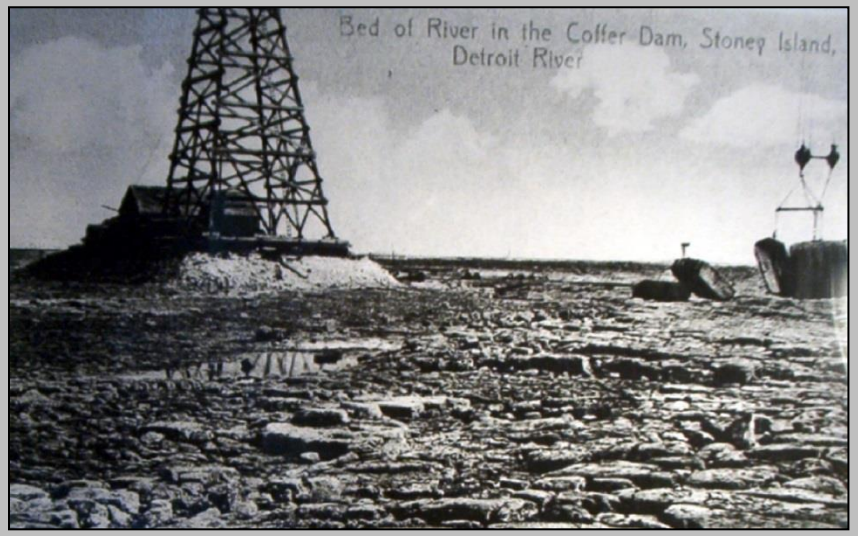
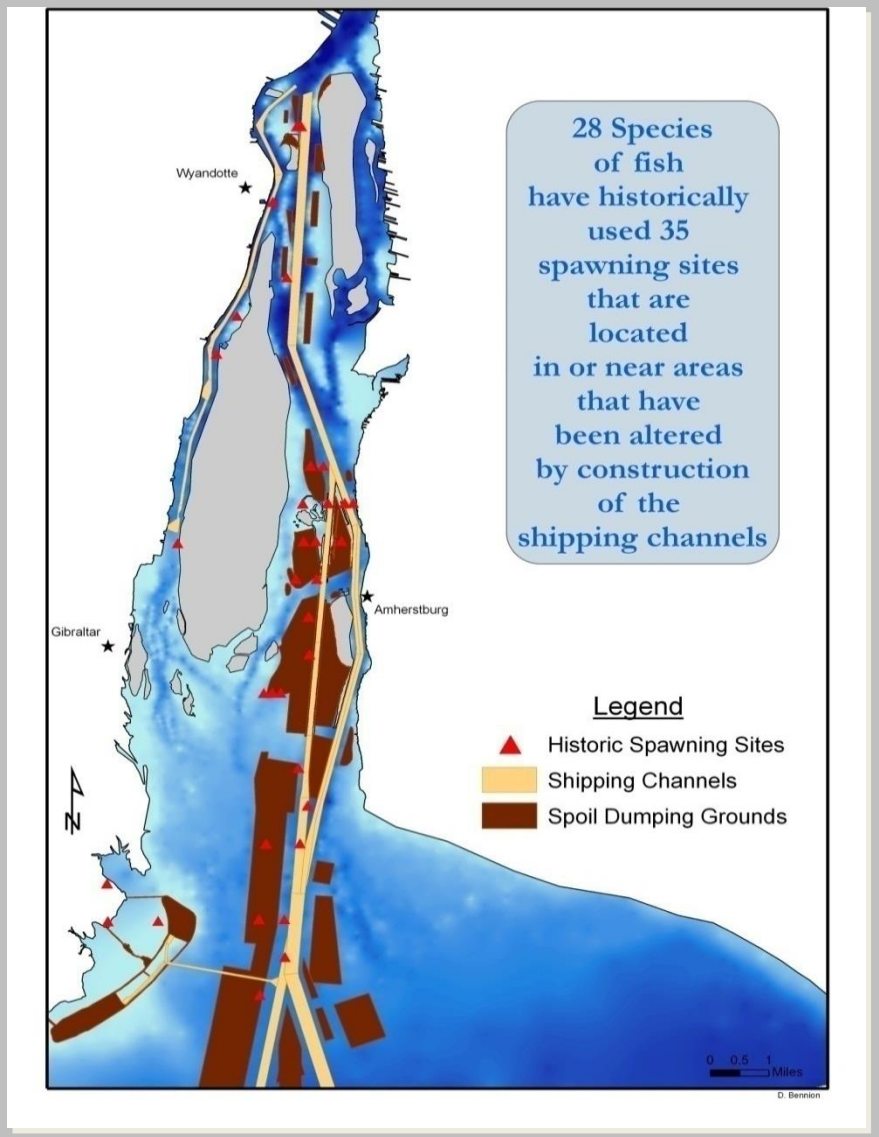
# Spawning Areas Removed

Before: Natural River Bottom




During Construction

Present Day Lower Detroit River

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# Number of Sturgeon in the Central Great Lakes Today

| | Population Estimates * | Lower CI | Upper CI |
|---|---|---|---|
| Southern Lake Huron | 35,484 | 25,939 | 45,030 |
| North Channel, SCR | 11,720 | 7,356 | 16,083 |
| Detroit River | 4,068 | 869 | 7,268 |

*J. Chiotti, et al., ISS7 presentation

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# Existing Spawning Habitat

- In 2001, only 3, small, sturgeon spawning grounds were known in the HEC: Blue Water Bridge, Mazlinka's Reef in SCR and, Zug Island in DTR

- Of these only Blue Water Bridge is naturally occurring. The other two were manmade.

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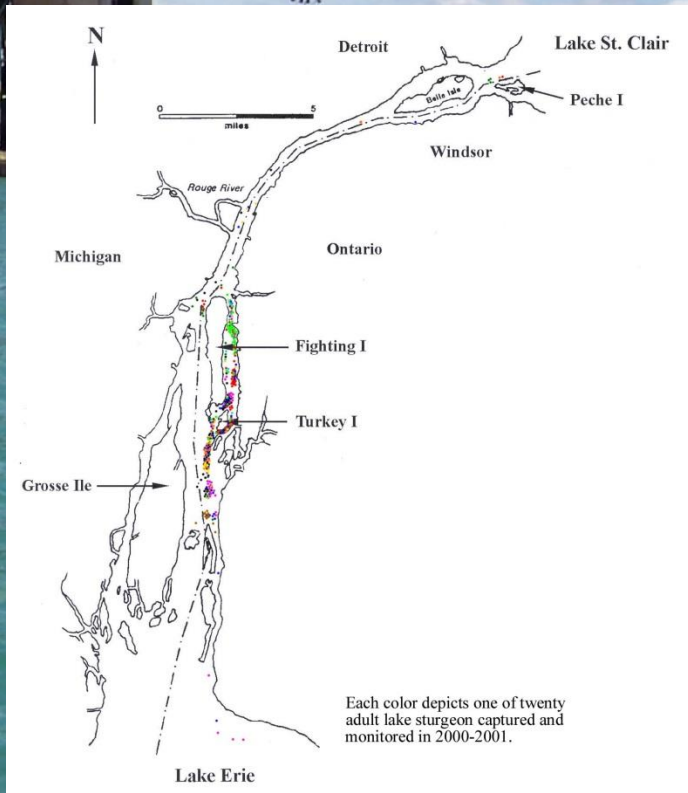
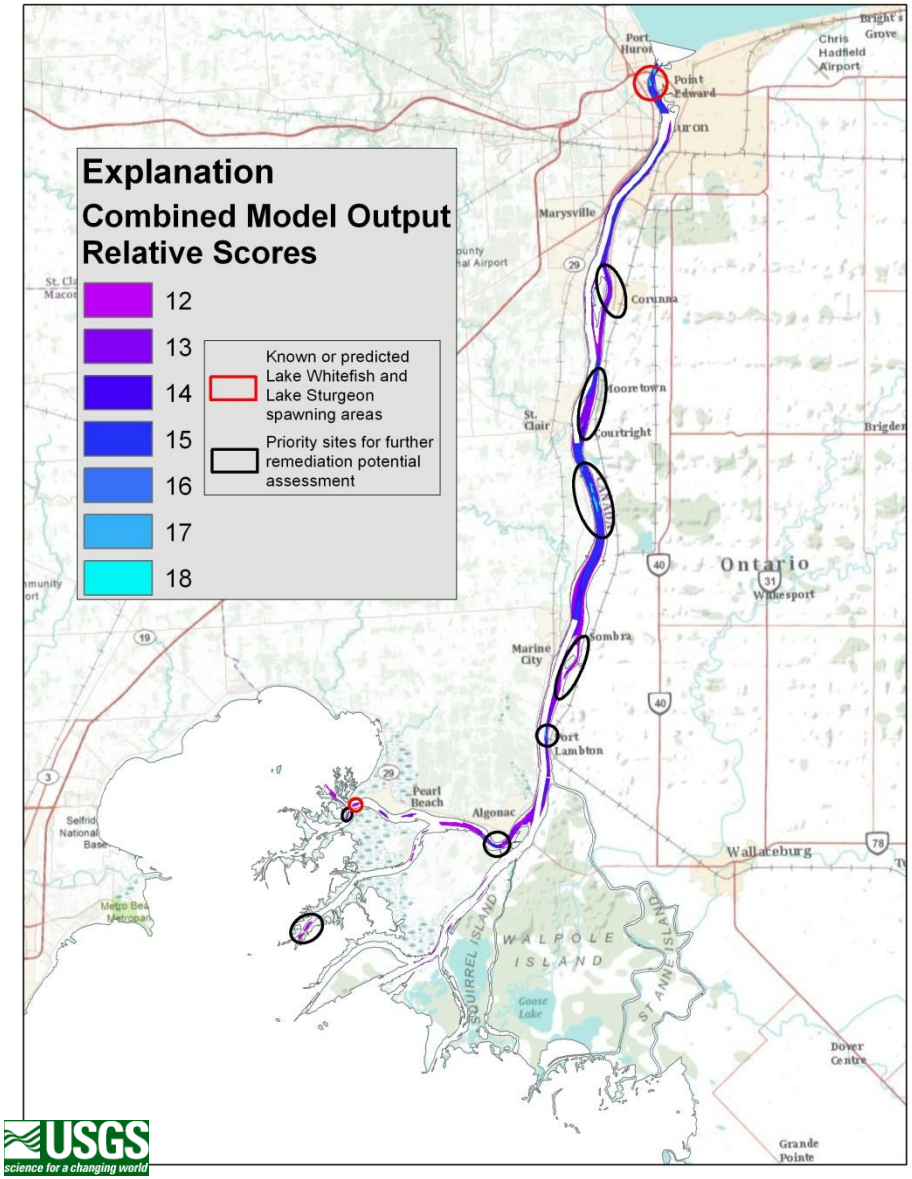
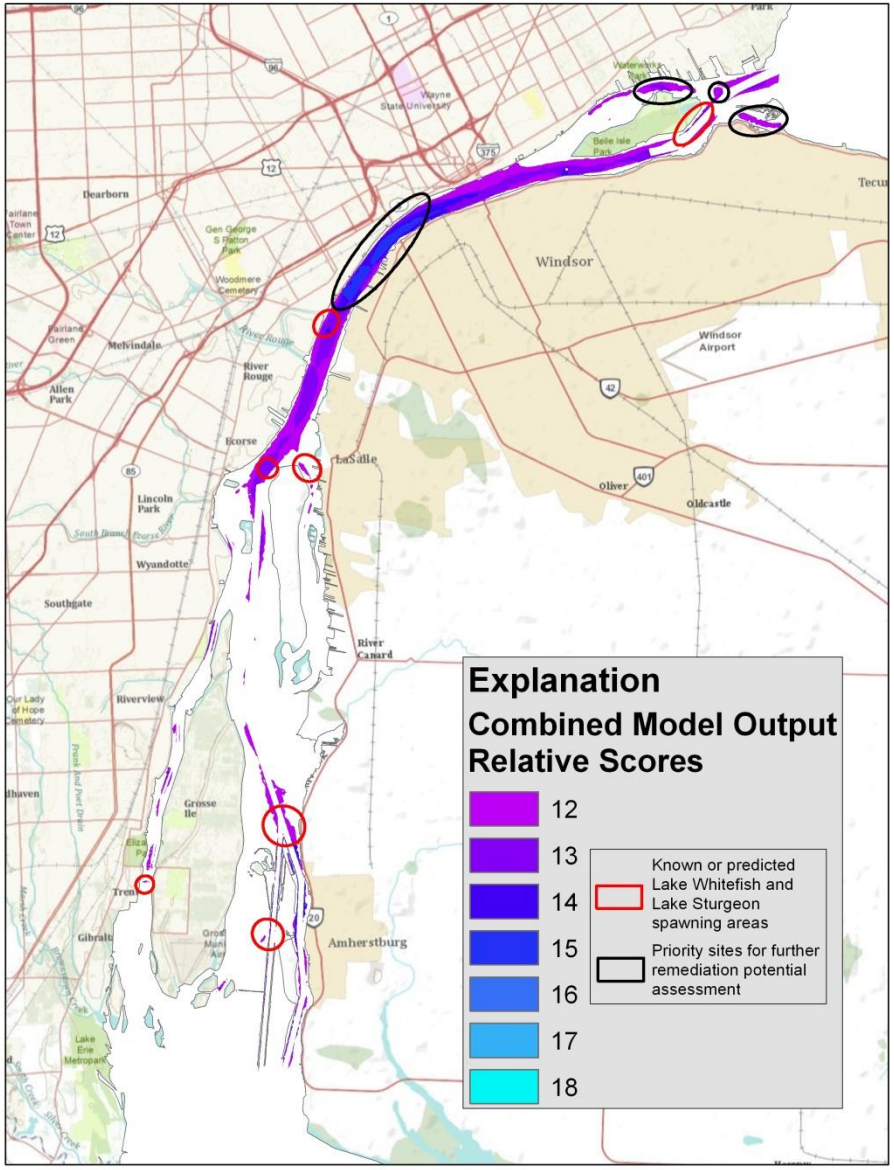
# Zug Island Steel Mill, Detroit River

Egg mat



# Bennion-Manny Model



# GPS-guided rock placement

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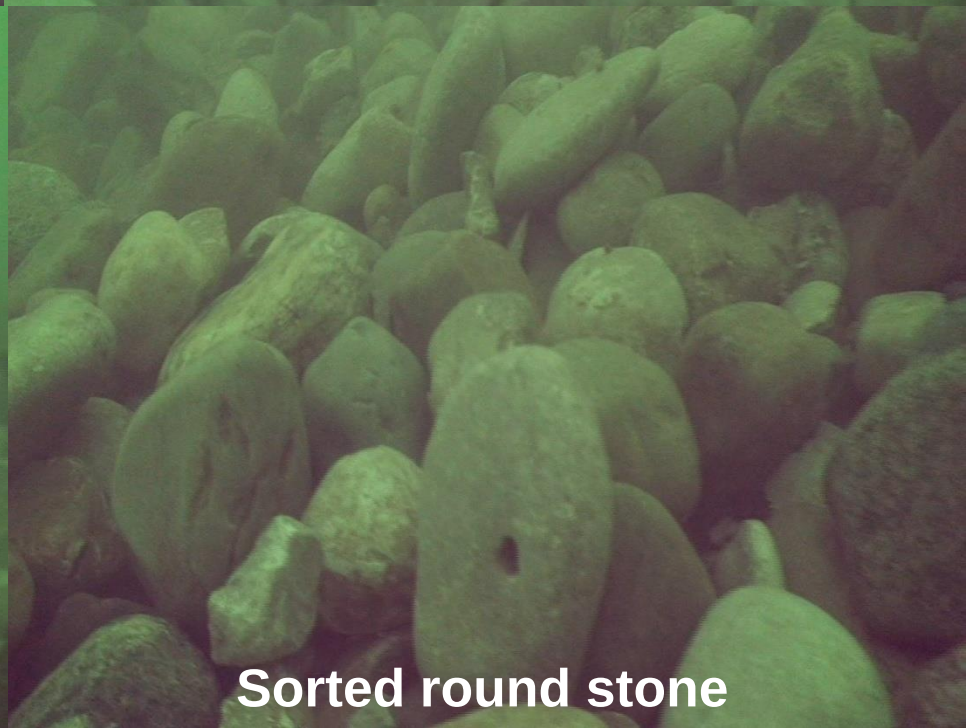
# Reef materials used included:

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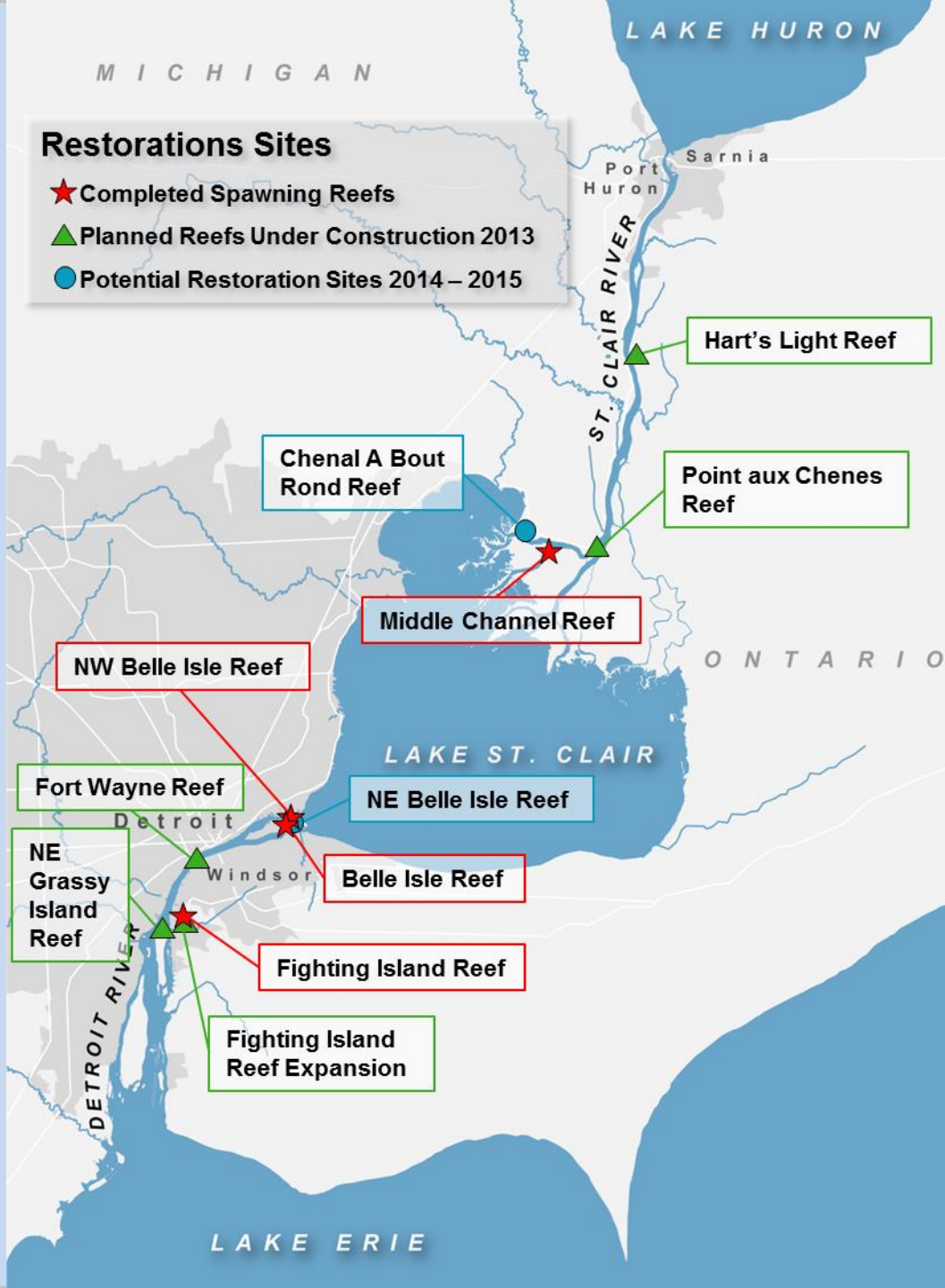
# Planned Reef Construction

Seven new spawning sites in the 160 km channel by 2016.

Newer reefs are larger than early experimental reefs (1.2 to 1.6 hectares each).

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We expect the HEC to be the epicenter of sturgeon restoration in the Great Lakes.
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