



Michigan's Lake Sturgeon Rehabilitation Strategy

Andrew Briggs

MDNR Fisheries Division

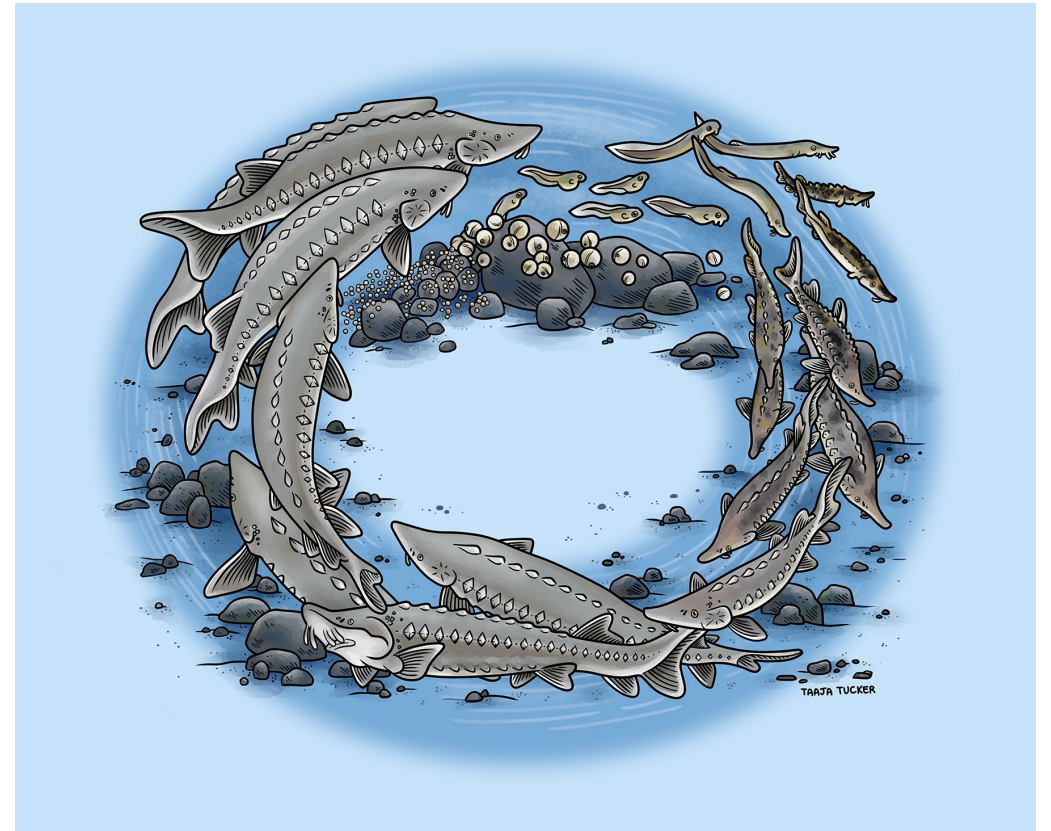
NRC Fisheries Subcommittee Meeting

December 14, 2023



Lake Sturgeon Facts and Life History

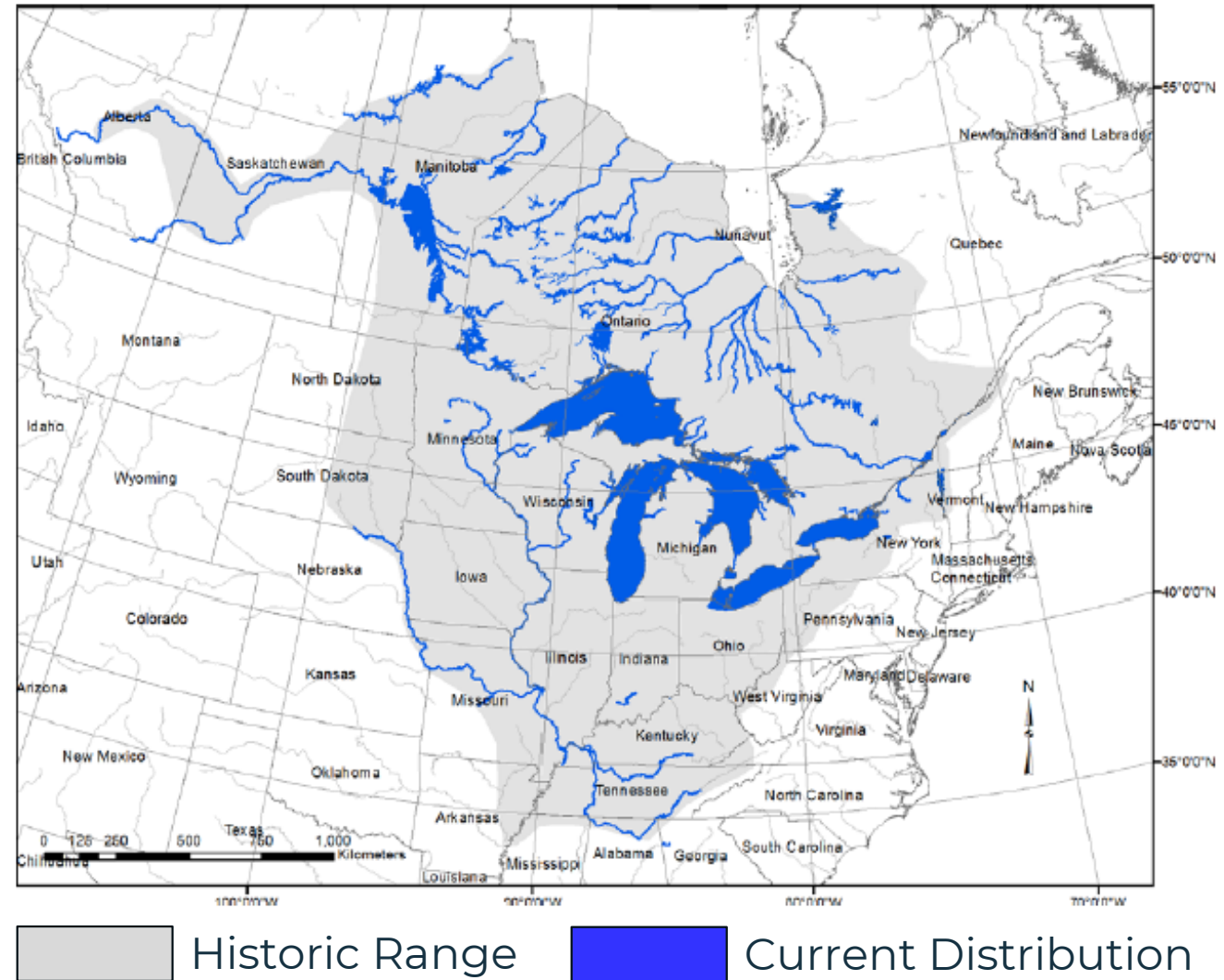
- Large
- Long-lived
- Living fossils
- Late-maturing
- Lakes → Rivers to spawn (not always)
 - Not annually
 - Spring
 - High fecundity



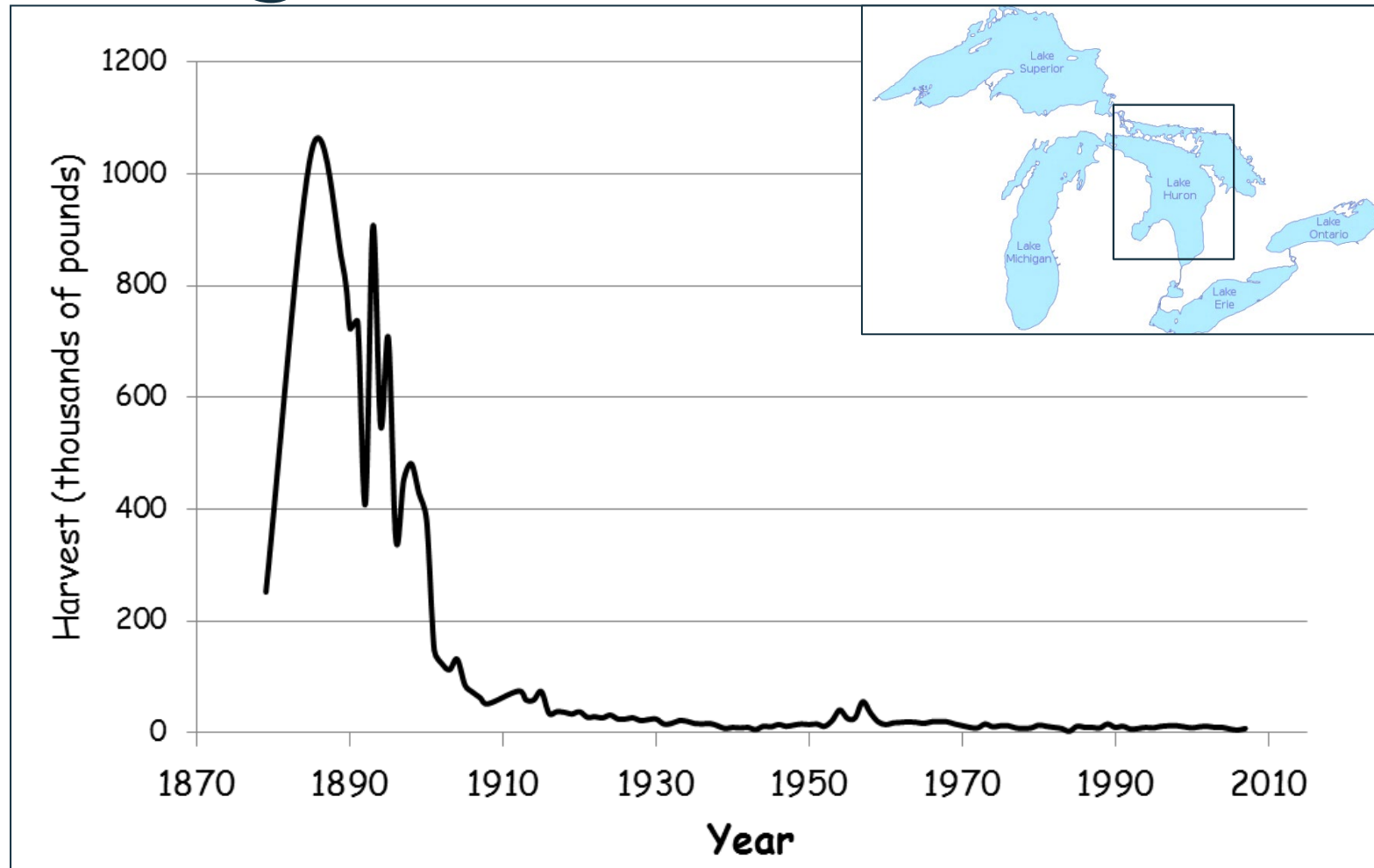
Status/Range

- State/provincial listing throughout range
- Not federally listed
- Threatened in Michigan

From Bruch et al. 2016

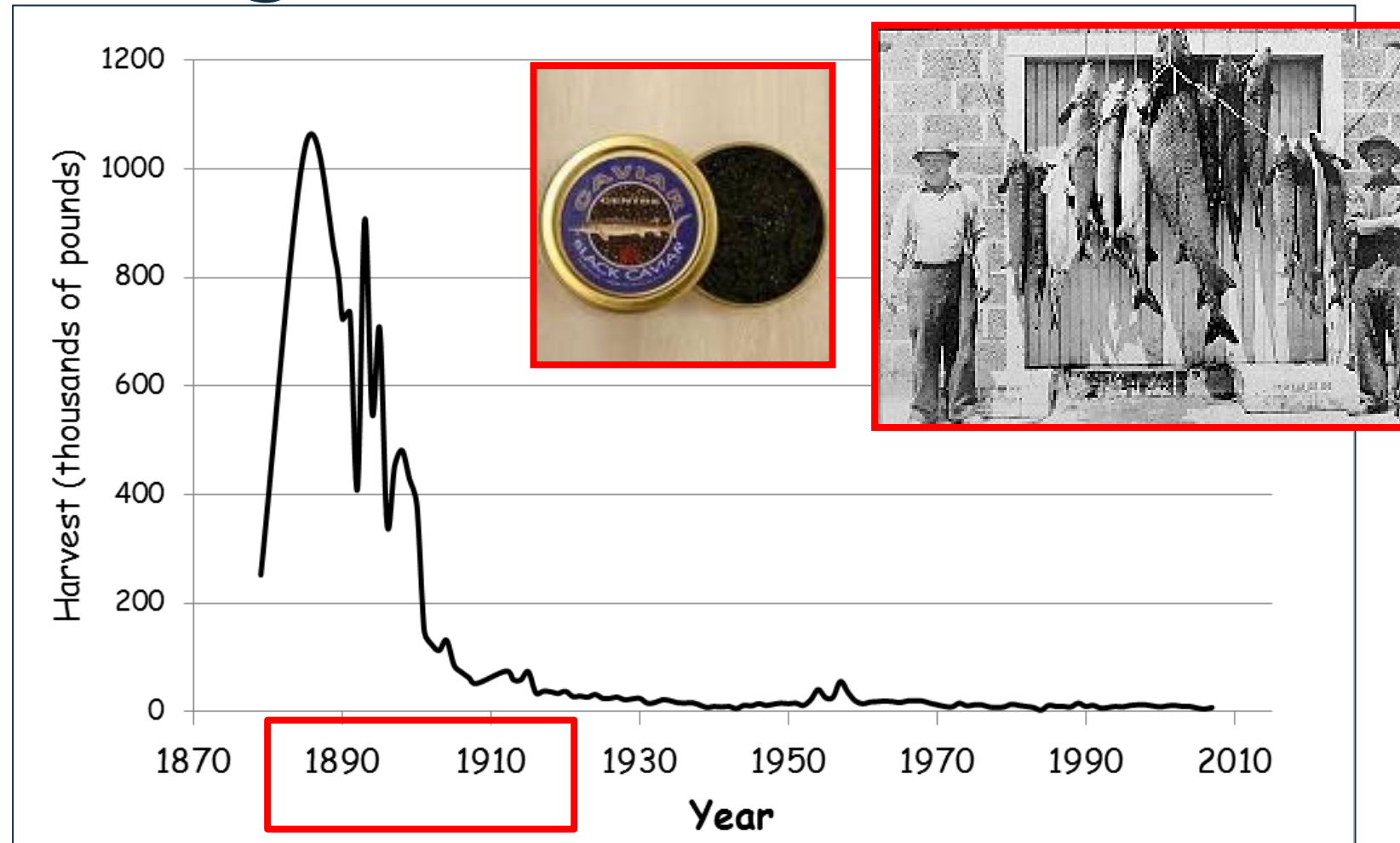


Lake Sturgeon Decline



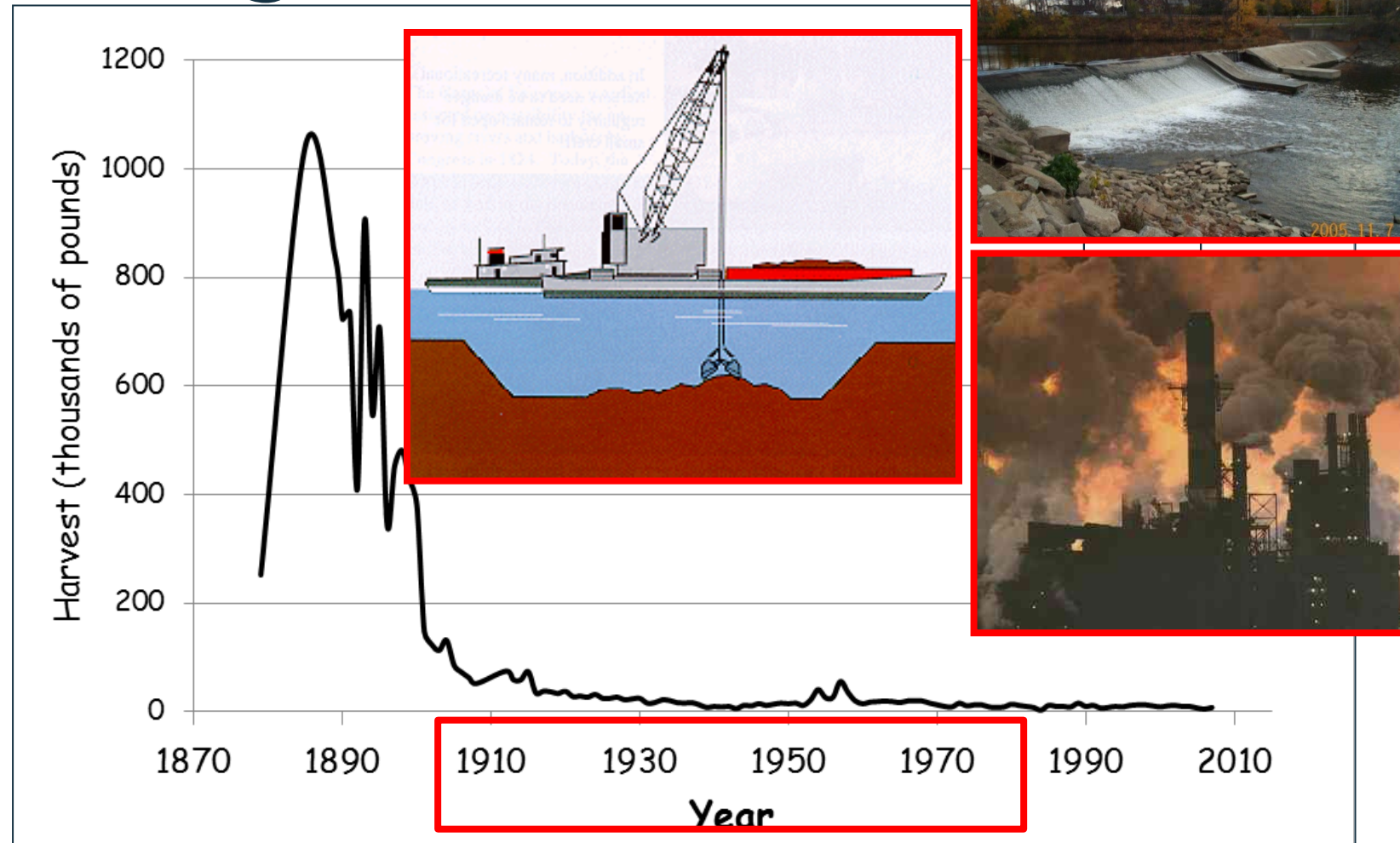
Source: Baldwin et al. 2009

Lake Sturgeon Decline



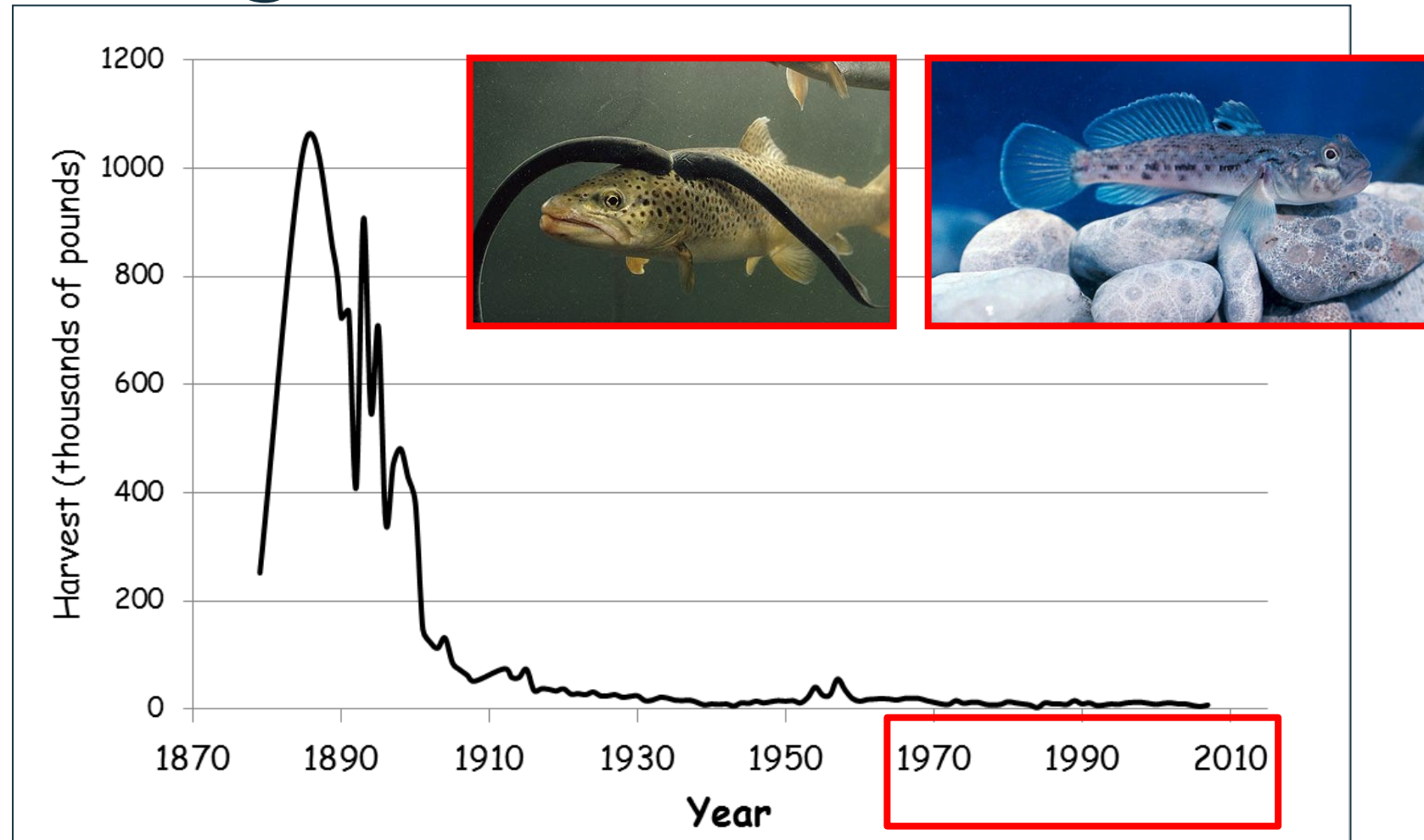
Source: Baldwin et al. 2009

Lake Sturgeon Decline



Source: Baldwin et al. 2009

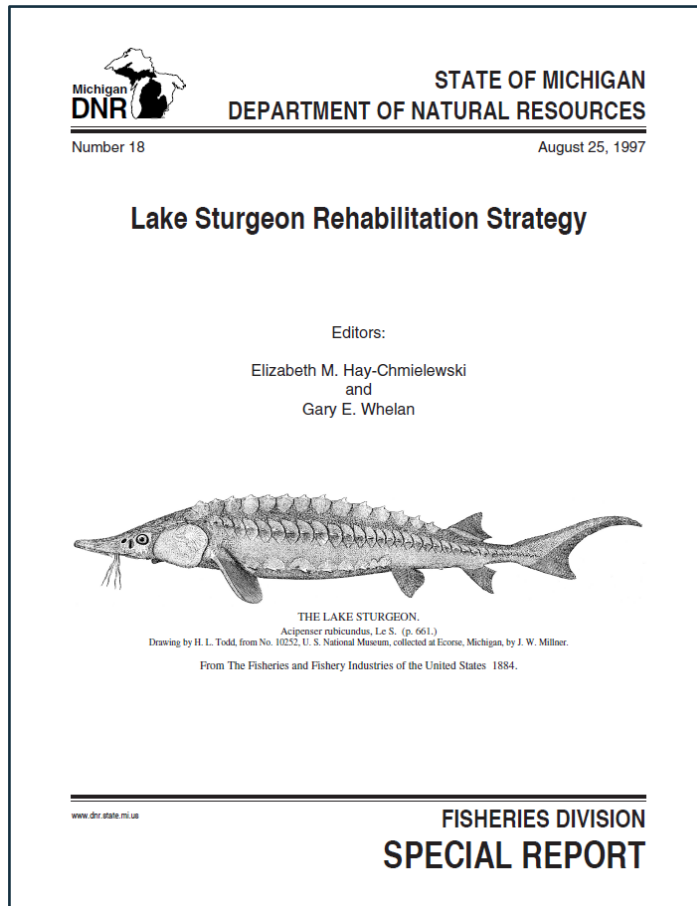
Lake Sturgeon Decline



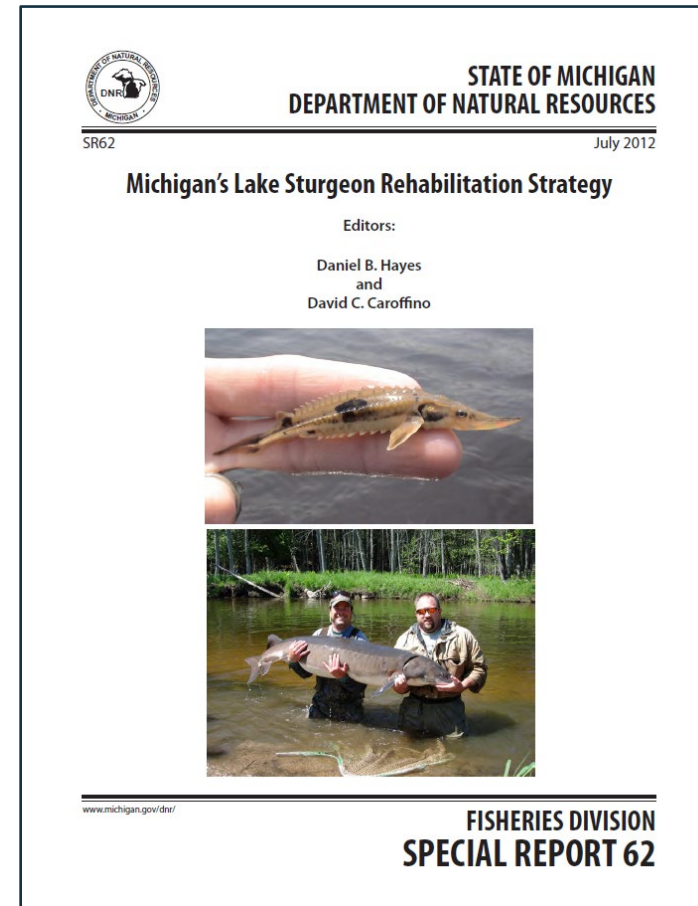
Source: Baldwin et al. 2009

Rehabilitation Strategy

1997

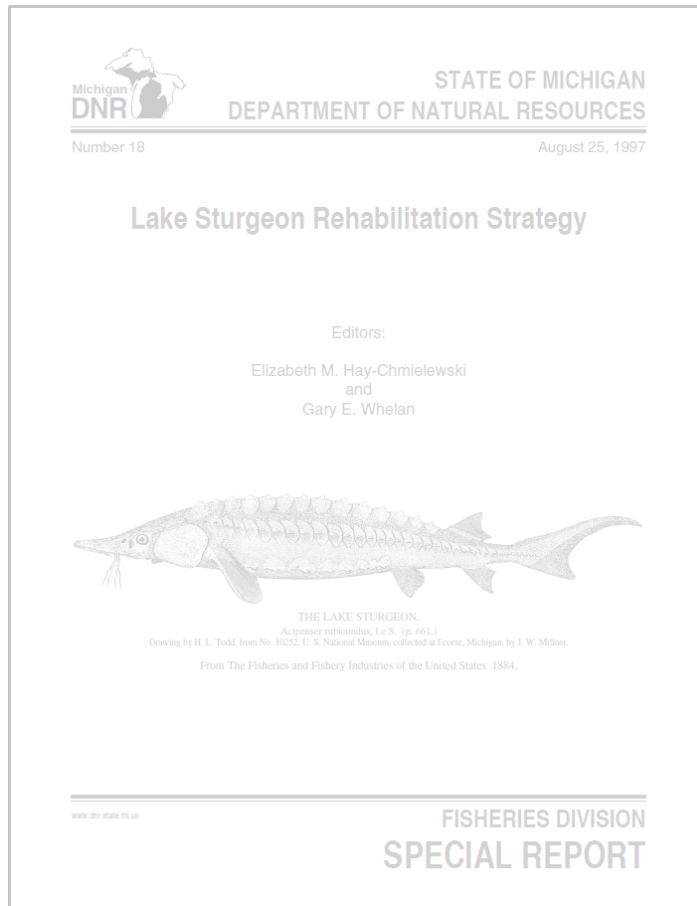


2012

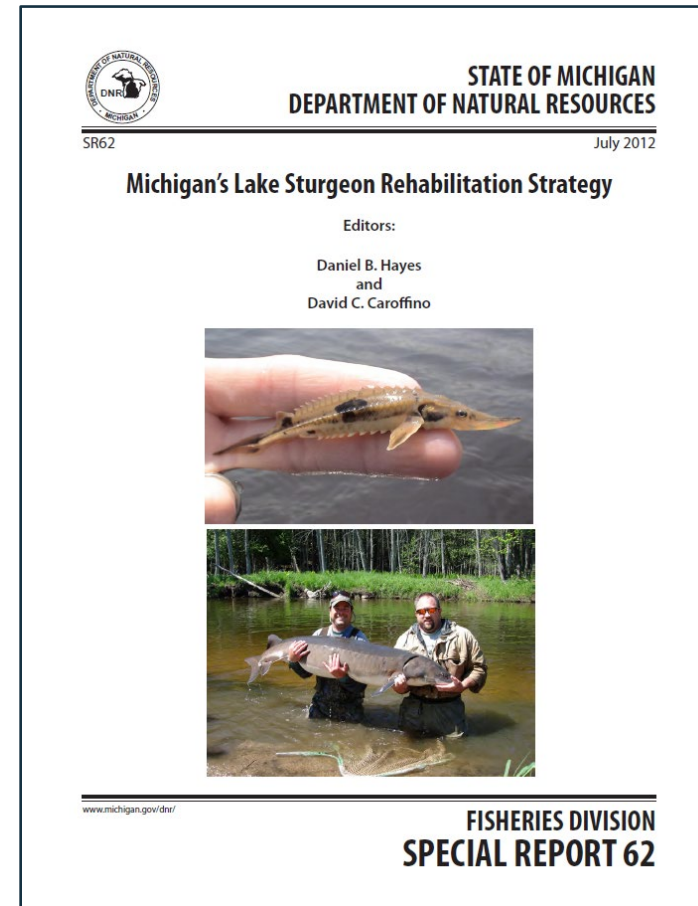


Rehabilitation Strategy

1997



2012





Purposeful Omissions

- Detailed commentary on each population
- Analysis of locations for reintroduction
- Description of priority or feasible habitat work

Guiding principles not detailed prescriptions

What it does

- Document and communicate goals, objectives, and priorities internally and externally
- Help in setting and implementing priorities
 - Resources are limited
 - Prioritizing means we have to say no
 - Try to create rational basis for decision making



Management Goals

1. To restore self-sustaining populations across the State of Michigan to a level which would allow lake sturgeon to be removed from the list of state threatened species
2. To maintain some number of populations that are healthy enough to provide fisheries that support the recreational and cultural needs of state-licensed and tribal fishers



Management Sub-Goals

1. Conserve and maintain populations that are currently self-sustaining
2. Rehabilitate depressed populations so they become self-sustaining at a higher abundance
3. Reintroduce lake sturgeon to suitable, vacant habitat

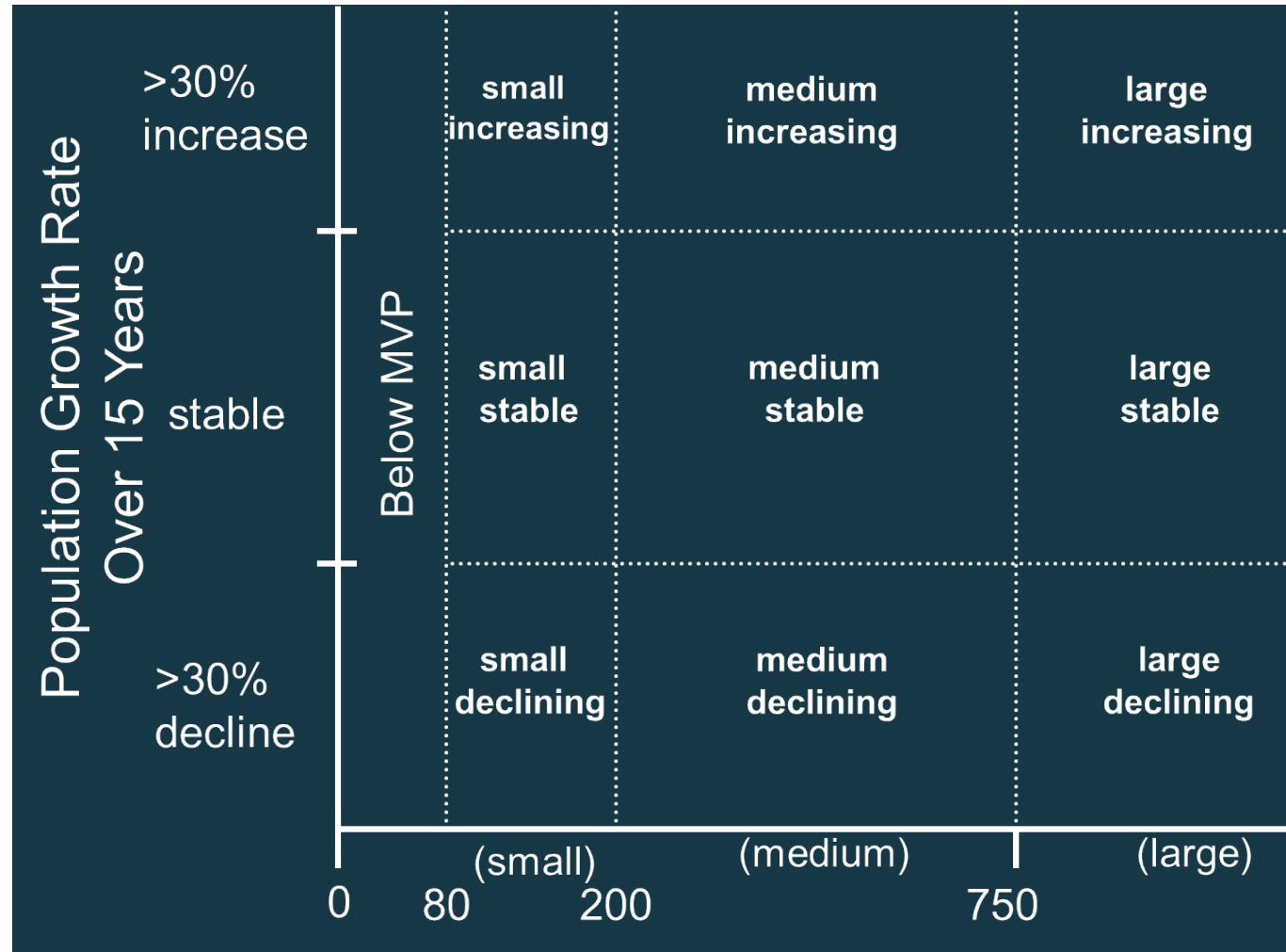


Conceptual Basis for Population Objectives

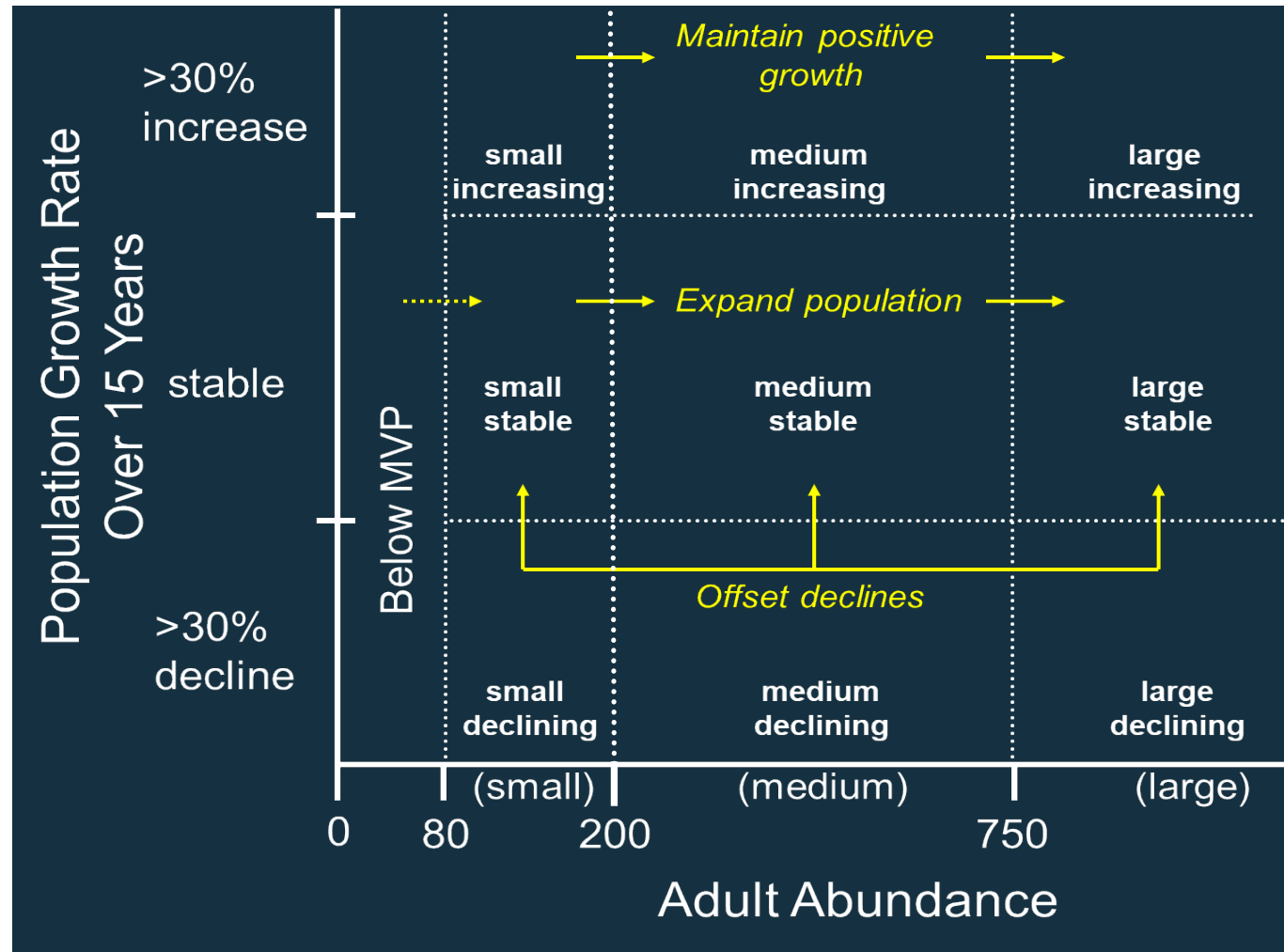
- Populations are dynamic and have:
 - STATUS – level of abundance
 - TRAJECTORY – rate of change
- Basis for population categories, which should be used for guiding our management actions



Population Classification



Population Classification



Watershed / Population	Estimated Adult Population Size	Category
Lake Superior		
Ontonagon River	< 25	Below MVP
Sturgeon River	1,808	Large stable
Lake Michigan		
Cedar River	< 25	Below MVP
Grand River	103	Small declining
Indian Lake	60	Below MVP
Kalamazoo River	88	Small declining
Manistee River	400	Medium stable
Manistique River	< 25	Below MVP
Big Manistique Lake	< 25	Below MVP
Menominee River	5,272	Large stable
Millecoquins Lake	< 25	Below MVP
Muskegon River	166	Small increasing
St. Joseph River	< 25	Below MVP

Watershed / Population	Estimated Adult Population Size	Category
Lake Huron		
Au Sable River	< 25	Below MVP
Black Lake	1,125	Large stable
Burt Lake	100	Small stable
Carp River	< 25	Below MVP
Mullett Lake	< 25	Below MVP
Otsego Lake	500	Medium stable
Rifle River	< 25	Below MVP
St. Marys River	354	Medium stable
Saginaw River	< 25	Below MVP
Lake Erie		
St. Clair River/Lake St. Clair	15,882	Large stable
Detroit River	4,838	Large stable

Population Monitoring



Population Monitoring

Monitoring should occur at least every 15 years, with prioritization for populations:

1. with a harvest fishery where abundance estimates are needed to set regulations or allocate harvest
 2. perceived to be near MVP
 3. classified as declining
 4. classified as stable
 5. classified as increasing
- } with priority to small populations for each



Management Approaches

- Addressing mortality limitations
- Addressing recruitment limitations

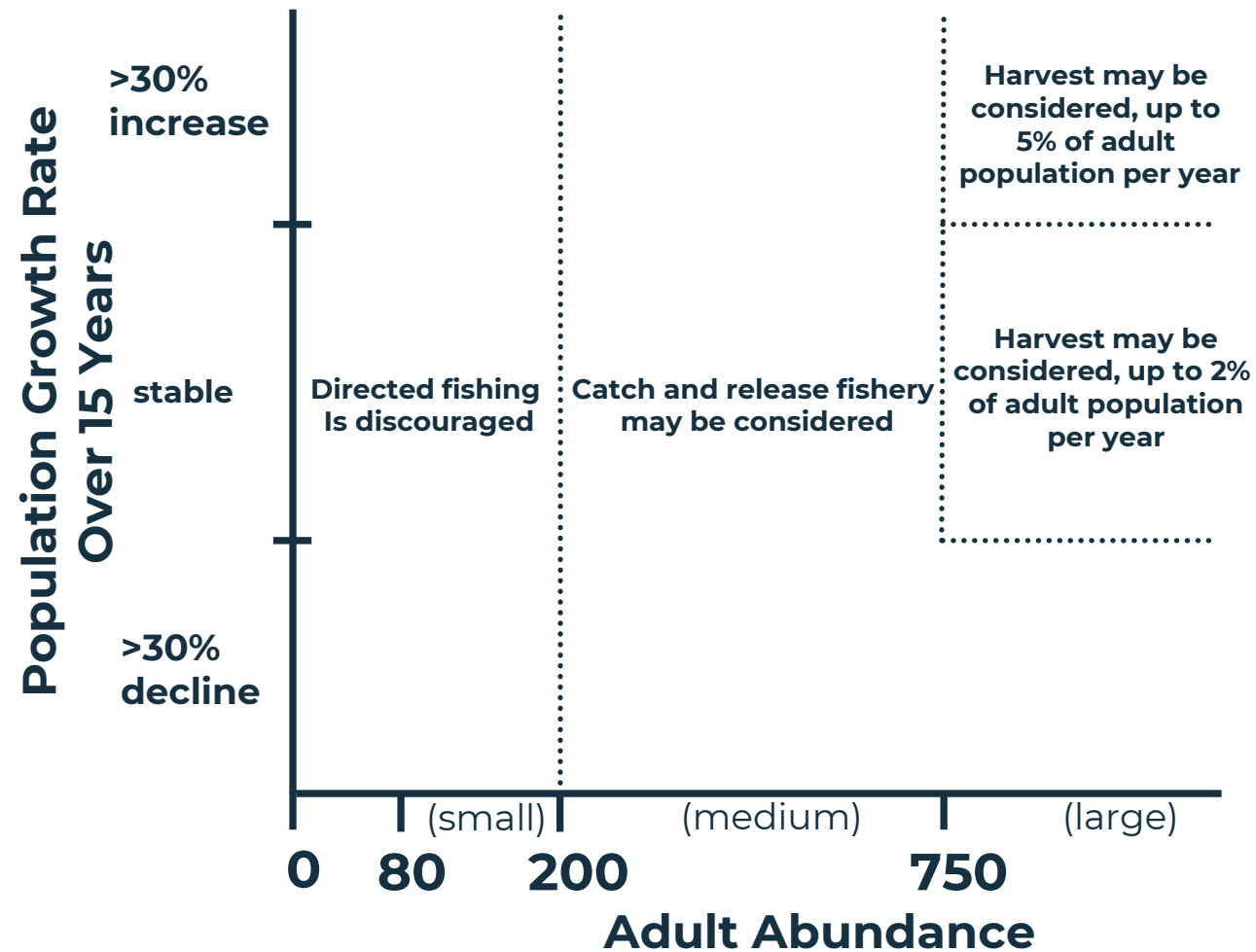


Addressing Mortality Limitations

- Natural
- Human-induced
- Sea Lamprey
 - Limited areas
 - TFM and the “sturgeon protocol”
- Fishery Regulations
 - Commercial prohibited
 - Harvest generally prohibited (exceptions)



Fishery Regulations



Assessing Recruitment Limitations

- Habitat
 - Critical but difficult
 - Ecological implications
 - Opportunistic
 - Partners
- Stocking



Stocking

- Primary tool available to managers
- Priorities
 1. Small-declining populations above MVP
 2. Small-stable and medium-declining populations
 3. Medium-stable populations
 4. Populations below MVP
 5. Extirpated or new populations



Education

- Important
- Opportunistic
- Collaborative



ST. CLAIR - DETROIT RIVER
STURGEON FOR TOMORROW

Limitations

- Funding and staff
- Knowledge
 - Fish passage
 - Hatchery needs
 - Genetic stock analysis



Advancements

Waterbody-specific management plans

- Black Lake complete
- More currently in draft
 - SCDRS
 - Cedar and Whitefish Rivers



**MANAGEMENT PLAN FOR LAKE
STURGEON IN BLACK LAKE
2016**

Advancements

Monitoring

- Continued survey efforts (MANY systems)
- Effects of recreational fishery
 - SCDRS
 - Harvest reporting
- Sea Lamprey
 - Effects
 - Juvenile sturgeon “rescues” before treatment



Advancements

Recreational Fisheries

- Expanded opportunities
- Simplified requirements



2018

2020

2023

Table 2: Lake Sturgeon
Hook & Line Fishing Only (except as indicated above)

Waters	Seasons	Regulations and Size Restrictions
Detroit River	Fishing Season: July 16 - March 15	All lake sturgeon must be released immediately.
Lake St. Clair and St. Clair R.	Fishing Season: July 16 - March 15 Possession Season: July 16 - Sep. 30	Between 42" - 50". Lake sturgeon less than 42" and greater than 50" must be released immediately.
Otsego Lake (Otsego Co.)	Fishing and Possession Season: July 16 - March 15	50" minimum size limit. Lake sturgeon less than 50" must be released immediately.
All MI-WI Boundary Waters (see pp. 24-25 for more details)	Fishing and Possession Season: 1st Sat. in Sep. - Sep. 30	60" minimum size limit. Lake sturgeon less than 60" must be released immediately.
Black Lake (Cheboygan & Presque Isle Cos.)	Fishing and Possession Season: 1st Sat. in Feb. through the following Wed. or until the quota is reached (whichever comes first)	No size limit. All harvested lake sturgeon must be reported immediately to DNR on site. Contact DNR Gaylord office (989) 732-3541 for details.
St. Marys River (Chippewa Co.) From the Soo Locks/Compensating Works downstream to the DeTour Village and Drummond Island ferry terminals to the south, and from Hay Point to Cherry Island then north to the international boundary for the northeast.	Fishing Season: July 16 - March 15	All lake sturgeon must be released immediately.
Portage and Torch Lakes (Houghton Co.) This includes Portage River, Portage Canal and north and south entry.	Fishing Season: July 16 - March 15	All lake sturgeon must be released immediately.
Ontonagon River (Ontonagon Co.) From Lake Superior up to the Victoria Dam Road.	Fishing Season: July 16 - March 15	All lake sturgeon must be released immediately.
All Other Waters	NO FISHING SEASON	It is unlawful to fish for lake sturgeon, except in the waters listed above.

Advancements

Habitat

- SCDRS spawning reefs
- Sturgeon “elevator”
- Dam removals



Stocking

- Continued stocking in Cedar, Ontonagon, Kalamazoo, and Manistee rivers and Otsego Lake
- Reintroduction into Saginaw River system
- Future efforts in the Boardman River



Outreach

- Sturgeon Festival
- Release Ceremonies
- Sturgeon in the Classroom



Summary

Progress being made on goals and sub-goals!

1. Conserve and maintain populations that are currently self-sustaining



2. Rehabilitate depressed populations so they become self-sustaining at a higher abundance



3. Reintroduce lake sturgeon to suitable, vacant habitat



Summary

Specific highlights:

- Expanded fishing opportunities
- Improved and expanded habitat
- Research and monitoring continues
- Successful and popular outreach
- Collaboration is key

Questions



Andrew Briggs
briggsa4@michigan.gov