Lake Superior Fisheries Management Plan

June 26, 2017

Meeting Outline

Meeting goals

1. Present an introduction to Lake Superior fishery.

2. Provide overview of previous plan.

3. Discuss framework for public input moving forward and timeline.

4. Identify a foundation of information to guide development of next plan.

Lake Superior

- Largest lake in the world (SA=31,700 mi^2)

- 10% of world's surface Fresh Water

- Contains as much water as all the other Great Lakes combined, even throwing in two extra Lake Eries

- Deepest point = 1,335ft; Avg depth = 489ft

- Deep, cold, and low productivity → **Oligotrophic**

Lake Superior Fishery

Despite relatively small component of Lake Superior surface area, Wisconsin waters play a large role in the biology of the Lake

Complex fishery

- Commercial
  - State and Tribal
- Sport fishery
  - Charter, recreational, sustenance

Diverse, multi-species fishery

Nearshore

Lean Lake Trout

Brown Trout

Coho Salmon

Brook Trout

Chinook Salmon

Steelhead

Splake

Lake Whitefish

Embayments

Walleye

Smallmouth Bass

Northern Pike

Yellow Perch

Muskellunge

Lake Sturgeon

Offshore
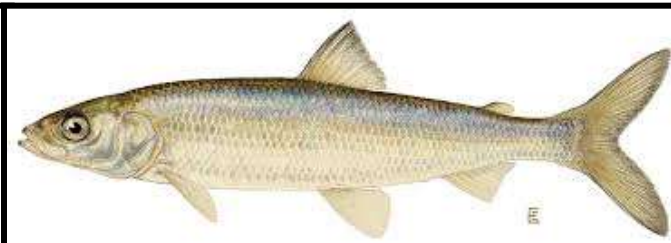
Lake Whitefish

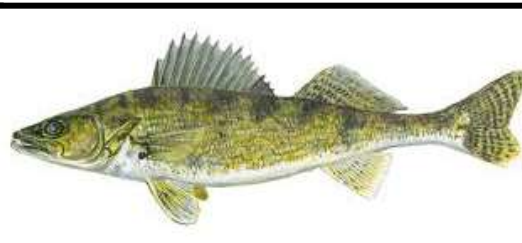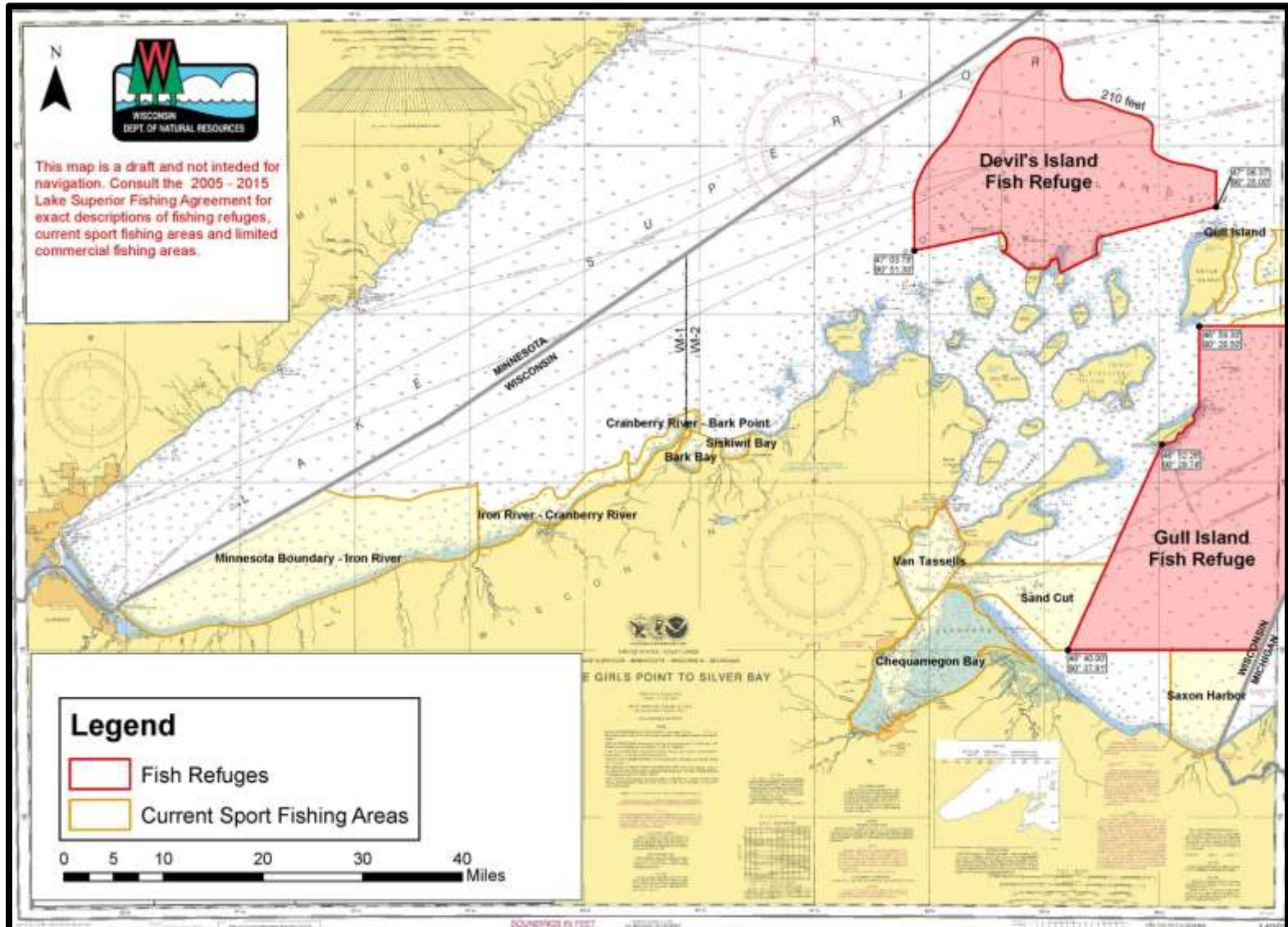Lean Lake Trout

Siscowet Lake Trout

Lake Herring

Bloater

Rainbow Smelt

Round Whitefish

Burbot

Restricted areas and refuges

Management challenges

- Habitat loss

- Non-native species

- Increasing climate variability

- Dynamic fisheries, shifting markets

- Inter-jurisdictional management

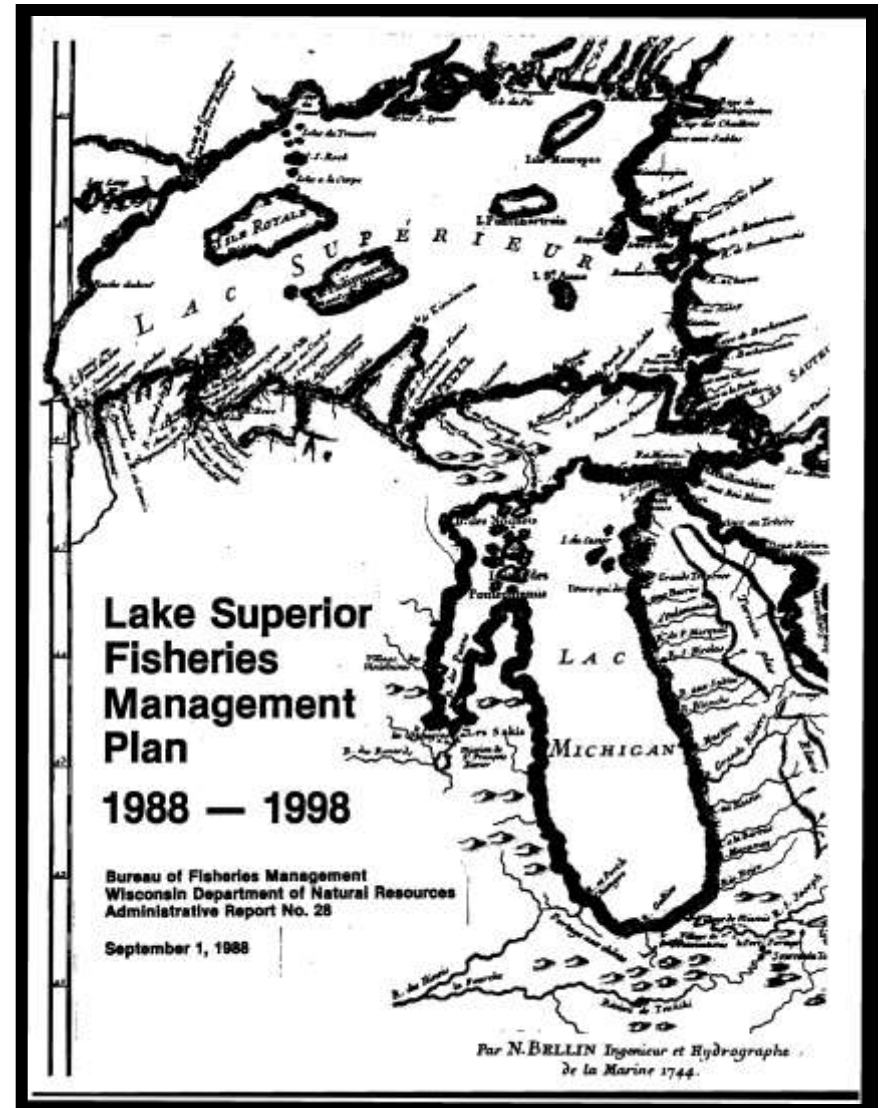Requires a plan to address complexity

LSFMP 1988 - 1998

Existing Lake Superior Management Plan was finalized in 1988

Many fish management goals have withstood the test of time; however,

Several fish management objectives may be outdated.

Need to update management plan to reflect current environmental conditions and stakeholder priorities and concerns.

Lake Superior Fisheries Management Plan 1988 — 1998

Bureau of Fisheries Management
Wisconsin Department of Natural Resources
Administrative Report No. 28

September 1, 1988

Par N.BELLIN Ingenieur et Hydrographe de la Marine 1744.

LSFMP 1988 - 1998

Goals:

- Manage for a diverse, multi-species commercial fishery to allow an optimum sustained harvests.
- Manage for a diverse, year-round, multi-species sport fishery to allow an optimum sustained harvest and to provide a variety of angling opportunities.
- Manage for a diverse, multi-species tribal home-use fishery to allow an optimum sustained harvest.
- Manage for fish communities, based on foundations of stable self-sustaining stocks, consistent with the productive capacity of Lake Superior.
- Develop an economic analysis to assist in management decisions.
- Maintain, monitor, and enhance habitat quality.
- Increase control of sea lamprey over present levels.
- Increase and maintain safe, public fishing boat access.

LSFMP 1988 - 1998

Objectives:

- **Commercial Fishery** – Very specific, with identified target harvest levels.
  - Ex. "Manage the lake whitefish populations at levels that will allow a sustained harvest of 290,000 pounds."
- **Sport Fishery** – Mix of specific and general targets.
  - Ex. "Manage the lake trout fishery to provide an annual harvest of 33,000 fish. Maintain a catch rate of 0.16 fish/hour during June – August."
  - Ex. "Improve the size structure of yellow perch populations in Chequamegon Bay."
- **Tribal home** use fishery, fish communities, economic analysis...

"Manage the lake trout populations at levels that will allow a sustained annual harvest of approximately 160,000 pounds (59,000 fish) and an annual mortality rate conducive to lake trout rehabilitation."
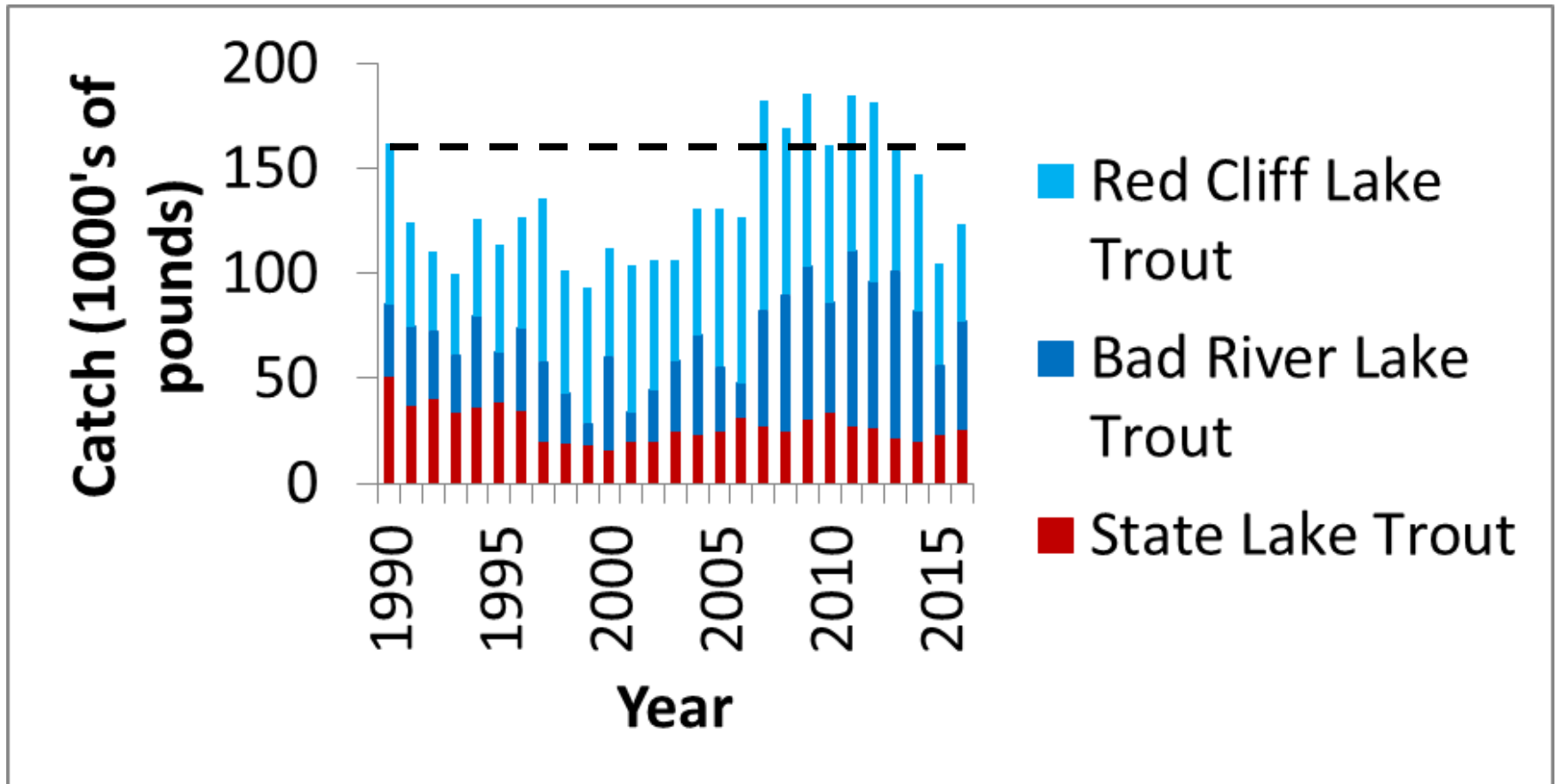
"Manage the lake whitefish populations at levels that will allow a sustained annual harvest of 290,000 pounds."
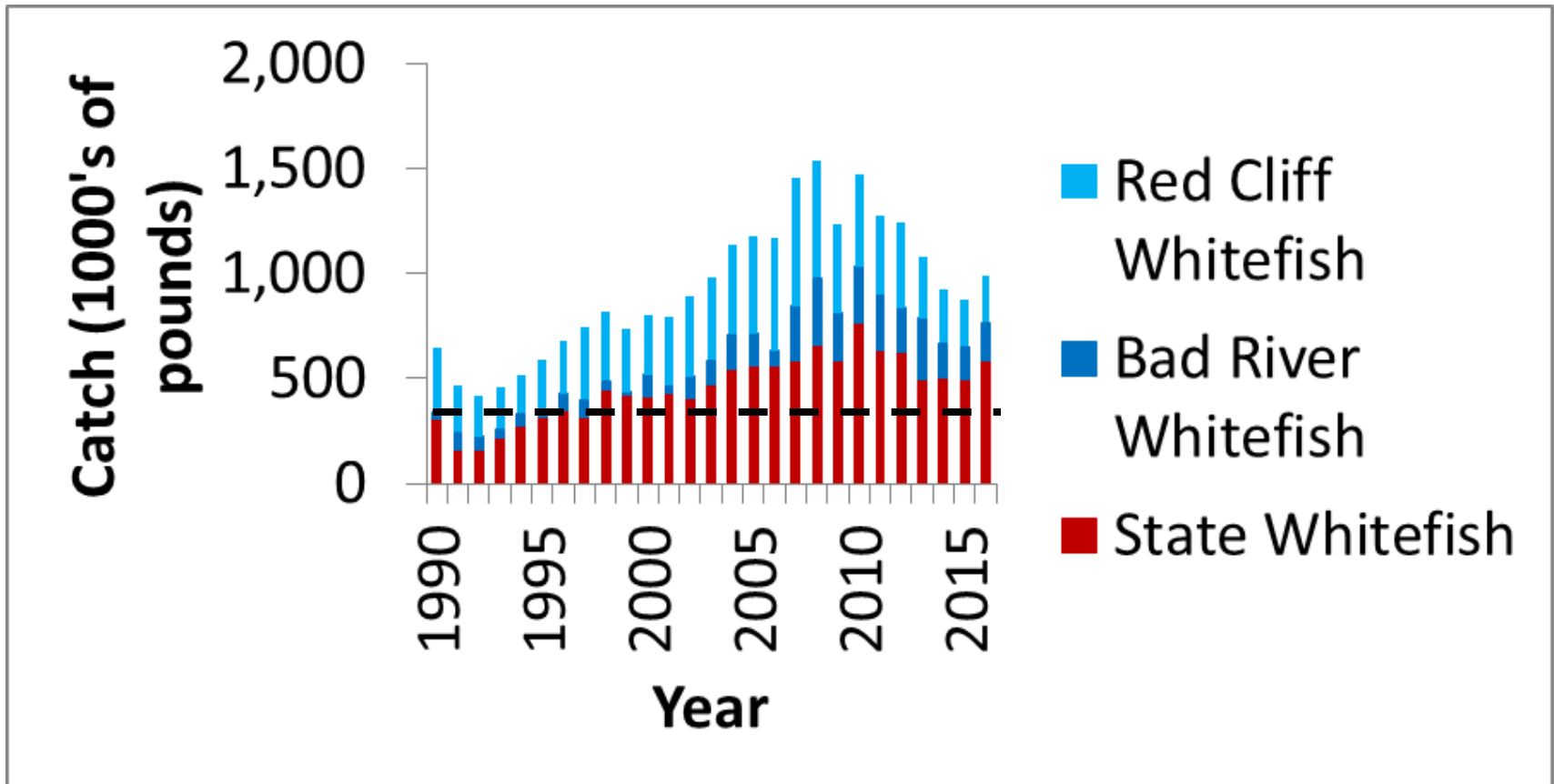
"Manage the round whitefish populations at levels that will allow a sustained annual harvest of 40,000 pounds."
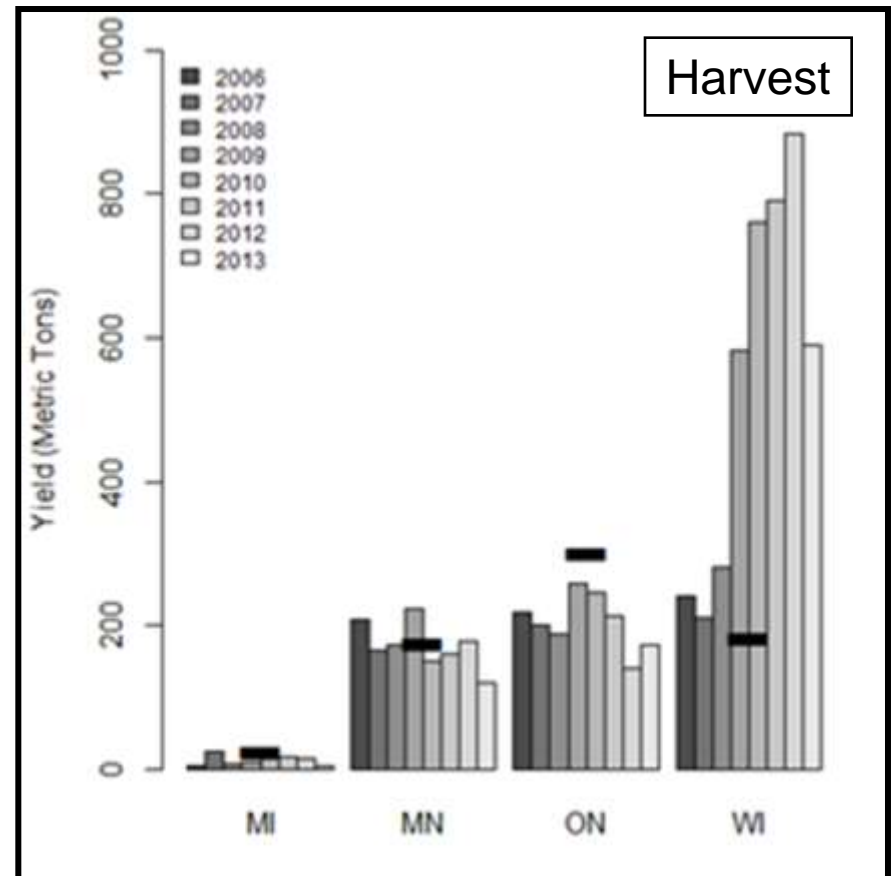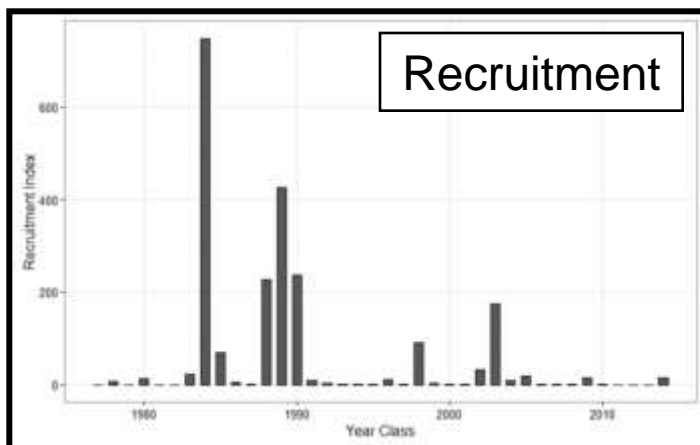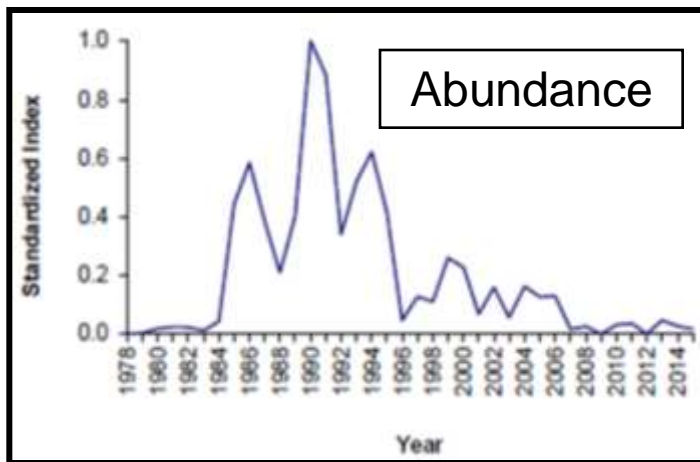
Commercial fishers do not target Round Whitefish due to limited market.

Only 21 pounds of Round Whitefish were harvested in last 20 years (1997 – 2016).

©Joseph Tomelleri

Low abundance since 1980 may also be a factor.
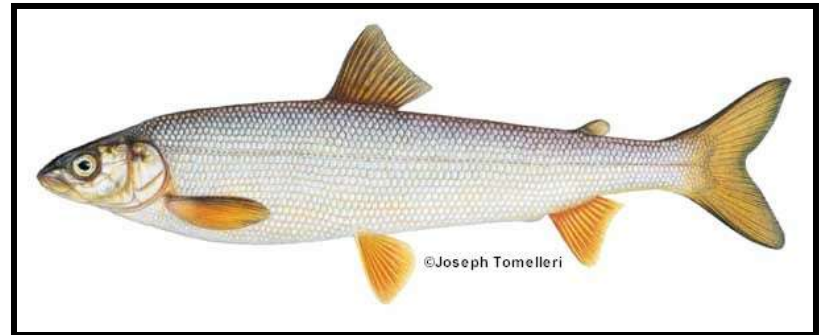
"Prevent excessive exploitation and predation to permit lake herring to continue expansion towards Lake Superior's carrying capacity."
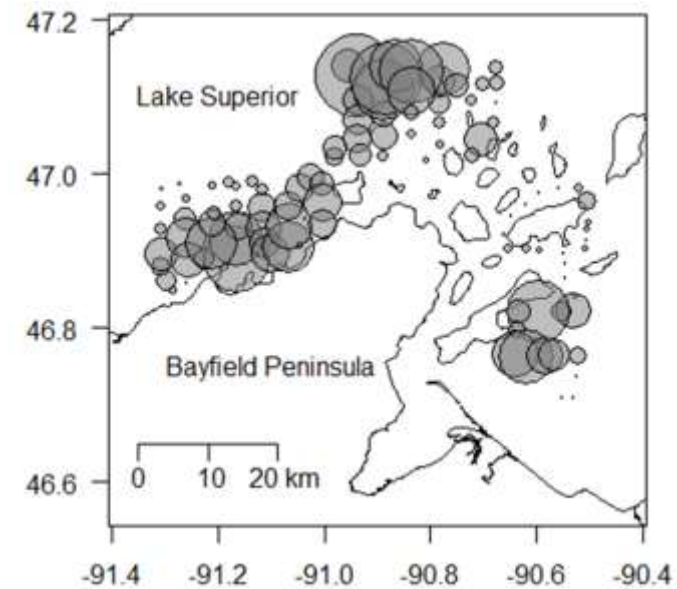
Cisco management

Estimate spawning stock biomass using hydroacoustic surveys

Set state commercial total allowable catch at 7.5% of spawning stock biomass

Reevaluate every 3 years

Continue to collaborate with commercial operators

"Manage the lake trout fishery to provide an annual harvest of 33,000 fish. Maintain a catch rate of 0.16 fish/hour during June-August."

- Fishery supported through natural recruitment and stocking (in WI-1)

- Harvest averages approximately 20,000 (~15,000 in WI-2 and ~5,000 in WI-1)

- Unrealistic, but close.

- WDNR efforts towards this objective

  - Improved population model

  - Increased harvest monitoring

  - Implemented harvest control

  - Continued coordination with other jurisdictions
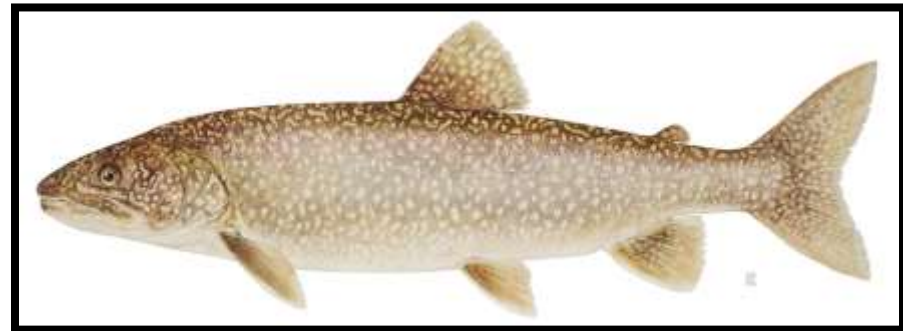
"Manage the anadromous brown trout fishery to provide an annual harvest of 6,000 fish. Maintain a catch rate of 0.03 fish/hour during the fall spawning run and 0.10 fish/hour during the early-winter ice fishing season."

- Brown trout in the Lake are naturalized and are supplemented by stocking

- Harvest has averaged approximately 2,872 fish in the Lake since 2000

- Unrealistic due to low recruitment and competition

- WDNR efforts towards this objective

    – Offshore stocking of Seeforellen

    – Additional population surveys (Brule)

    – Monitor commercial by-catch

    – Protect/improve habitat
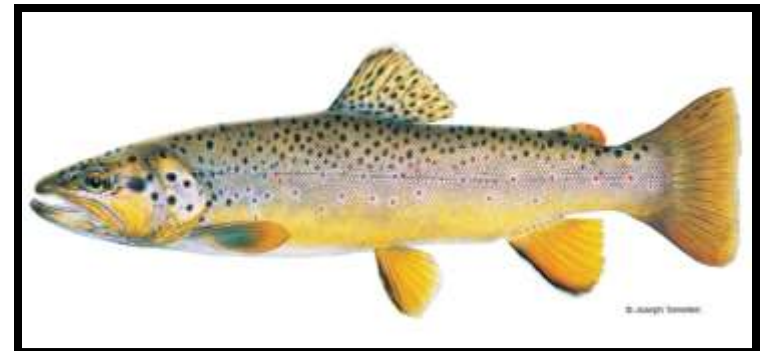
"Manage the coho salmon fishery to provide an annual harvest of 15,000 fish. Maintain a catch rate of 0.20 fish/hour during May."

"Manage the Chinook salmon fishery to provide an annual harvest of 12,000 fish. Maintain a catch rate of 0.16 fish/hour during May."
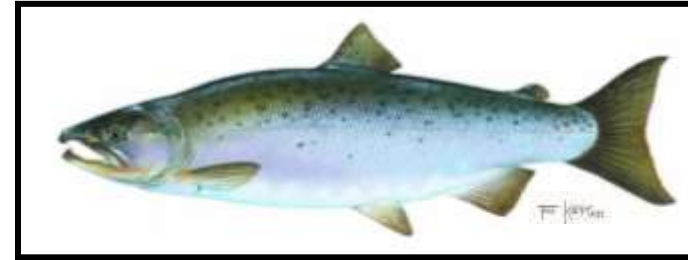

"Manage the steelhead trout fishery to provide an annual harvest of 13,000 fish. Maintain a catch rate of .06 fish/hour during the fall run on the Brule River and the spring run on the Sioux River."

Other species

"Manage walleye for optimum sustained yield on the St. Louis River, Kakagon Sloughs, and Bad River stocks."

"Improve the size structure of yellow perch populations in Chequamegon Bay."
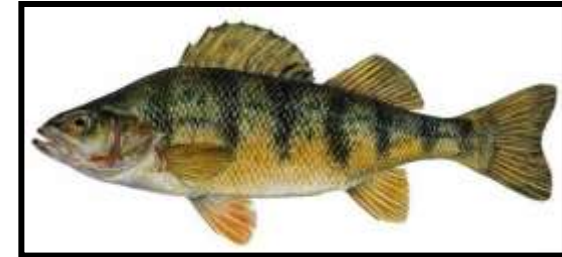
"Encourage sport angling for burbot in western Lake Superior."

"Maintain angling opportunities at the current level for the remaining sport species until their population status can be determined."
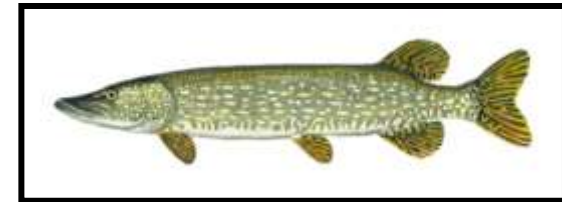
LSFMP 1988 - 1998

- Progress on objectives:
  - Goldilocks Scenarios

- Need to update management plan to reflect current environmental conditions and stakeholder priorities and concerns.

LSFMP 2019 - 2028

Stakeholder engagement??

What level of involvement?

– Public meetings, advisory group, how broad of a net to cast?

Bottom up vs. Top down?

– WDNR provide framework for feedback or allow stakeholders to drive the conversation

How we address these issues will have major implications on timeline to completion

Key groups to engage?

Boat clubs

Charter fishers

Commercial fishers

Sport fishers

Tribal fishers

Tributary fishers

Rod and gun clubs

Others?

Red Cliff Band of Lake Superior Chippewa

Bad River Band of Lake Superior Chippewa Tribe

Law Enforcement

WDNR Office of Great Waters

Chambers of Commerce

NGOs

Federal agencies

Stakeholder engagement options

1. Public meetings format
   - Stakeholder input via open meetings
   - WDNR incorporates input into draft plan
   - Several iterations prior to finalization

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2. Combination of an advisory panel with regular updates through public meetings
   - Advisory panel and WDNR work to draft plan
   - Work together through iterative process until plan is finalized

Advisory panel responsibilities

- <u>Advise</u> WDNR on development of vision, goals, objectives, and tactics.

- Represent viewpoint of stakeholder groups (fishing club, general angler, commercial fisher, etc.)

- Provide bi-directional communication between WDNR and public

- Take accountability for final plan and present with WDNR to public

- Attend 6-8 meetings

Lake Superior Fisheries Management Plan 2019 – 2028

Ambitious timeline:

June 2017: First public meeting, initial comment period

July through December 2017: Develop outline – vision, goal, outline, tasks

Early 2018: Present progress on outline to public

Spring 2018: Finalize first draft.

Summer 2018: Present 1st draft to public, second comment period.

Fall/Winter 2018: Incorporate comments and develop final draft.

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Advisory Panel
(monthly meetings)

Stakeholder Engagement Feedback

1) Desired approach?

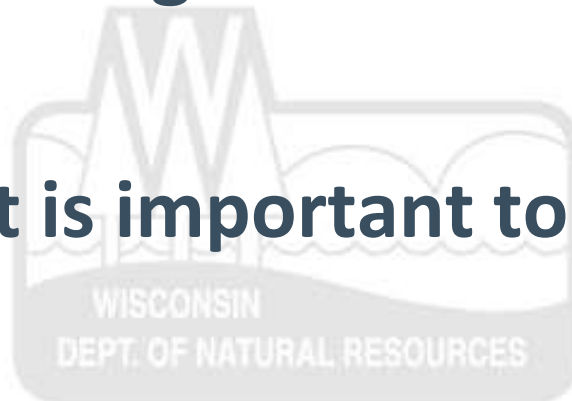2) Identify relevant stakeholder groups

3) Appropriate timeline?

Discussion and Comments

Start with 1988-1998 Goals.

What objectives would characterize those goals in 2020?

What is important to you?

LSFMP 1988 - 1998

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Things to consider when identifying a good objective:

Attributes:

S—Specific

M—Measurable

A—Attainable

R—Relevant

T—Time-bound

Examples

Weak: I will be healthier.

Strong: I will exercise 3 times a week for 30 minutes or more. I will eat vegetables at 2 meals a day.

Things to consider when identifying a good objective:

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S—Specific

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T—Time-bound

Socio-Ecological System

—Ecosystem

—Habitat

—Fish populations

—Fishery

—Economic value

—Aesthetic value

—Social value

Commercial, Sport, and Tribal Fishery

"Manage for a diverse, year-round, multi-species fishery to allow an optimum sustained harvest and to provide a variety of fishing opportunities."

Ecosystem and Habitat

"Manage for fish communities, based on foundations of stable self-sustaining stocks, consistent with the productive capacity of Lake Superior."
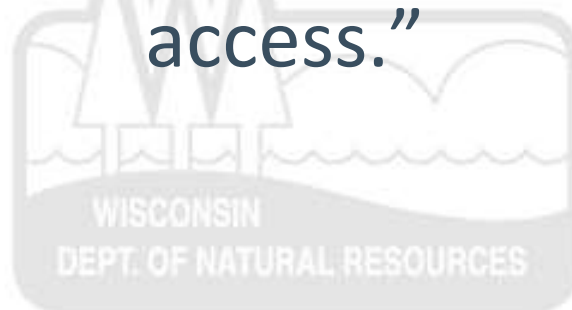
"Maintain, monitor, and enhance habitat quality."

Social and Economic

"Develop an economic analysis to assist in management decisions."

"Increase and maintain safe, public fishing boat access."

Next steps:

- Visit website for more information:
  - Search for "Lake Superior Fisheries Management" on WDNR website to find link for "Lake Superior Fisheries Management Plan"
- Collect initial comments via:
  - Mail Brad Ray, 141 S. Third Street, Bayfield, WI 54814
  - Email (dnrlakesuperiorplan@wisconsin.gov)
- Convene future meetings

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