Lake Michigan Salmon and Trout Fishery Meetings June 2016

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Meeting Guidelines

- Treat everyone with respect
- Respect other stakeholder's opinions
- Everyone will get a chance to be heard
- Everyone's comments are important. We have diverse opinions

Why are we here?

- Wisconsin has 178,000 Great Lakes anglers
- $114.3 million in annual retail expenditures by Great Lakes sport anglers
- $12.5 million in state and local tax revenue

Timeline

- Fisheries Meetings week of June 27
  - Monday, June 27, Technical College, Centennial Hall West, 1290 North Ave., Cleveland, WI 53015
  - Wednesday, June 29, Brown County Library, Auditorium, 515 Pine St. , Green Bay, WI 54301
  - Thursday, June 30, UW-Milwaukee School of Freshwater Sciences, Ballroom, 600 E. Greenfield Ave., Milwaukee, WI 53204
- Comment period until July 31 – email comments to DNRLAKEMICHIGANPLAN@wisconsin.gov
- Create final draft recommendations
- Present draft recommendations to Lake Michigan Fisheries Forum – August 2016
- Finalize plans by October 1

Agenda and Goals

- Review critical fisheries information
- Present holistic approach to management of the fishery
- Break into 4 breakout groups, listen to suggestions, comments and feedback from stakeholders on all ideas

Agenda

- 6:00 – 6:05 p.m. – Introduction
- 6:05 – 6:40 p.m. – Presentation
- 6:45 – 7:45 p.m. – Breakout groups
- 7:45 – 8:00 p.m. – Wrap-up

Stakeholder Communication and Information sharing

2011

June – Initial stakeholder meeting

November – meeting with Lake Michigan Technical Committee

2012

January – meeting with Lake Michigan Technical Committee

April – Lakewide meeting

May – Wisconsin stakeholder meeting

August – Wisconsin stakeholder meeting

December – Initial LMFF meeting

2013

Jan – March – various sport group meetings

April – LMFF

August – Kewaunee/Door angler meeting

October - LMFF

2014

Jan – March – various sport group meetings

April – LMFF

April – Charter captain meeting

September – LMFF

October – Charter captains meetings

2015

March – Charter Captains meeting

April - LMFF

October - LMFF

2016

March – Charter Captain meeting

April – LMFF

June – Salmon and trout meetings

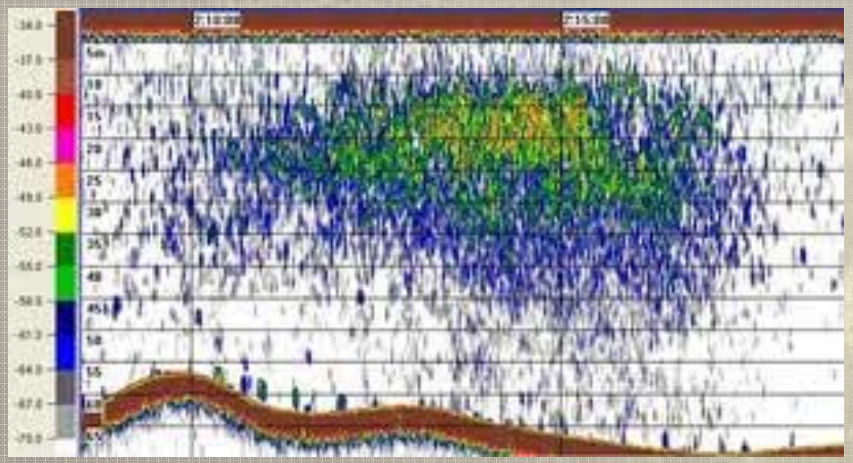
Press releases
GOV delivery
Individual club meetings
Web pages
E-mail address for comments
Conservation Congress

Consequences of Action/No Action

- If agencies reduce stocking (TAKE ACTION) but there was ample forage for more salmon and trout. The following will likely occur
  - Fishing will still be good
  - Fish size will be larger due to reduced predation on alewife
  - Forage base might grow larger and recover from current lows
  - If the predator prey ratio improves, more fish can be stocked in future years
- If agencies don't reduce stocking (NO ACTION) and there was a predator/prey imbalance in the lake then
  - there is an increased risk of collapsing not only the Chinook salmon fishery but the other trout and salmon fisheries as well
  - we would risk collapsing the Wisconsin trout and salmon charter industry and harming interrelated businesses as has happened in Lake Huron
  - we would not meet the expectations of the stakeholders who are concerned about the long-term viability of the trout and salmon fishery and desire less trout and salmon stocked into Lake Michigan at this time.

Review critical fisheries information

Forage Assessments

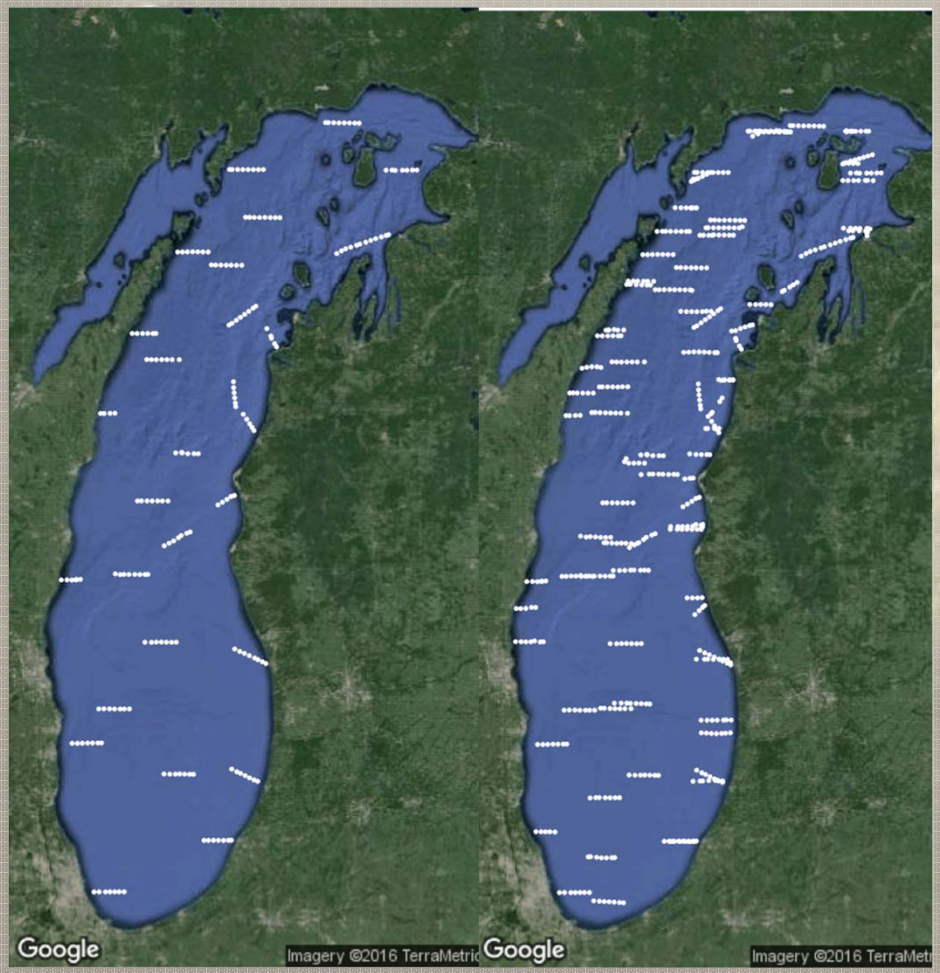


Hydro-acoustics

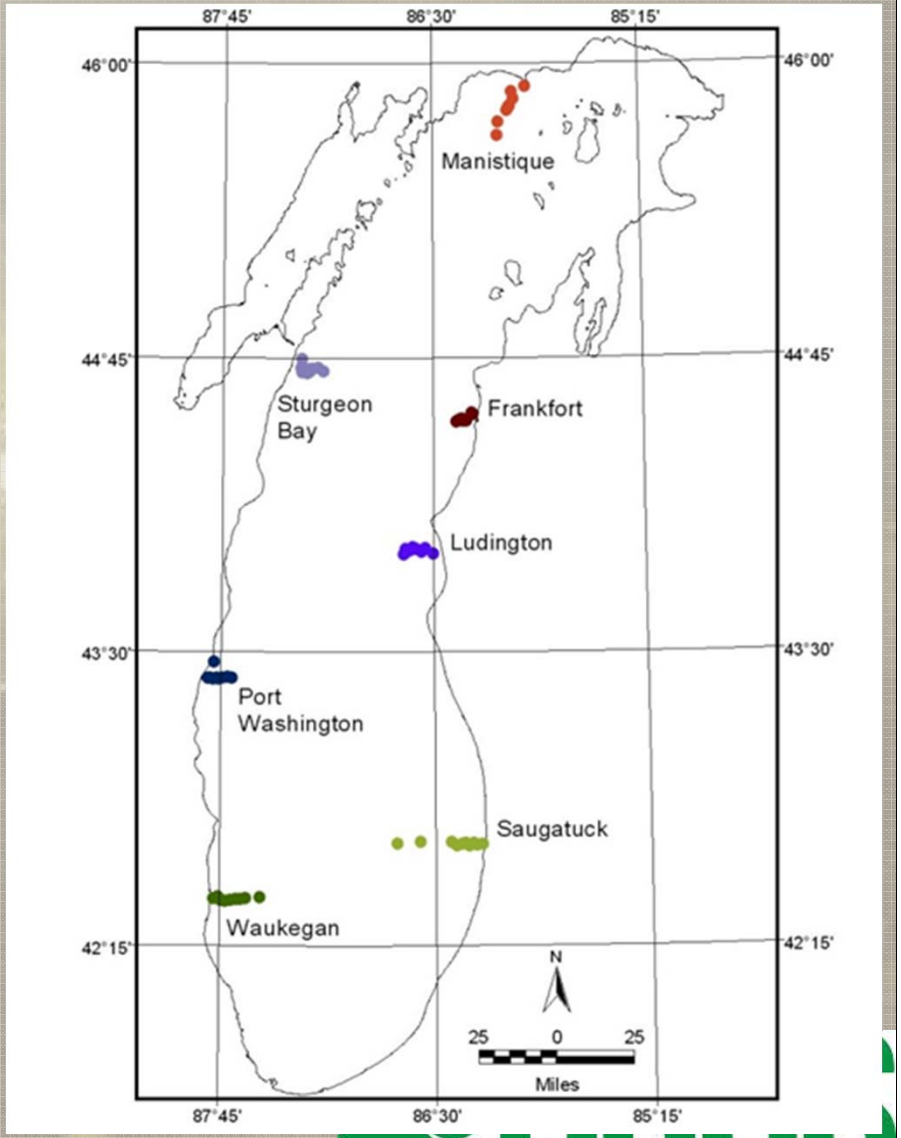
Bottom Trawl

USGS
science for a changing world

Forage Assessments



2015 2013 – 2015



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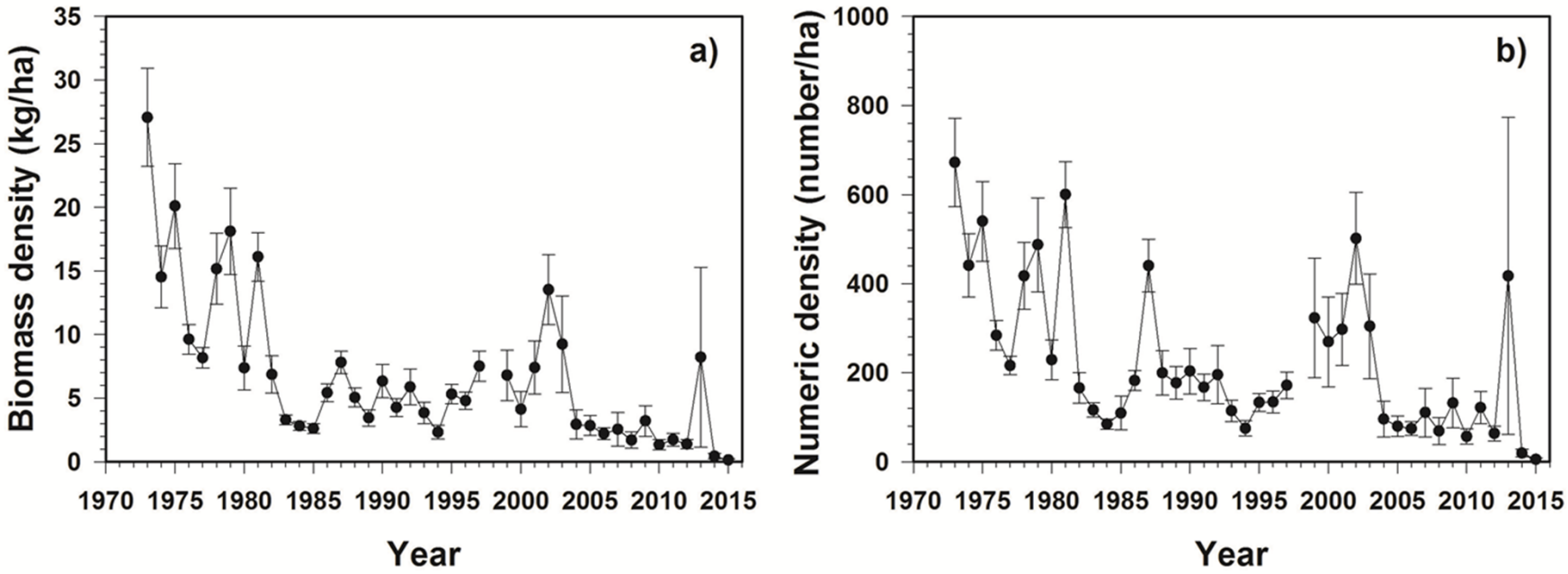
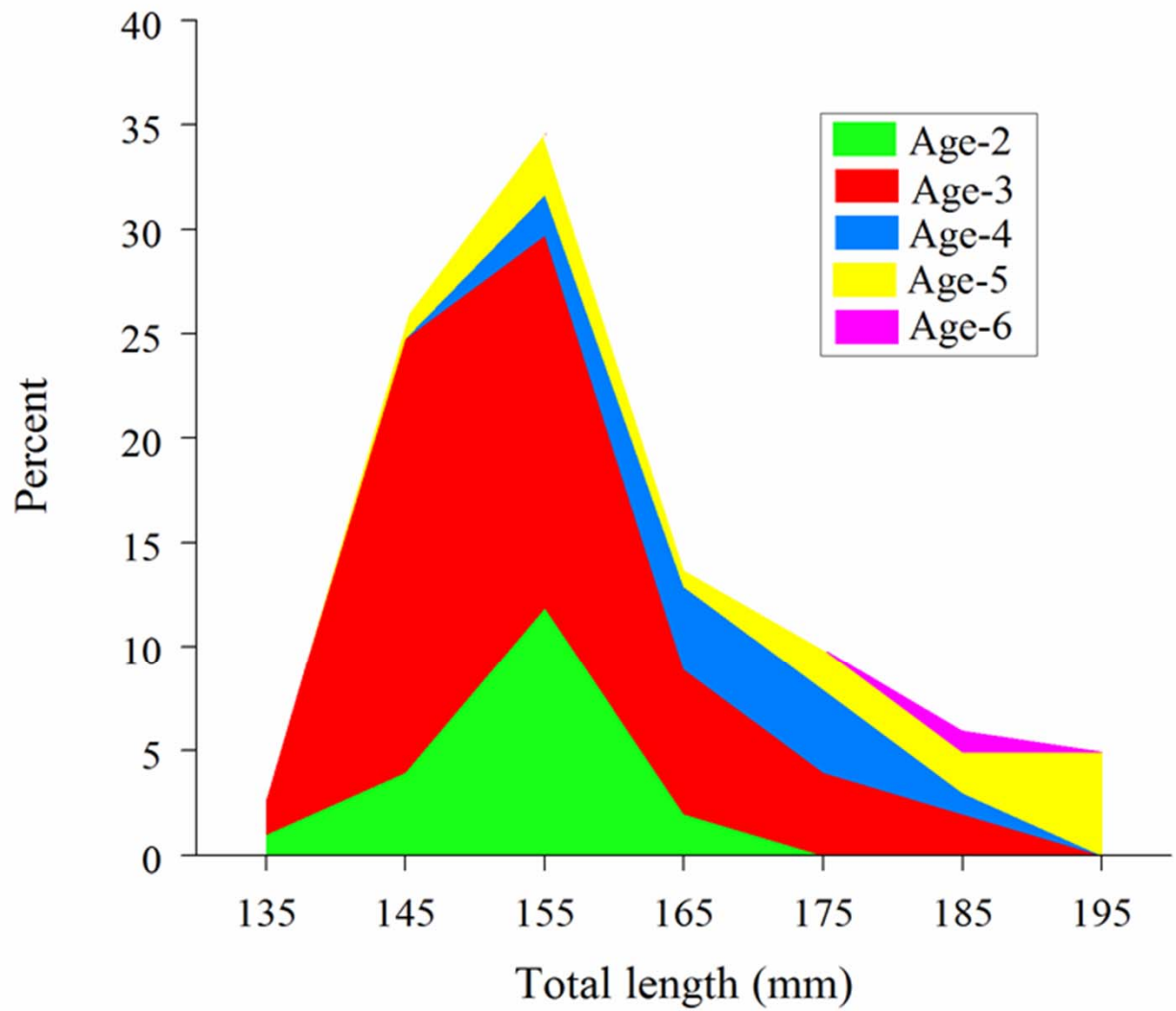
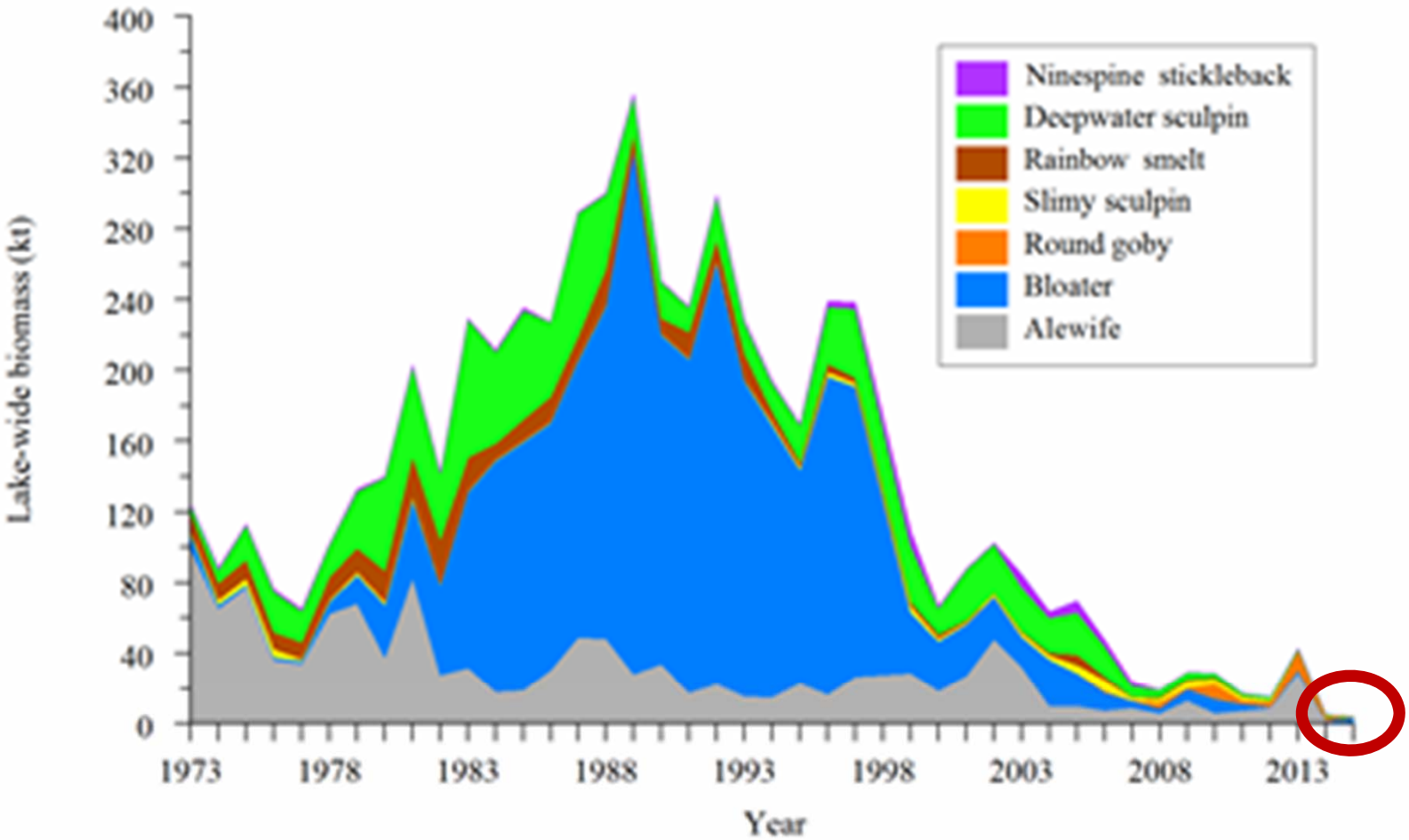
Density of adult alewives as biomass (a) and number (b) per ha (+/- standard error) in Lake Michigan, 1973-2015.



Age-length distribution of alewives ≥ 100 mm total length caught in bottom trawls in Lake Michigan, 2015.

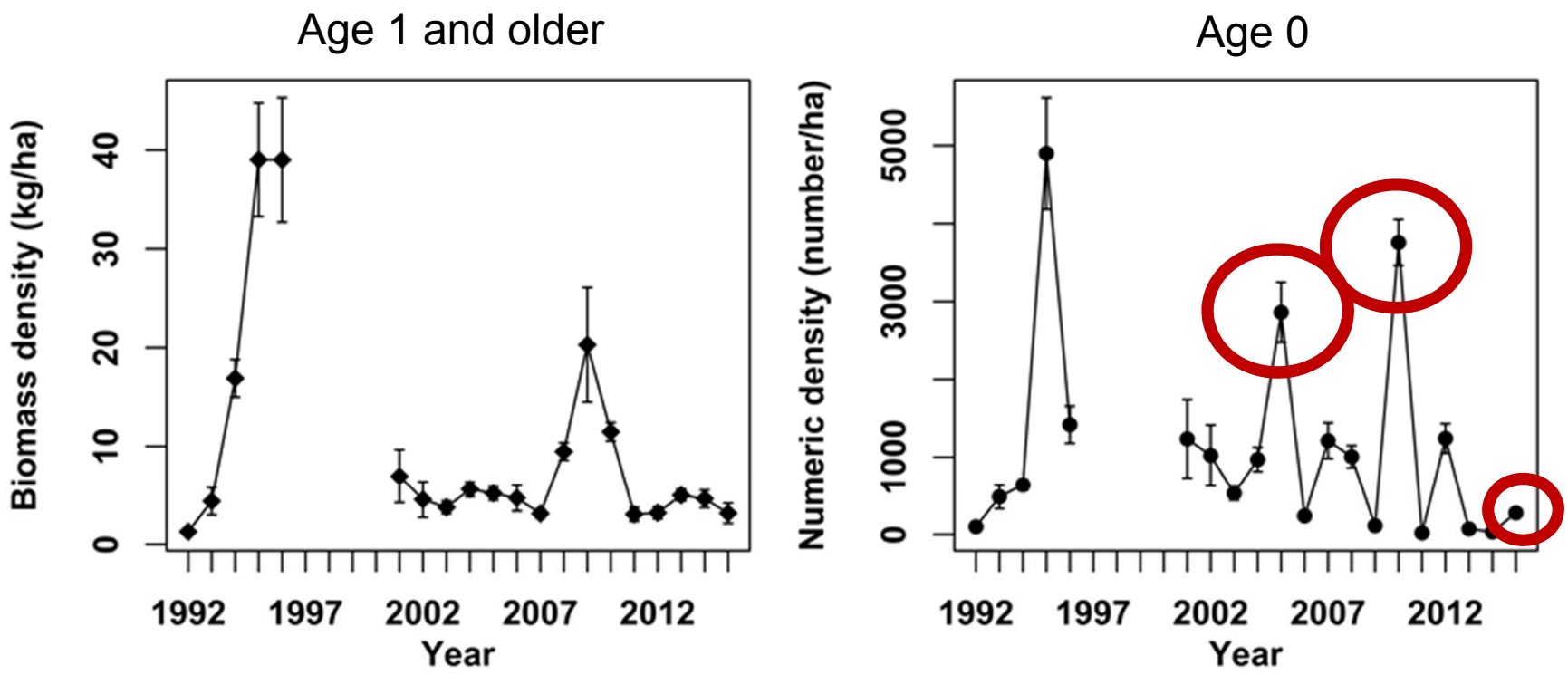


Estimated lake-wide (i.e., 5-114 m depth region) biomass of prey fishes in Lake Michigan, 1973-2015.



Biomass density of age-1 or older alewife (left panel) and Numeric density of age-0 alewife (right panel) in Lake Michigan during 1992-1996 and 2001-2015.

Acoustics Information



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Bottom Trawl Results for 2015 brief summary from Chuck Madenjian USGS

1. Based on the preliminary analysis, yearling and older (YAO) alewife biomass in Lake Michigan decreased by about 70% between 2014 and 2015, according to the bottom trawl survey
2. The 2015 value for alewife was the record low for the time series (0.5 kt) and overall biomass (4.0 kt) was also a record low.
3. Age distribution of alewives remained truncated with no alewife exceeding an age of 6.

Acoustic Results for 2015, brief summary from David Warner USGS

- Mean prey fish biomass was 36% lower than in 2014.
- The numeric density of the 2015 alewife year class was 25% of the average and 8 times the 2014 density.
- Adult alewife were sparsely distributed and fewer were caught in 2015 than in 2014, which is consistent with forecasts of lower alewife biomass in 2015 based on catch at age modeling & consumption by predators.

Chinook Weight / Condition

(Auxiliary Indicators)

- Average weight of age 3 female Chinook

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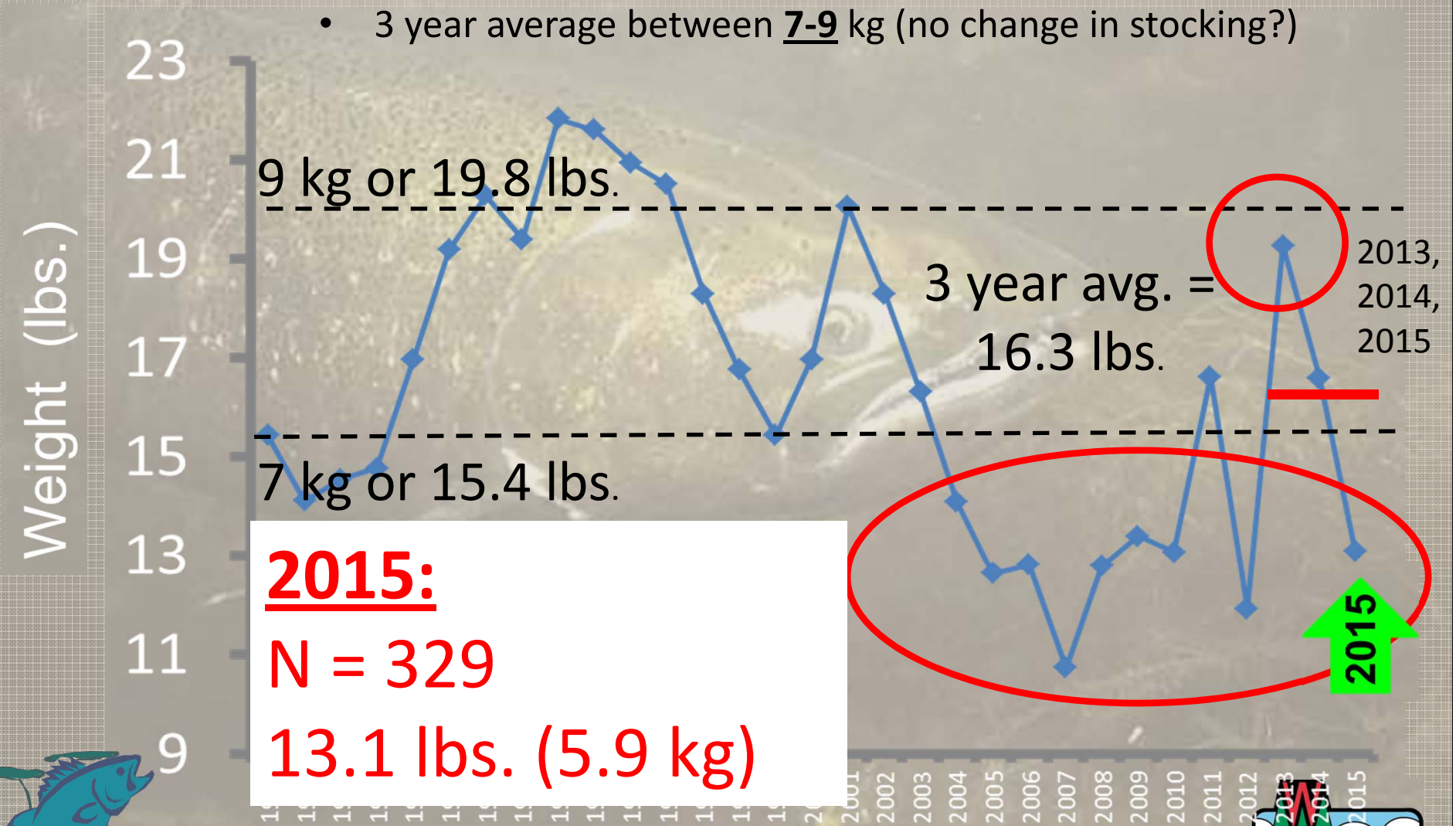
In the absence of a better indicator:

- 3 year average below **7 kg** or 15.4 lbs. (reduce stocking?)
- 3 year average above **9 kg** or 19.8 lbs. (increase stocking?)
- 3 year average between **7-9** kg (no change in stocking?)



2015:

N = 329

13.1 lbs. (5.9 kg)

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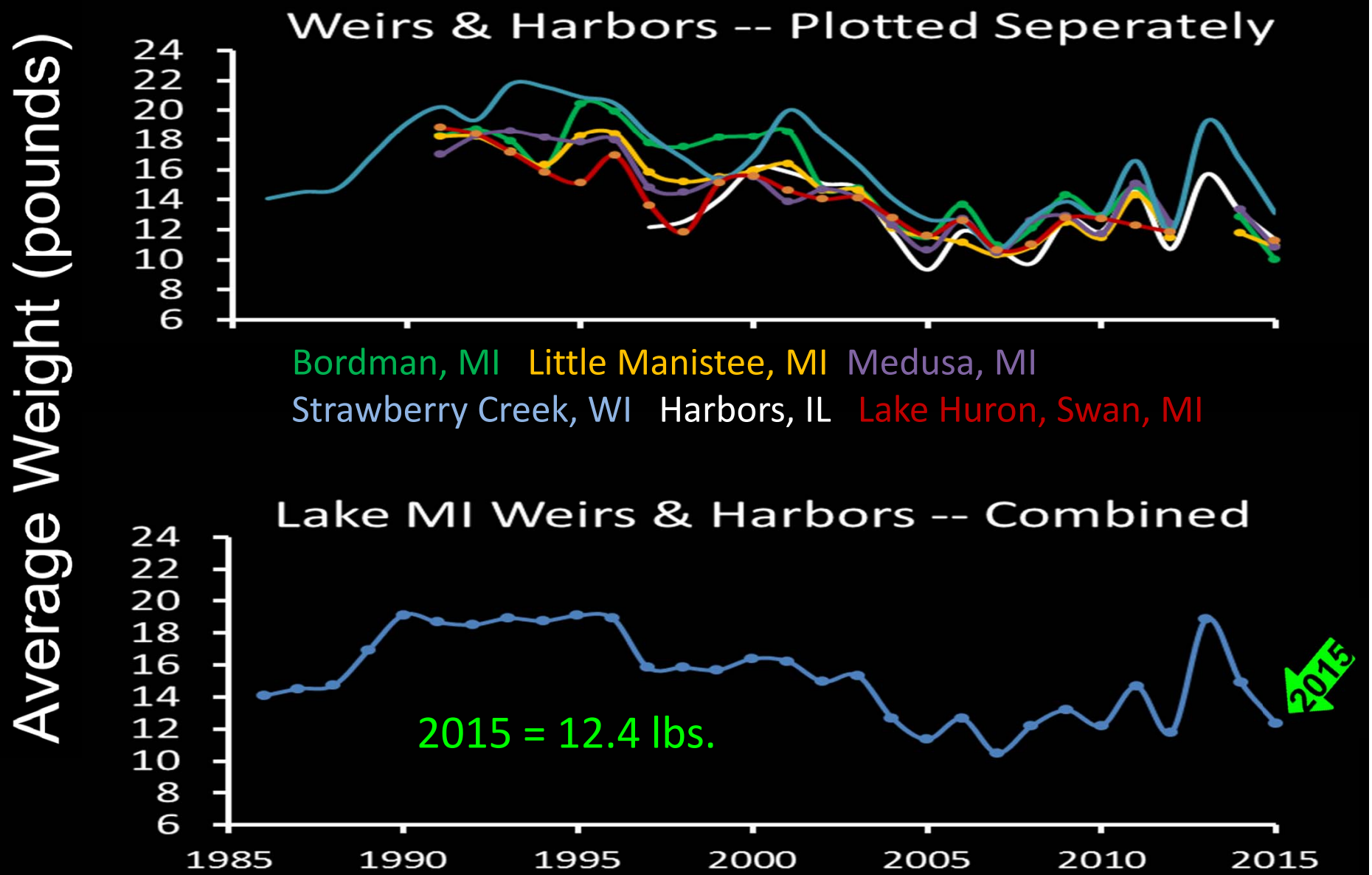
Average Weight of Age 3 Female Chinook
(Auxiliary Indicator)



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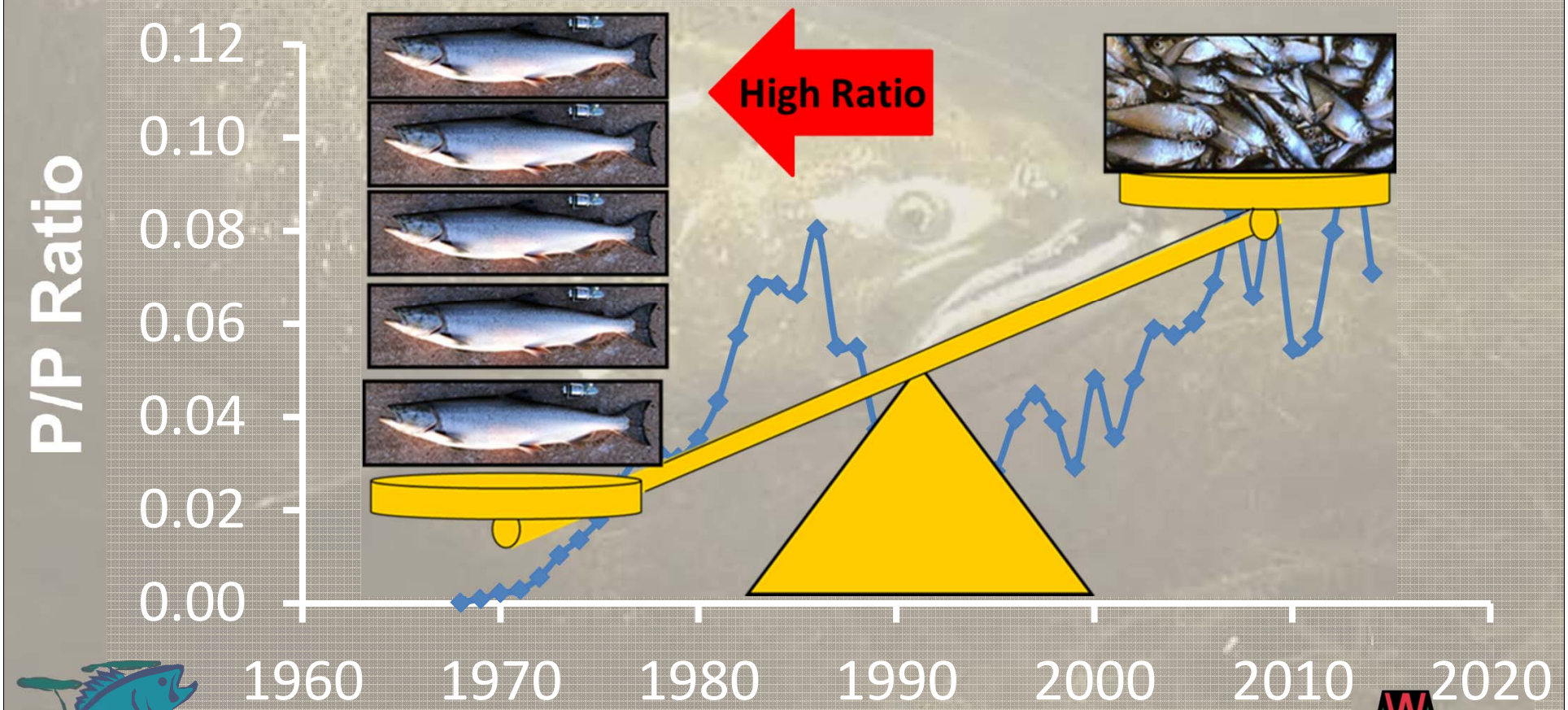
Chinook Total Lake Biomass ÷ **Alewife Total Lake Biomass** = **P/P Ratio**



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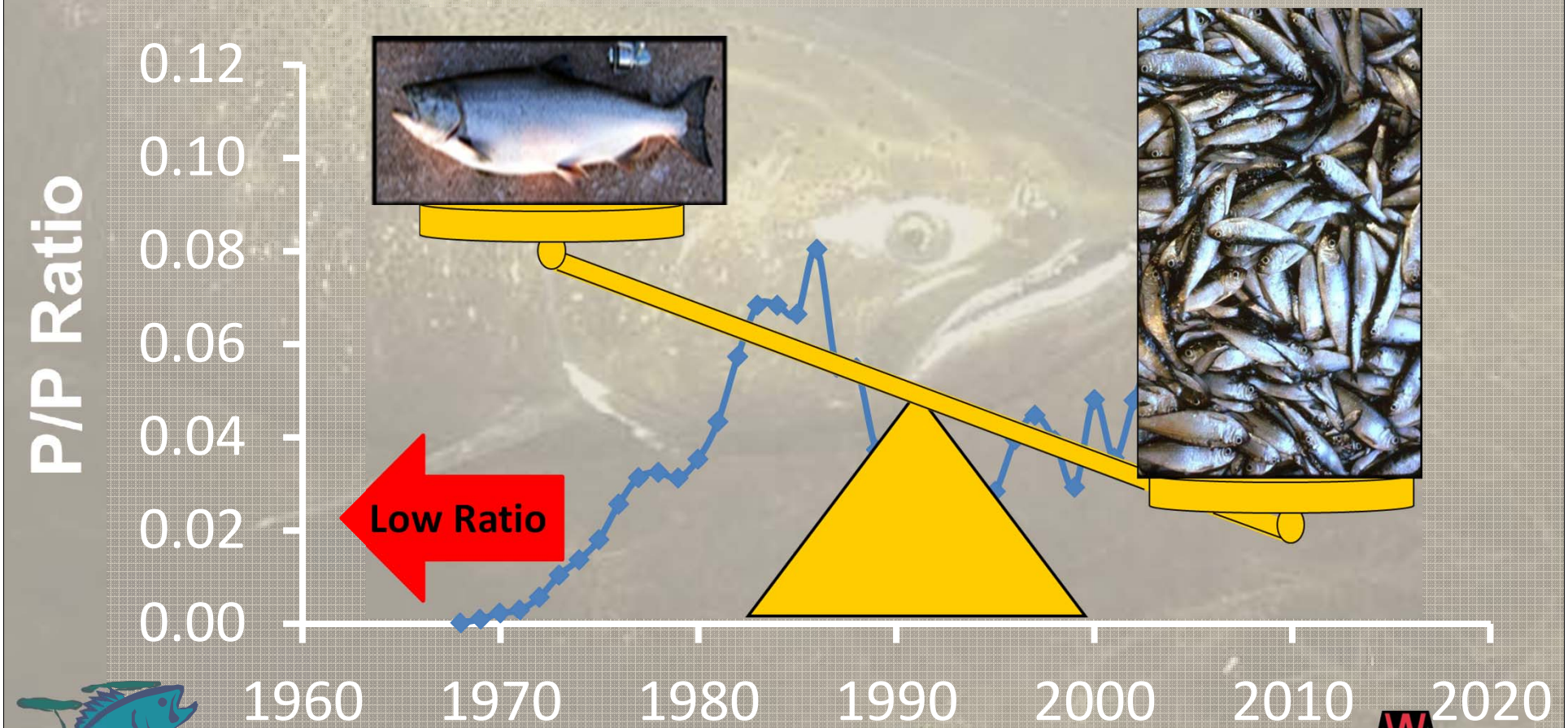

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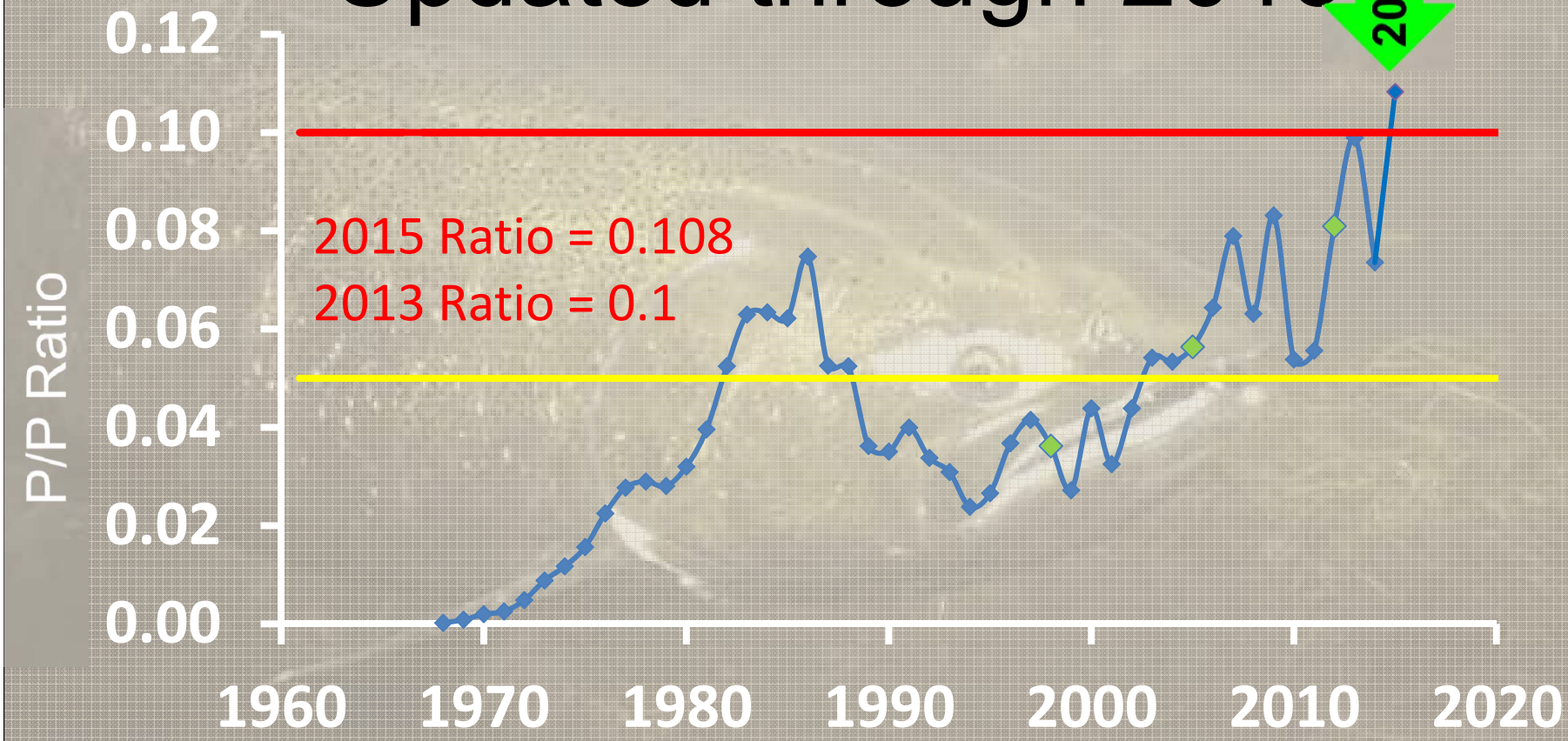
Chinook / Alewife Ratio Updated through 2015



2 of the past 3 years were at or above the upper limit.
Light green data points indicate recent stocking reduction decision years.

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Holistic Approach

- Discuss
  - Chinook salmon stocking numbers for 2017
  - Lake Trout season and bag limits
  - Species mix
  - Net pen usage
  - Stocking at dusk/night
  - Predatory Bird Hazing
  - Hatchery Production
  - Fish Purchase from private hatcheries
  - Support for enhanced research capacity
  - Habitat improvement opportunities
  - Enhanced outreach, education and marketing of the fishery
  - Stakeholder suggestions

Potential chinook salmon stocking numbers for 2017

Potential chinook salmon stocking numbers for 2017

- The Lake Michigan Committee (Fisheries Managers from all the bordering states of Lake Michigan and the tribes) has recommended a 61.5% lake-wide reduction of Chinook salmon.

State	Current	Proposed	Percent
Wisconsin	810,000	355,000	56%
Michigan	560,000	200,000	64%
Illinois	230,000	90,000	61%
Indiana	200,000	45,000	78%
Total	**1,800,000**	**690,000**	**61.5%**

Lake Trout season and bag limits

Lake Trout Information

- Lake trout rehabilitation guided by “A Fisheries Management Implementation Strategy for the Rehabilitation of Lake Trout in Lake Michigan”
- 550,000 fingerling reduction starting 2016
- Lake Trout Working Group via the LM Technical Committee will analyze whether certain lake trout stocking areas are meeting expected goals

Lake Trout season and bag limits

- Current regulations
  - Mid-Lake Reef closed
  - March 1 to October 31
  - 2 per person per day
  - 10 inch minimum size
- Possible ideas
  - Increase open season to year round
  - Increase bag limit to 3 per person per day
  - Open Mid-Lake Reef to fishing

Species Mix

Species Mix

- Currently stocked by WDNR
  - Chinook and Coho salmon
  - Steelhead (Chambers Creek, Ganaraska)
  - Rainbow trout (Arlee)
  - Brown trout (Wild Rose, Seeforellen)
- Currently stocked by USFWS
  - Lake trout
- Other ideas
  - Atlantic salmon
  - Splake, tiger trout, steelhead (Skamania)

Net pen usage

Net Pens

- Enclosure made of rigid frame and mesh material
- Thought to increase imprinting, survival, and growth
- Results from other states are mixed
- Illegal in WI to rear fish in a net pen until 2013

Net Pen Locations - 2015

Stocking at dusk/night

Stocking at dusk/night

- Request to stock at dusk/night has been brought up numerous times over the years
- Logistics may be an issue
  - Safety
  - Workload
  - Cost (overtime)
- Fish behavior
  - Low dispersal rates as fish stay for days at stocking location
  - Bird predation may be a minor source of overall mortality
- Trial period or study to determine usefulness?

Predatory Bird Hazing

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Predatory Bird Hazing

- Michigan DNR
- Clearance through US Dept of Agriculture
- Work with local clubs
- Set up training program
- Hatchery driver notifies volunteers when and where fish will be stocked
- Volunteers monitor fish and use harassment techniques

Hatchery Production

Hatchery Production

- **Brule Rearing station**
  - 125,000 yearling wild rose brown trout
  - 100,000 fingerling wild rose brown trout
  - 75,000 yearling coho salmon
- **Thunder River Rearing station**
  - 150,000 yearling wild rose brown trout
- **Wild Rose**
  - 300,000 yearling seeforellen brown trout
  - 400,000 yearling coho salmon
  - 550,000 fingerling chinook salmon
- **Kettle Moraine**
  - 270,000 yearling steelhead
  - 150,000 fingerling chinook salmon
- **Lake Mills Hatchery**
  - 120,000 yearling rainbow trout

Maxed Out

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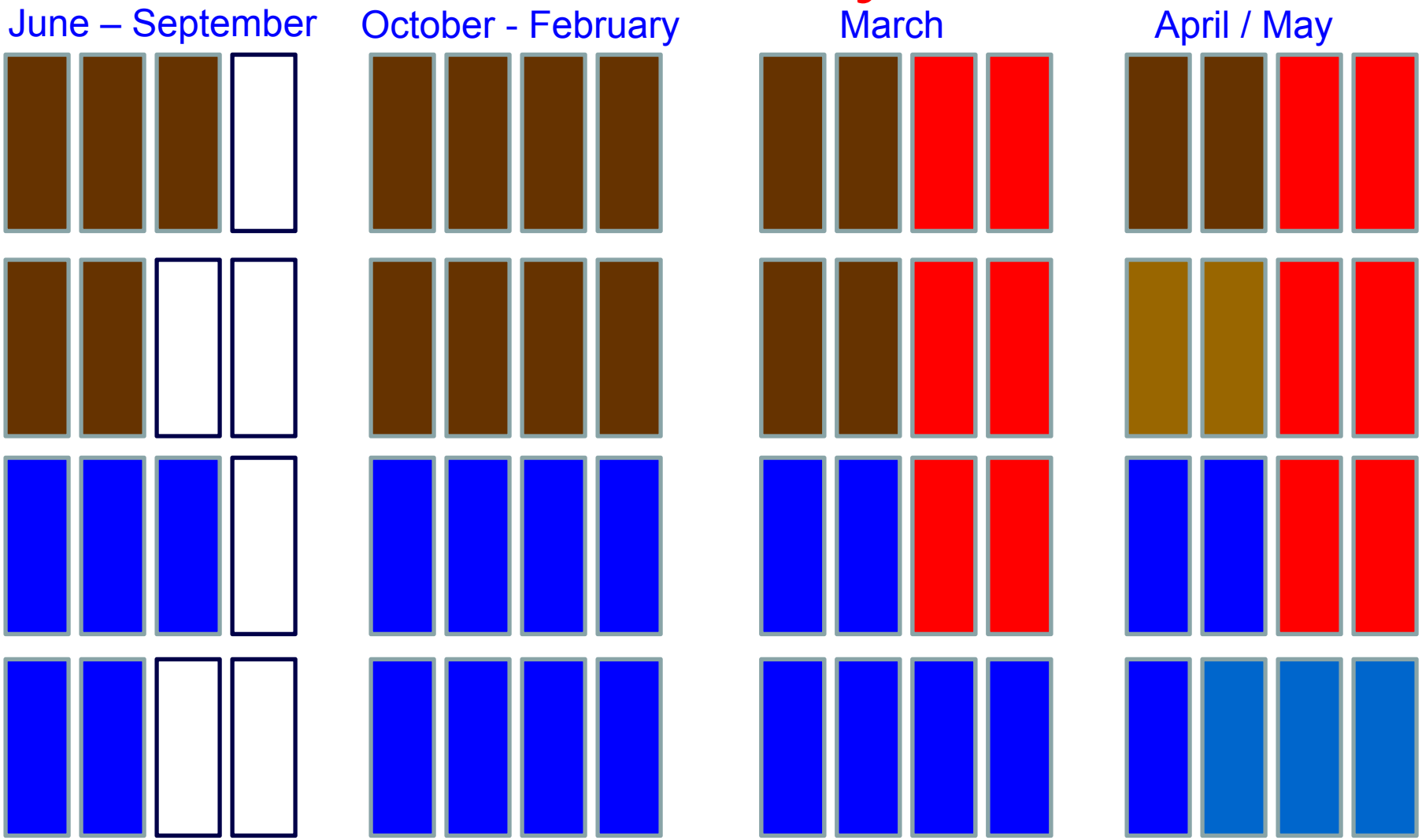
Wild Rose Hatchery Production



Small fry growing

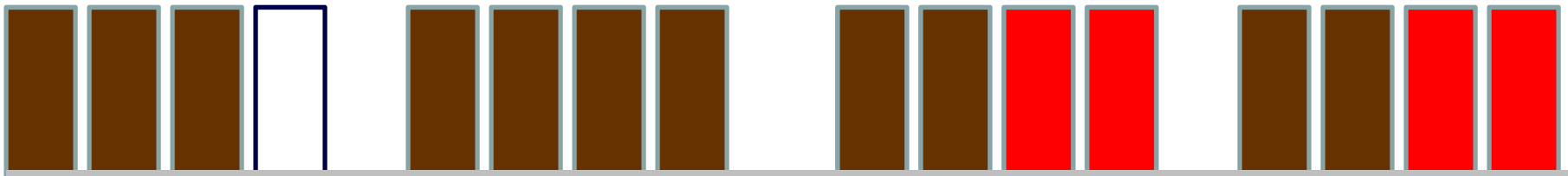
Expand into empty tanks
Transfer
Stock

Stock browns and cohos early
Transfer chinook

Stock browns, coho and chinook
Transfer brown and coho fry

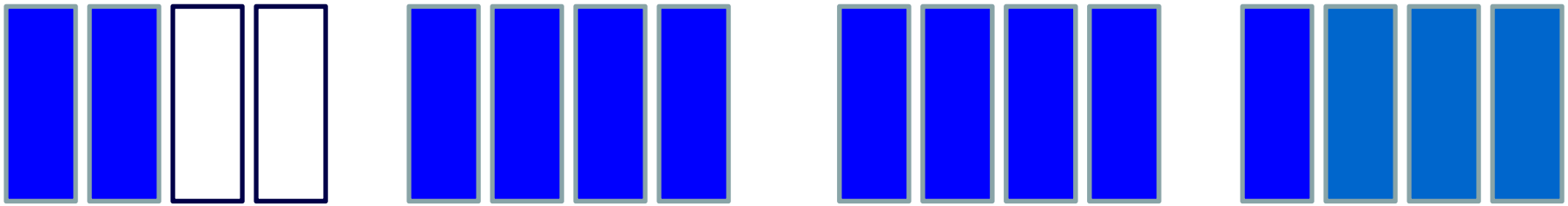
Wild Rose Hatchery Production

June – September | October - February | March | April / May



Production

400,000 fingerling wild rose brown trout transfers
300,000 yearling seeforellen brown trout
400,000 yearling coho salmon
550,000 chinook salmon
150,000 chinook salmon transfers



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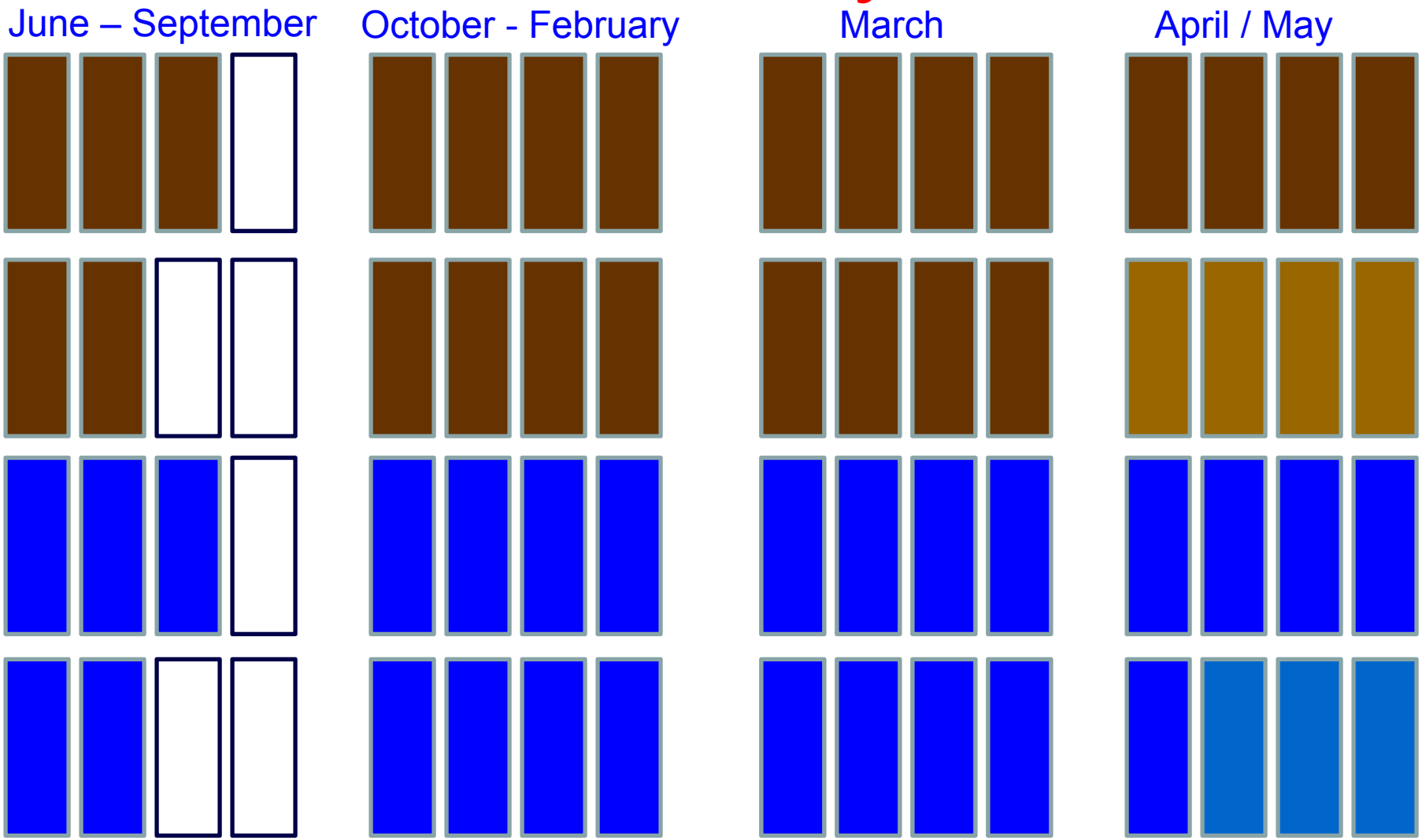

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Allow fish to grow in March

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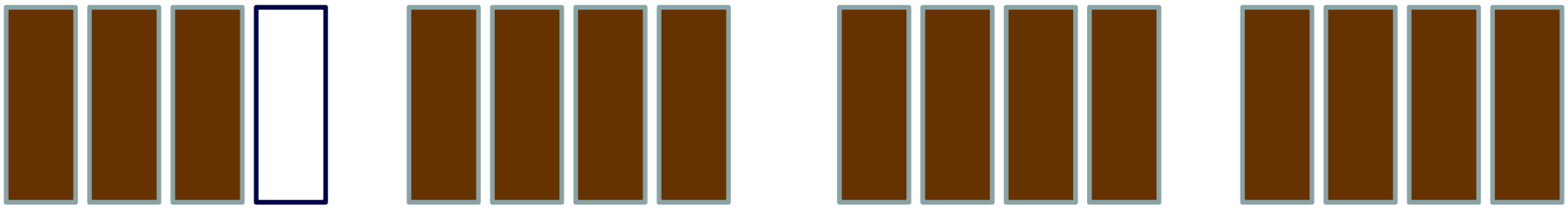

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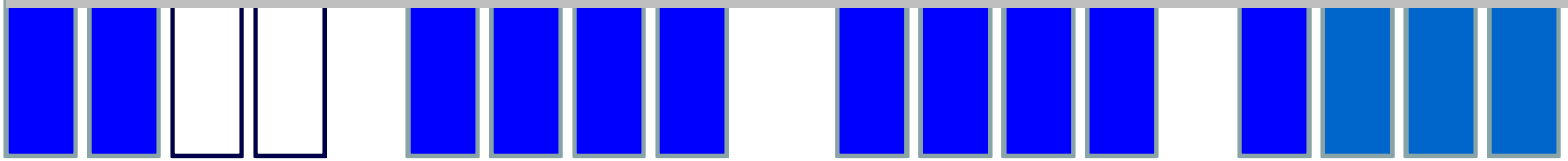

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Fish Purchase from private hatcheries

Support for enhanced research capacity

Habitat improvement opportunities

Enhanced outreach, education and marketing of the fishery

Time for Breakout Groups!!

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