

Bass Spawning Sanctuary Project

7/3/25 Update

David Philipp and Julie Claussen

Fisheries Conservation Foundation

www.fishconserve.org



Steve Cooke, Joel Zhang

Carleton University

Justin Lombardo

University of Illinois

WHAT IS THE PROBLEM?

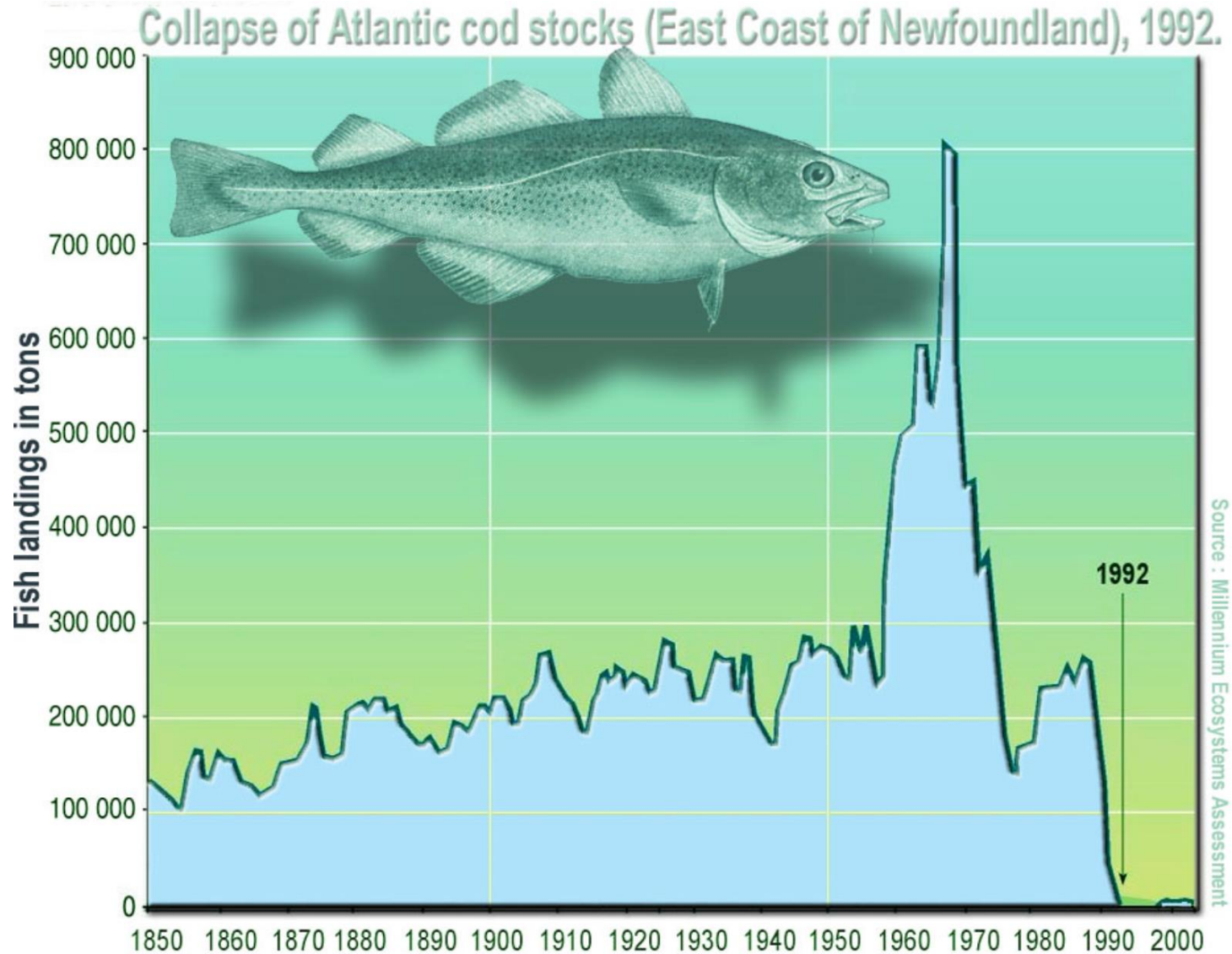


WHAT IS THE PROBLEM?

**RECRUITMENT
OVERFISHING**



CANADA'S MOST FAMOUS EXAMPLE



**HOW CAN THAT HAPPEN WHEN BASS
FISHING IS MOSTLY CATCH AND RELEASE?**

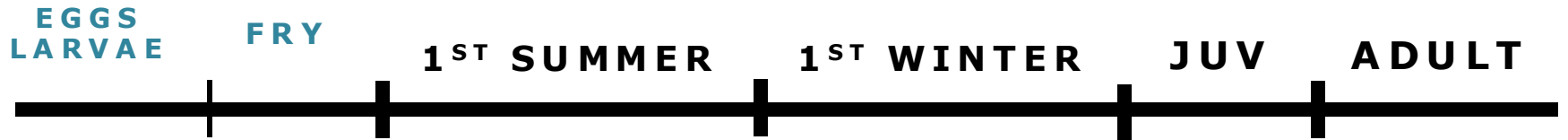


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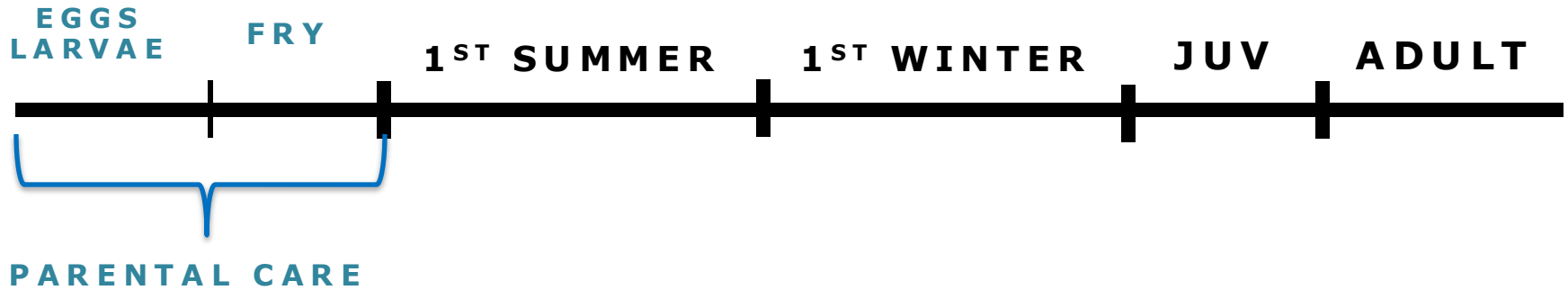


**ANGLING DURING THE NESTING SEASON
REDUCES REPRODUCTIVE SUCCESS**

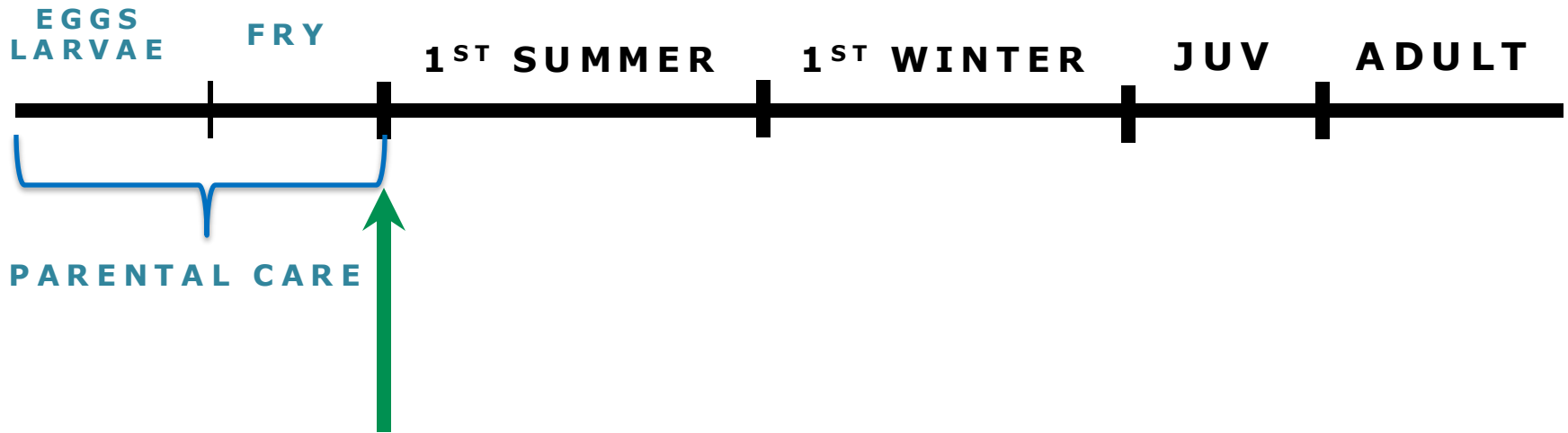
BASS LIFE HISTORY STAGES



BASS LIFE HISTORY STAGES

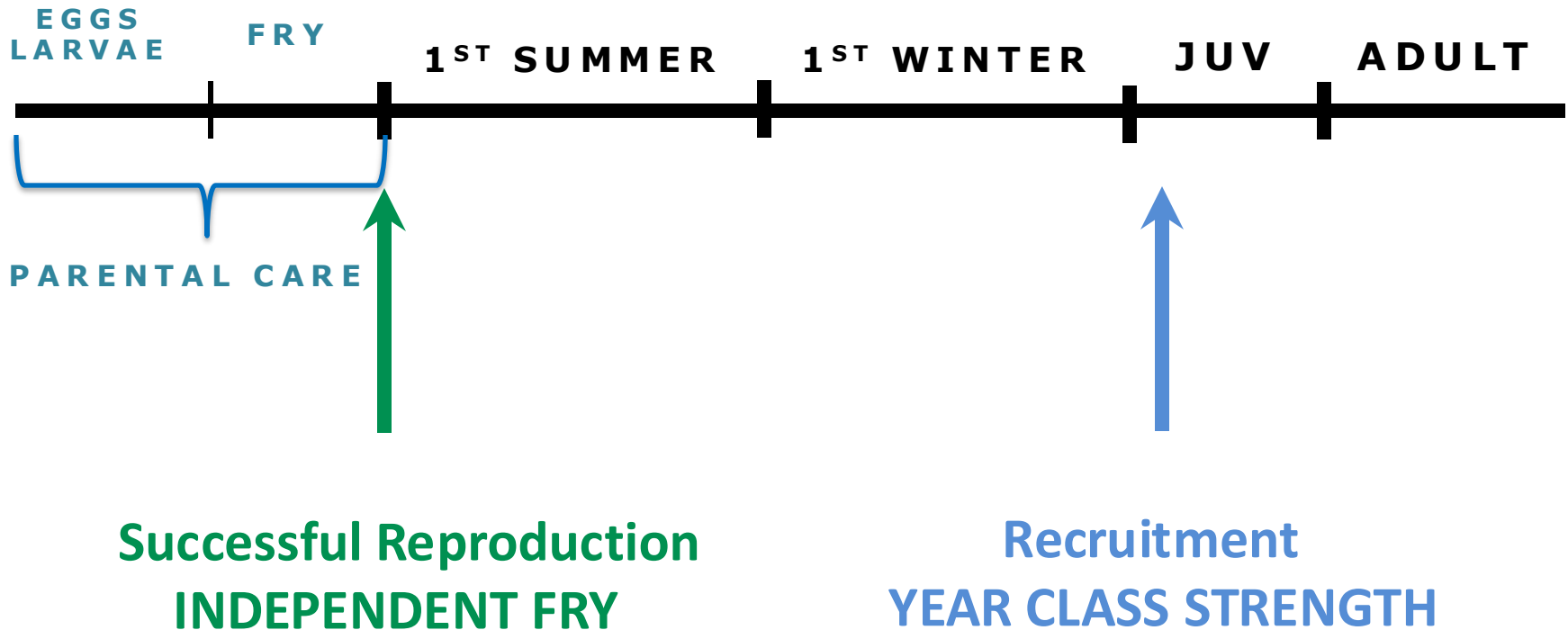


BASS LIFE HISTORY STAGES



Successful Reproduction
INDEPENDENT FRY

BASS LIFE HISTORY STAGES



A group of people are on a small pontoon boat on a calm lake. The background is a dense forest of trees with bright green foliage. The water in the foreground is dark green with ripples. The text "DOESN'T THE CLOSED BASS SEASON PROTECT THE MALE BASS FROM ANGLING?" is overlaid in white capital letters.

**DOESN'T THE CLOSED BASS SEASON PROTECT THE
MALE BASS FROM ANGLING?**

A photograph of a lake with a dense forest of green trees in the background. A small pontoon boat with several people on board is positioned in the middle ground. The water is calm with some ripples. The sky is overcast.

**DOESN'T THE CLOSED BASS SEASON PROTECT THE
MALE BASS FROM ANGLING?**

ABSOLUTELY NOT!



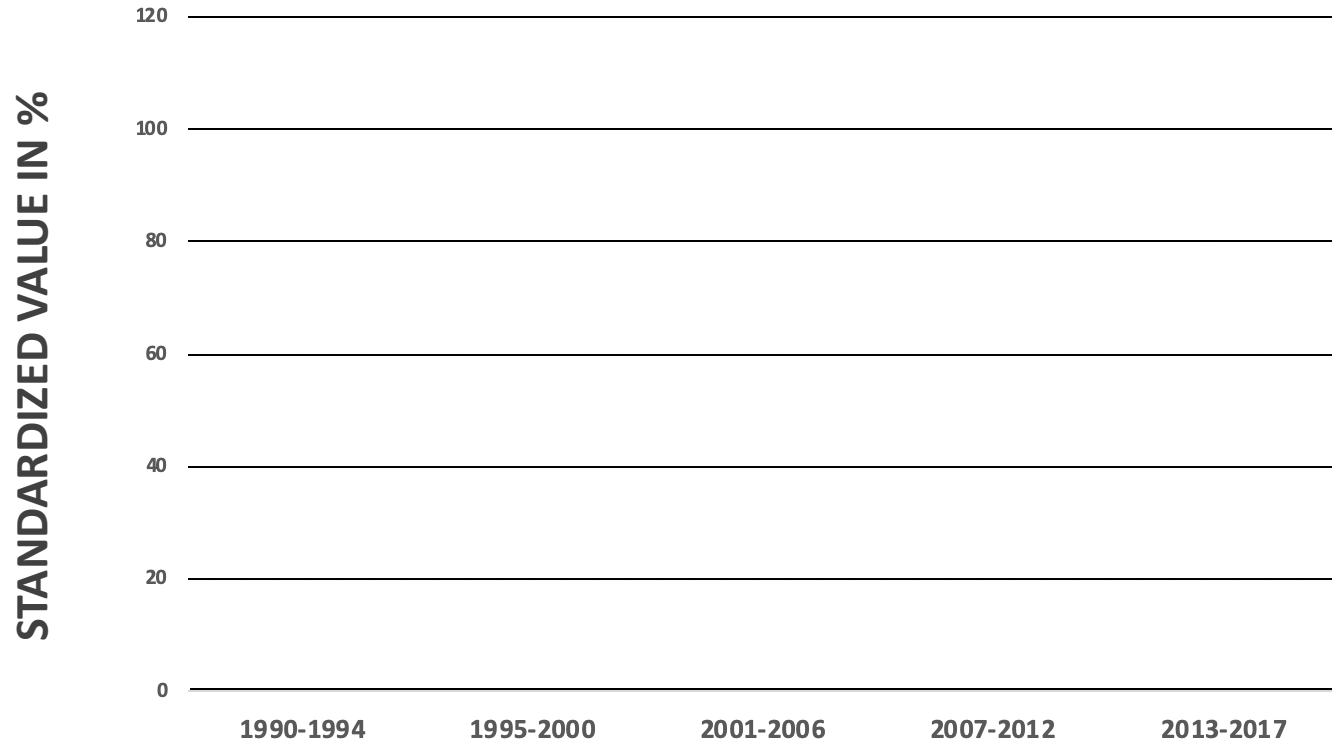
HOW EXTENSIVE IS ANGLING FOR NESTING BASS?

A photograph of a river with a wooden bridge in the background and two people snorkeling in the water. The water is greenish-brown and rippled. The background shows a rocky bank with trees and a wooden bridge structure.

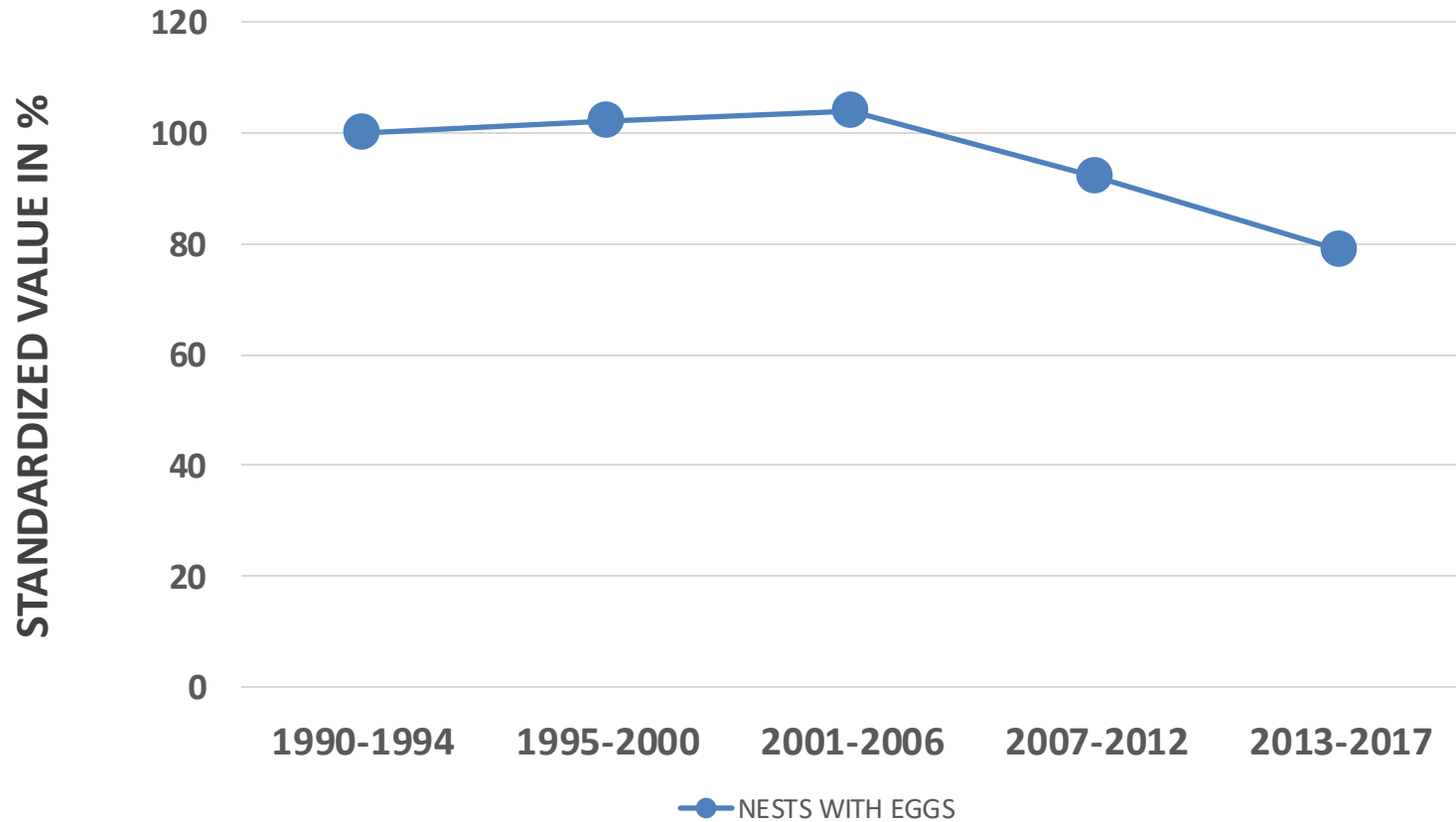
HOW EXTENSIVE IS ANGLING FOR NESTING BASS?

**SNORKEL SURVEYS TO ASSESS ANGLING
PRESSURE, REPRODUCTIVE SUCCESS, AND
RECRUITMENT SINCE 1990**

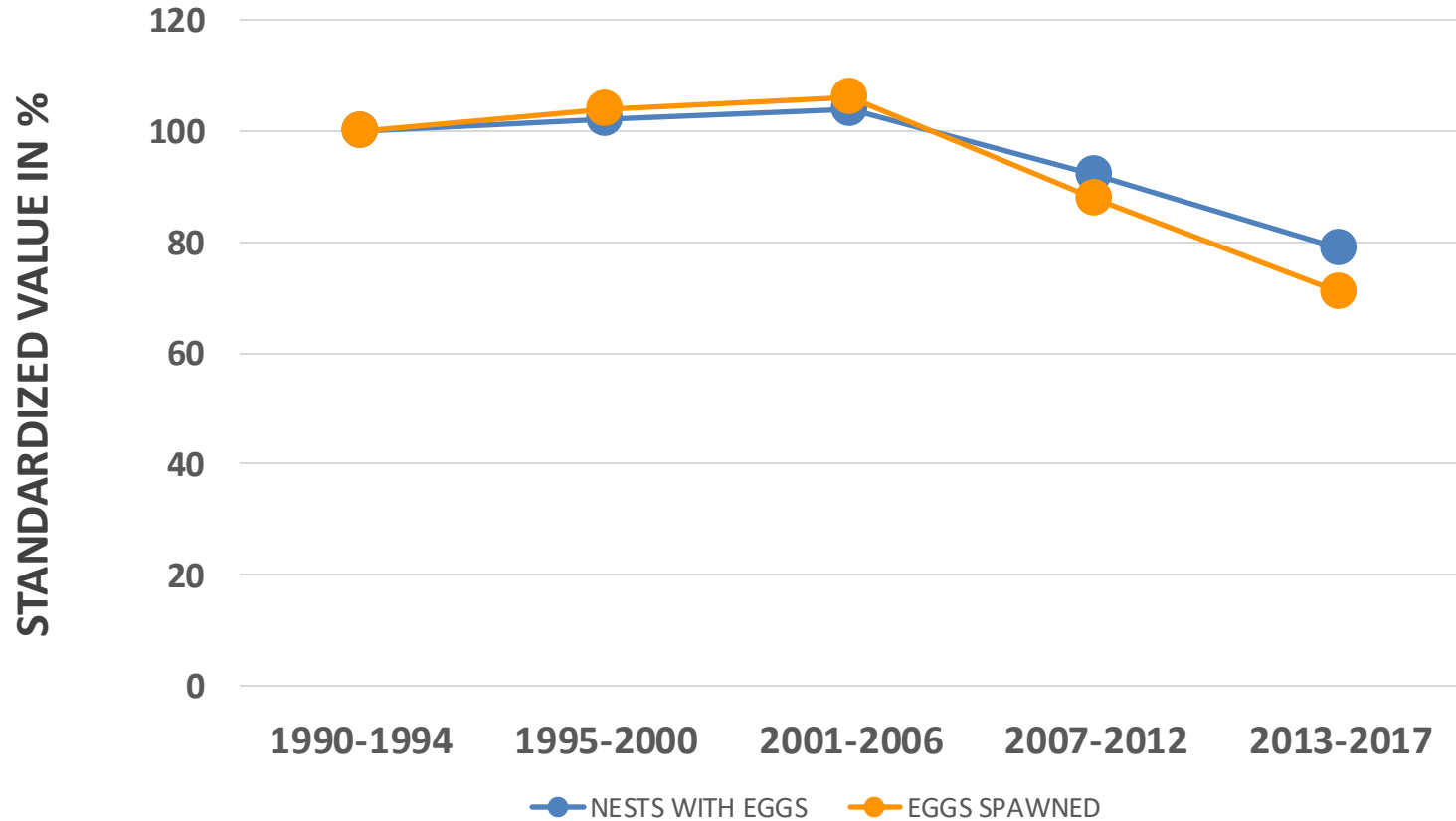
BASS REPRODUCTION IN LAKE OPINICON



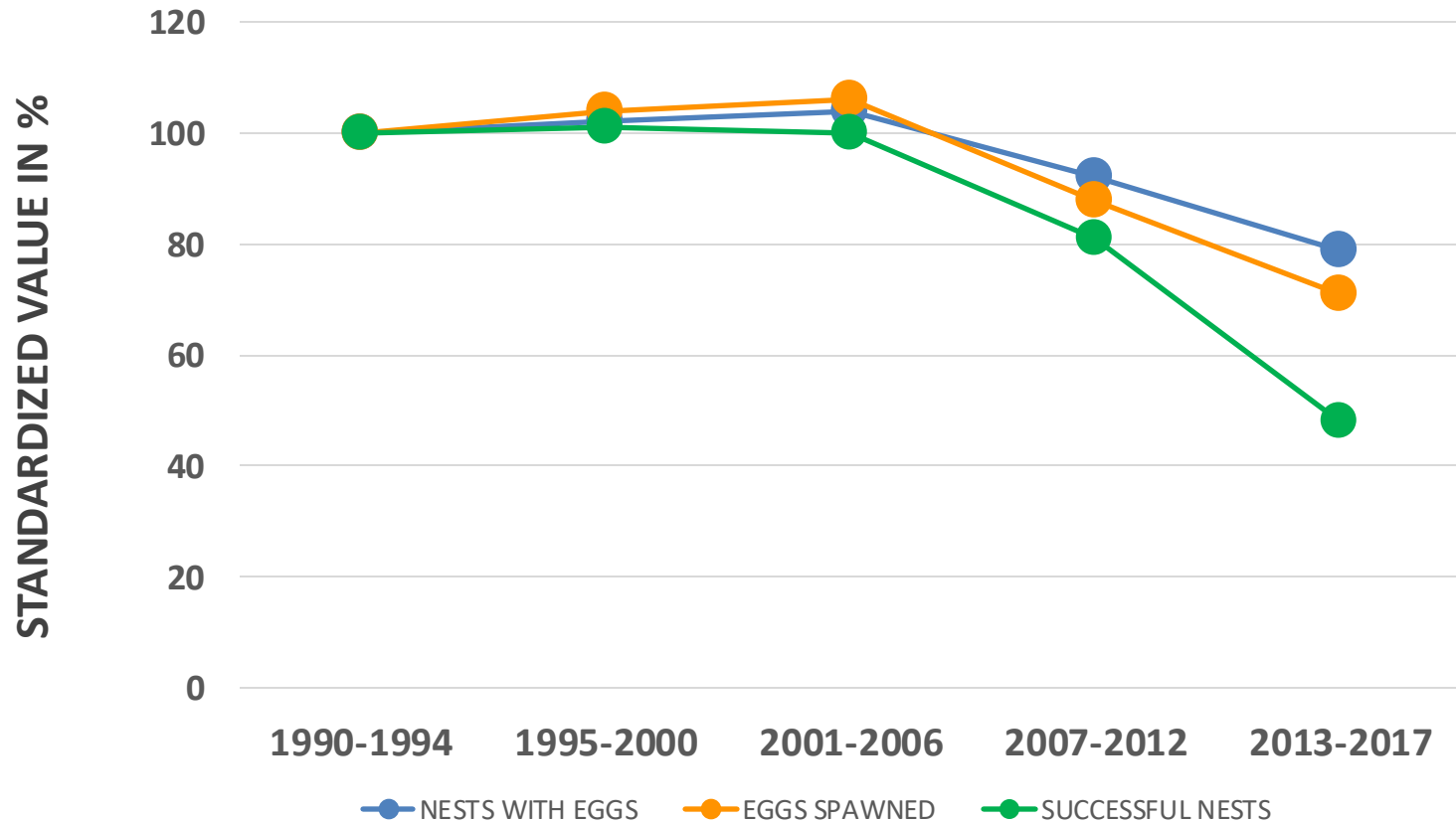
BASS REPRODUCTION IN LAKE OPINICON



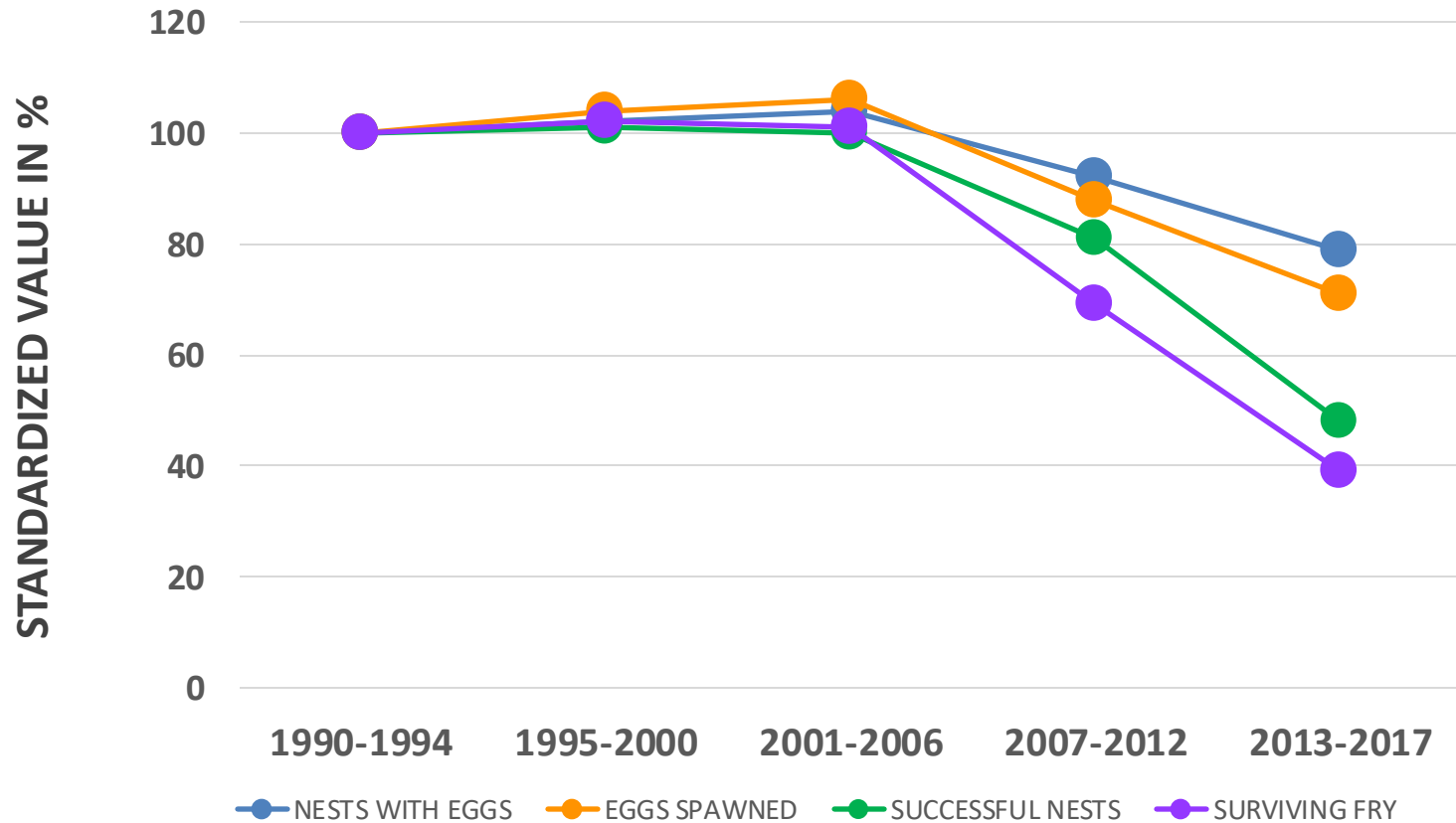
BASS REPRODUCTION IN LAKE OPINICON



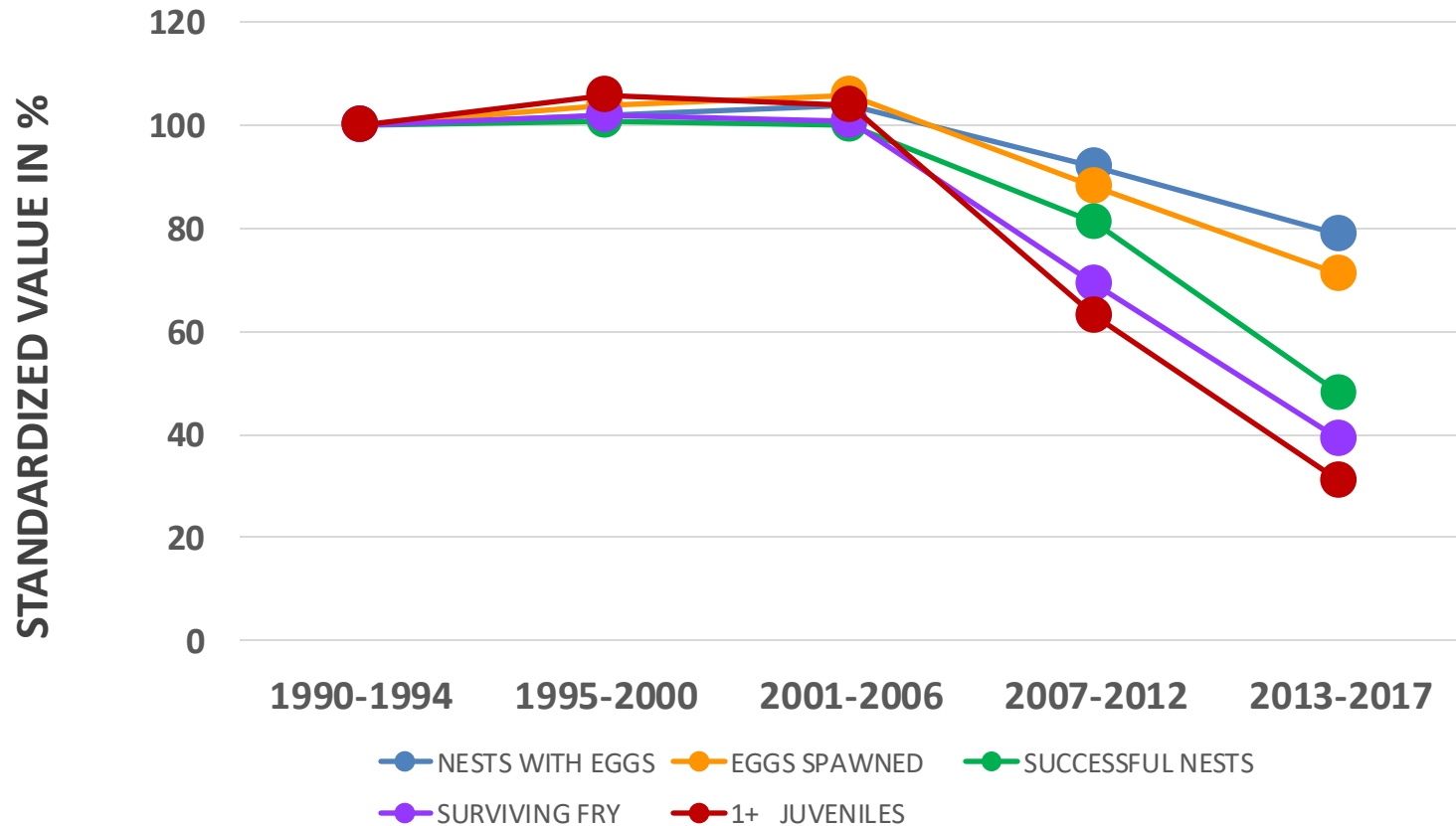
BASS REPRODUCTION IN LAKE OPINICON



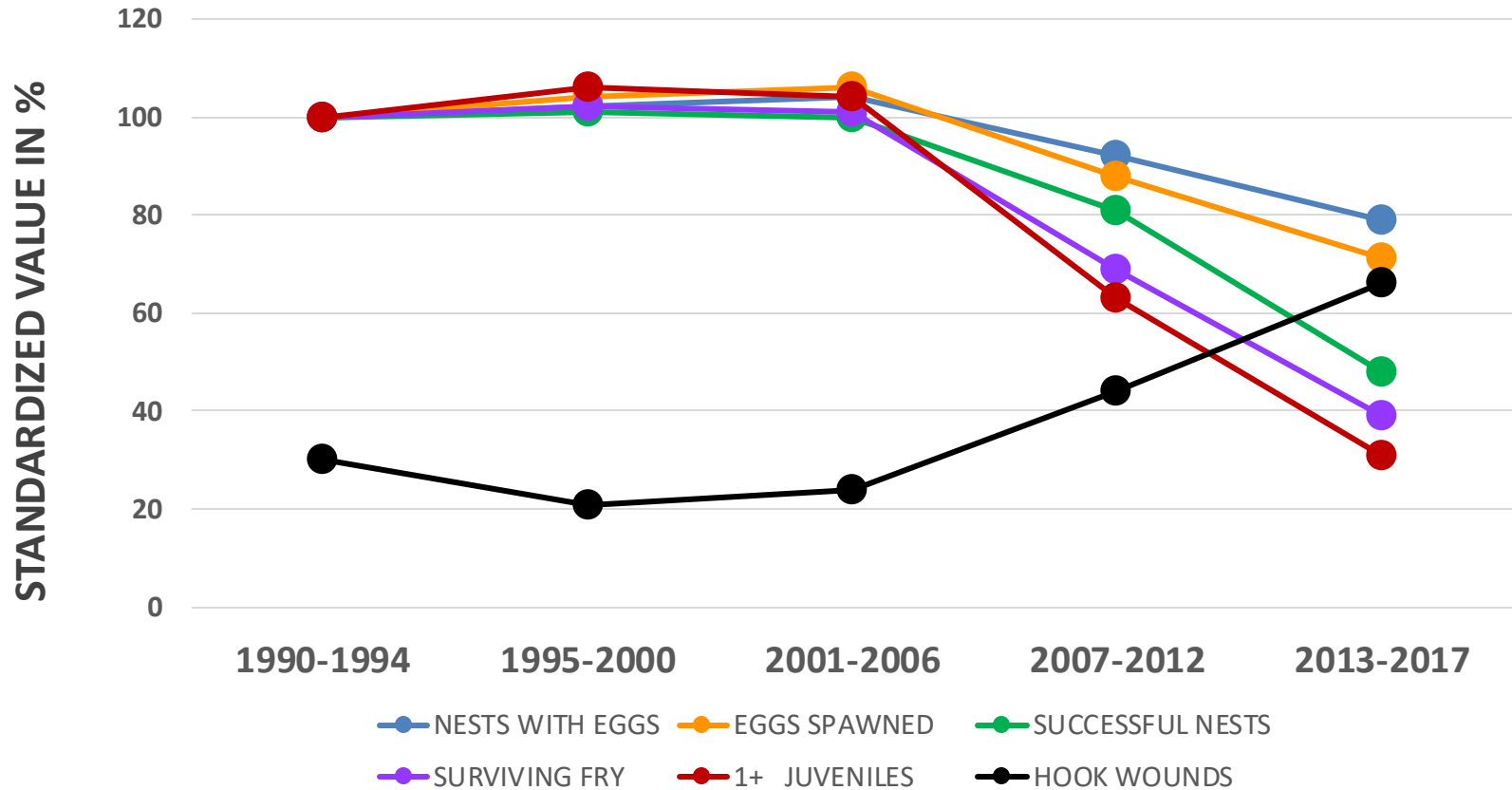
BASS REPRODUCTION IN LAKE OPINICON



BASS REPRODUCTION IN LAKE OPINICON



BASS REPRODUCTION IN LAKE OPINICON



**CONCLUSION:
ANGLING NESTING BASS (EVEN C/R) HAS
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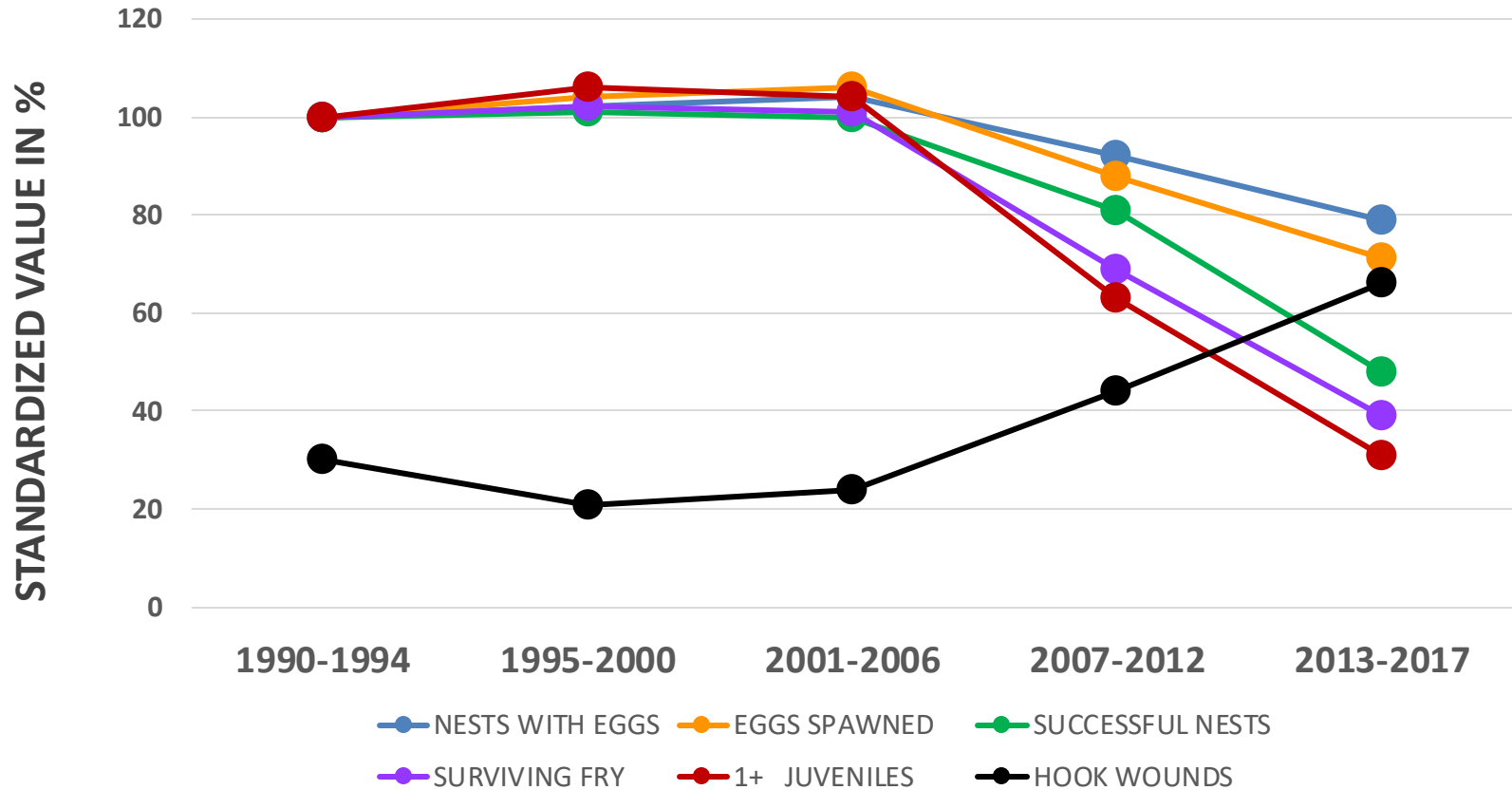


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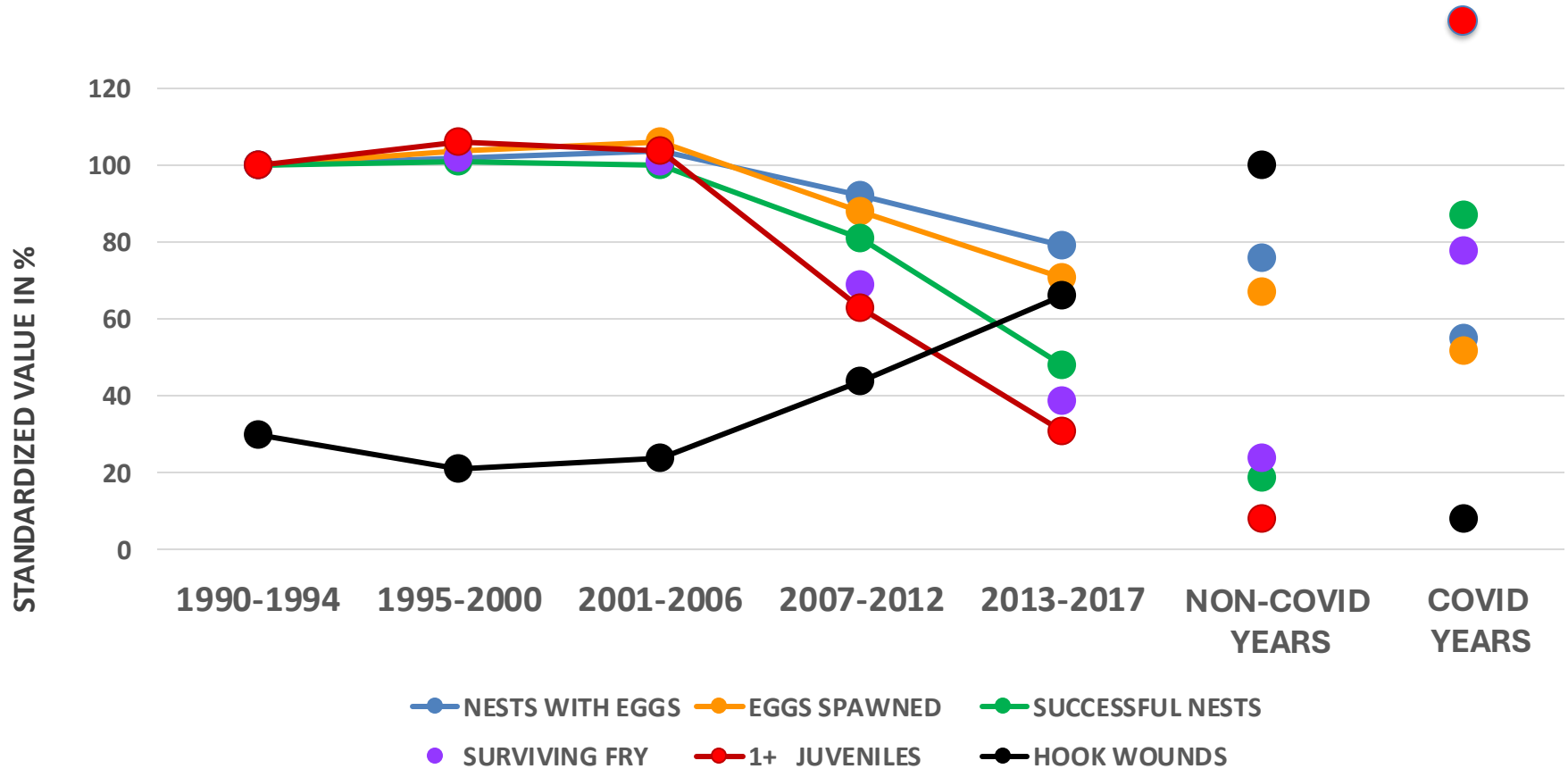
SKEPTICS?



BASS REPRODUCTION IN LAKE OPINICON



BASS REPRODUCTION IN LAKE OPINICON



ANGLING NESTING MALES

DECREASES REPRODUCTIVE SUCCESS

PRODUCES WEAK YEAR CLASSES

**RESULTS IN FEWER ADULTS
[AND SMALLER-ONES]**



An underwater photograph showing a large bass fish in the foreground, swimming towards the left. The fish has a dark, mottled pattern on its side. In the background, several other bass fish are visible, swimming in the water. The water is slightly murky, and there is some aquatic vegetation and rocks on the bottom. A white text overlay is positioned in the middle of the image.

WHEN DOES A BASS POPULATION REACH A TIPPING POINT?

ANGLING NESTING MALES

DECREASES REPRODUCTIVE SUCCESS

PRODUCES WEAK YEAR CLASSES

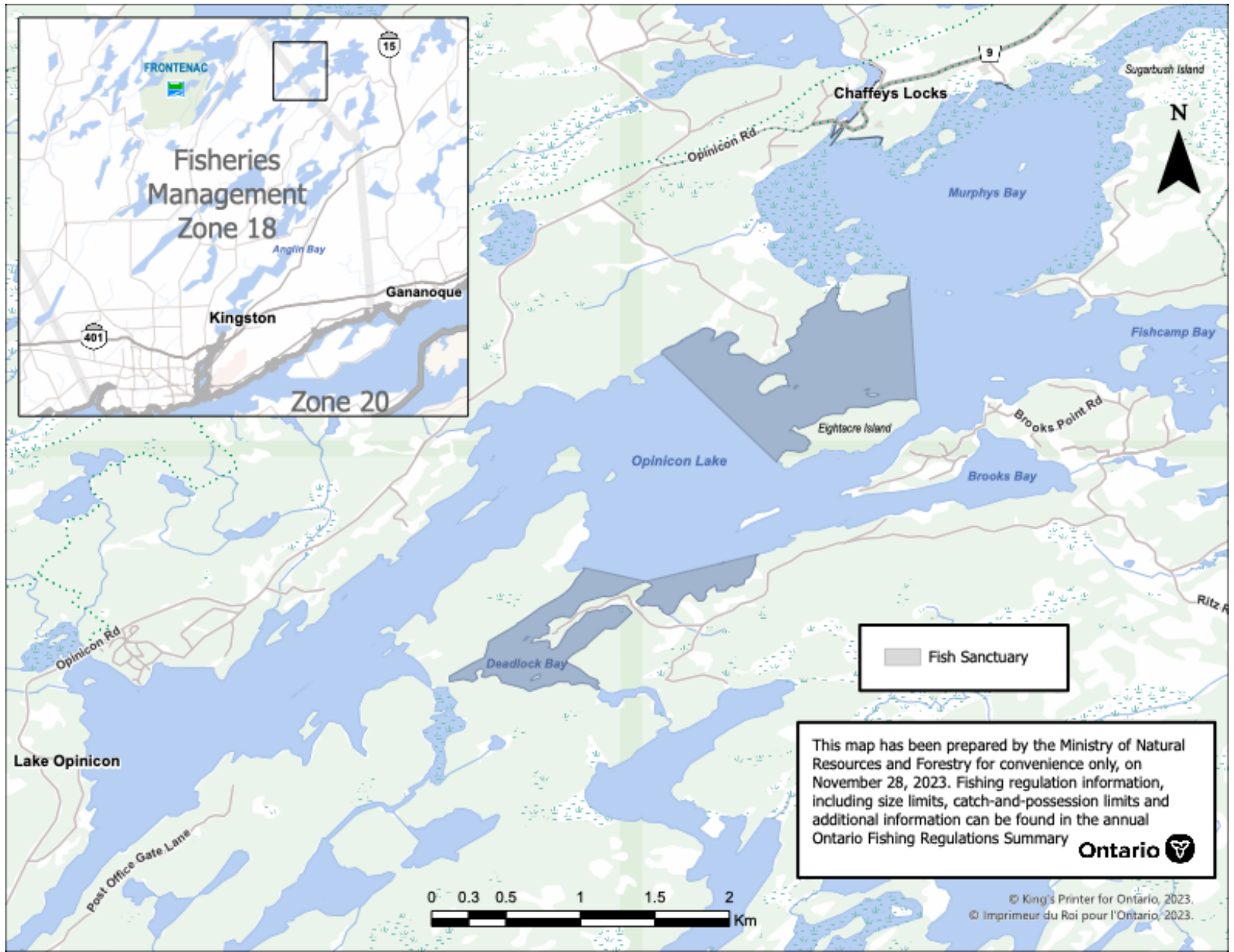
**RESULTS IN FEWER ADULTS
[...AND SMALLER ONES]**

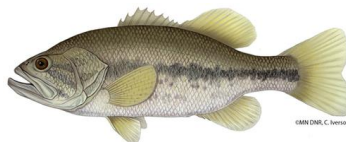
HOW DO WE REVERSE THOSE TRENDS?

CREATE BASS SPAWNING SANCTUARIES (BaSSs)

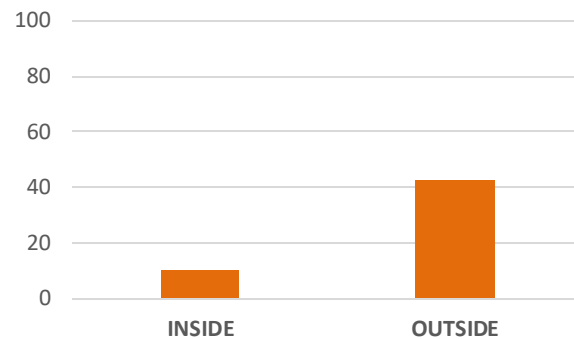


BaSS SITES FOR LAKE OPINICON

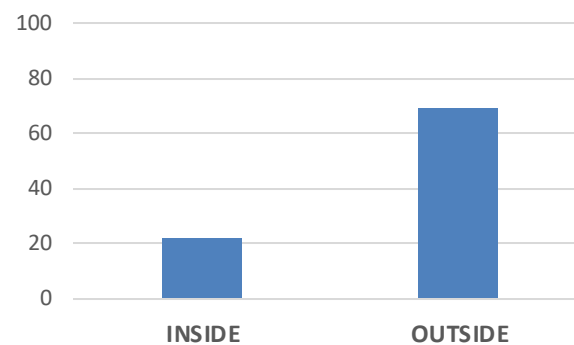




LAKE OPINICON



LAKE CHARLESTON



2024 DATA

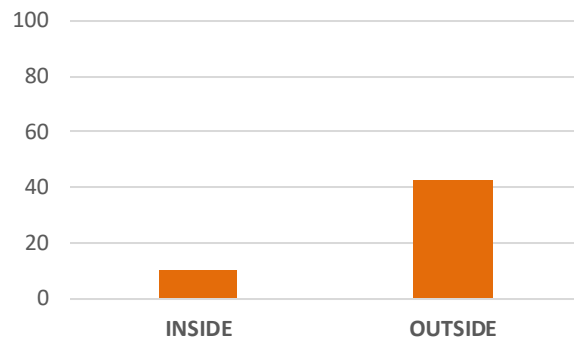
% HOOKWOUNDS



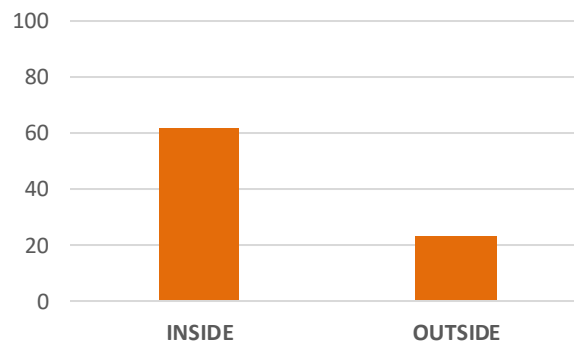
LAKE OPINICON

2024 DATA

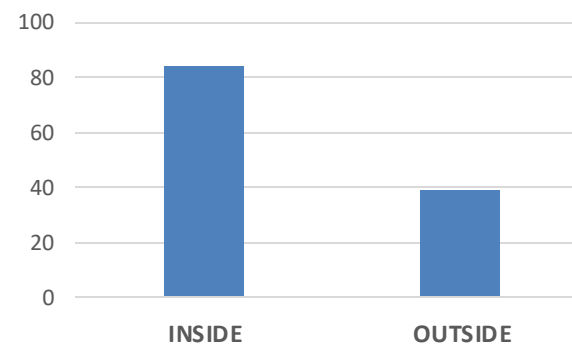
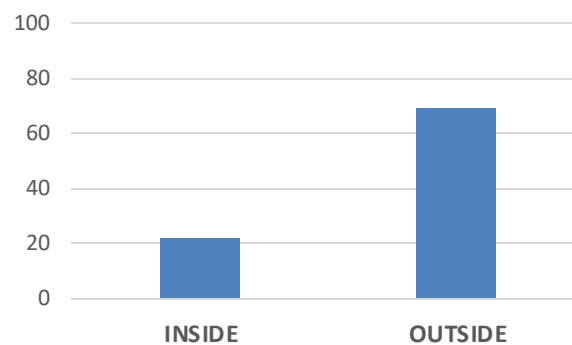
% HOOKWOUNDS



% NEST SUCCESS



LAKE CHARLESTON





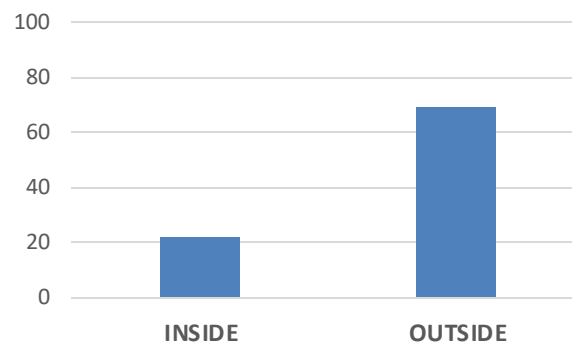
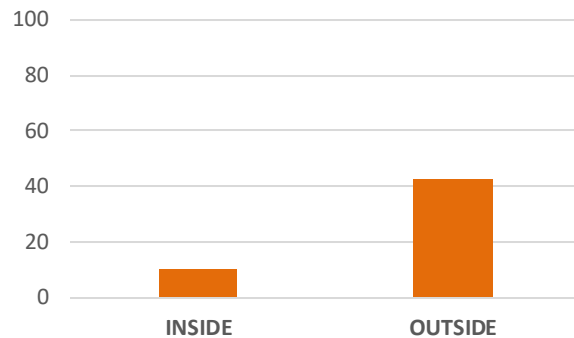
LAKE OPINICON



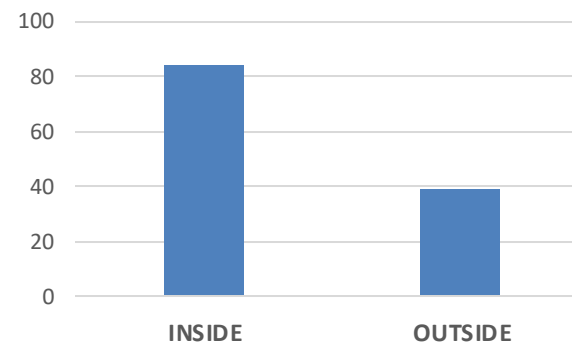
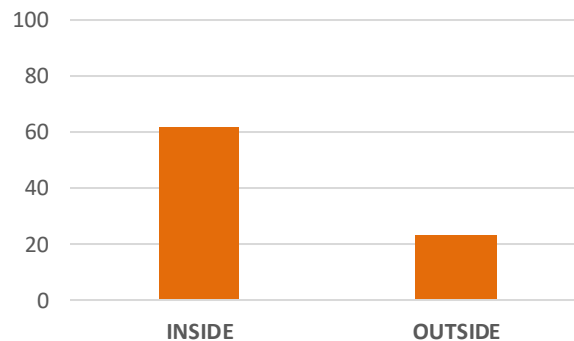
LAKE CHARLESTON

2024 DATA

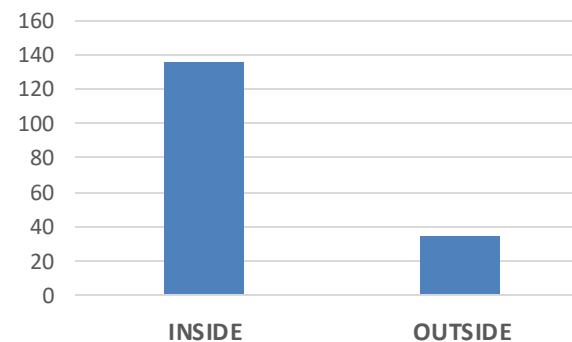
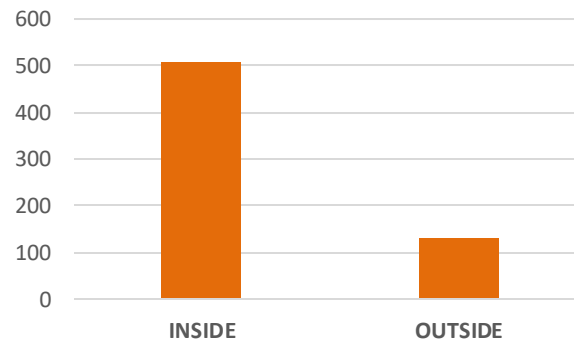
% HOOKWOUNDS



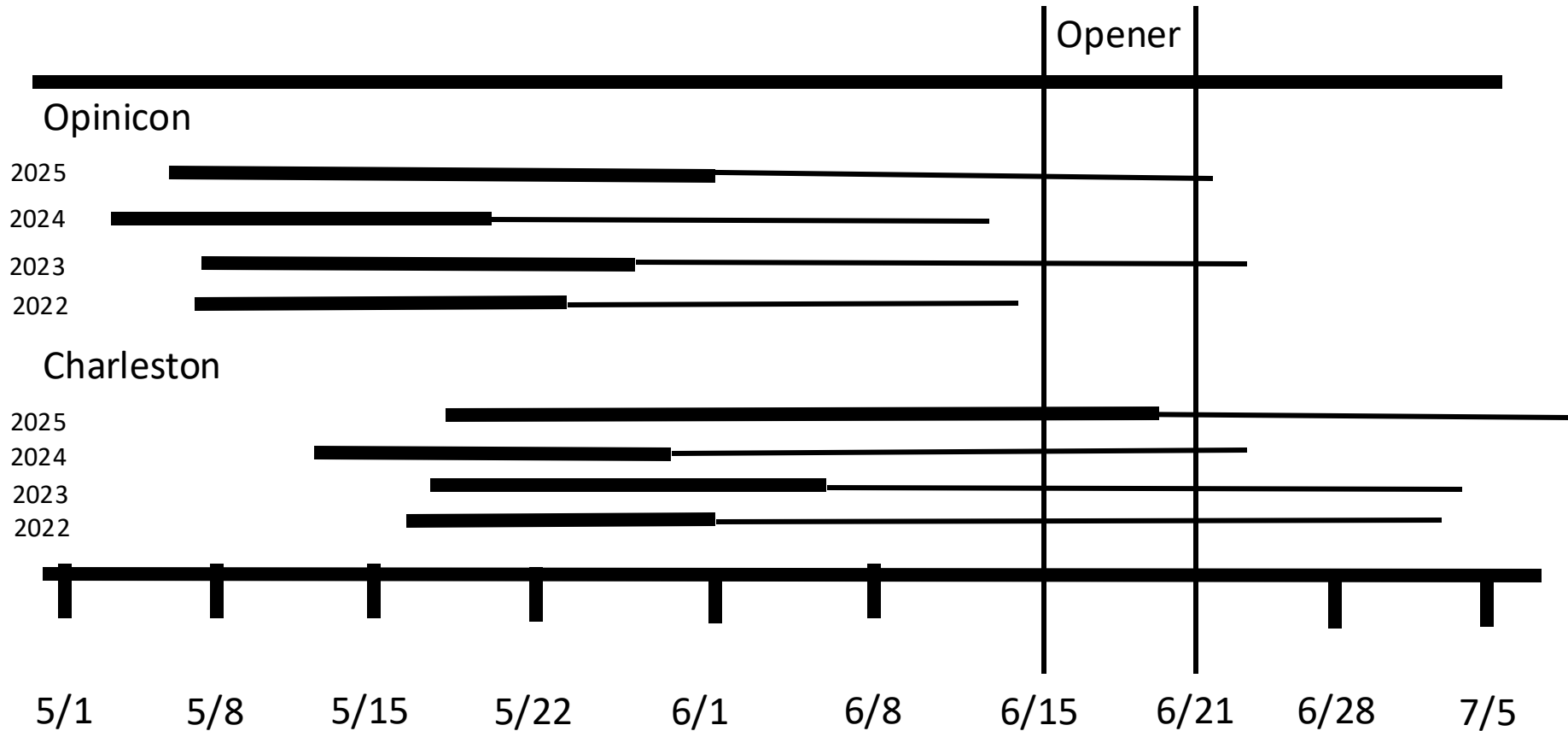
% NEST SUCCESS



SUCCESSFUL FRY
(X1000)



Spawning/Parental Care Timelines



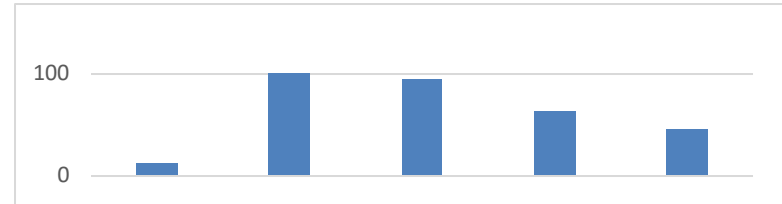
Recruitment Overfishing is a Regional Issue



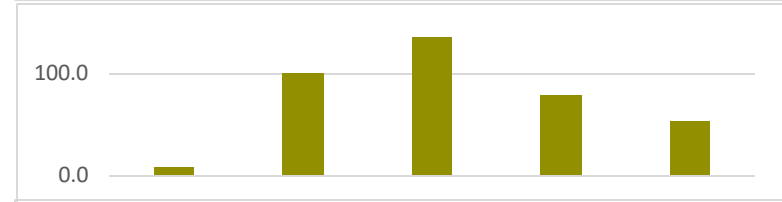
Relative Year Class Strength



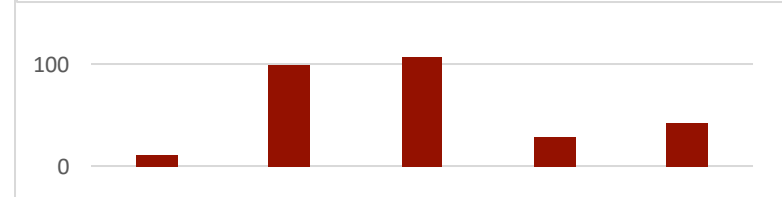
Opiniçon



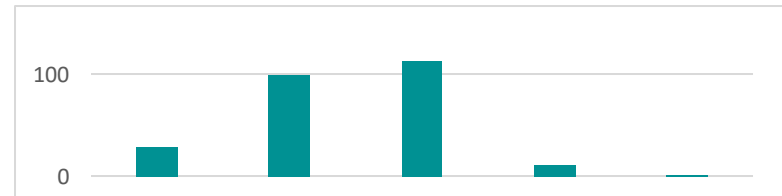
Sand



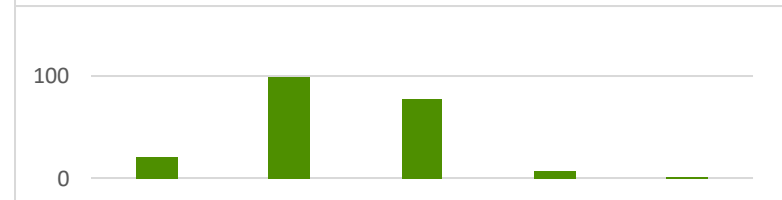
Indian



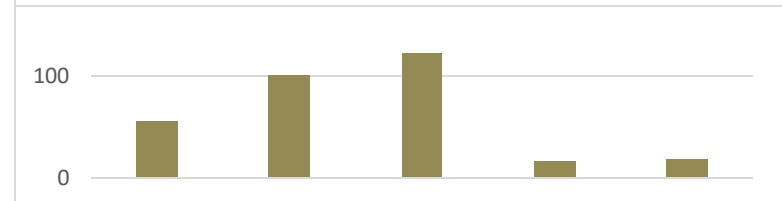
Upper Rideau



Big Rideau



Lower Rideau



2019

2020

2021

2022

2023

Recruitment Overfishing is a Regional Issue



LOTS OF LOCAL INTEREST

PROOF OF CONCEPT

OPINICON AND CHARLESTON

**PROOF OF
CONCEPT**

OPINICON AND CHARLESTON

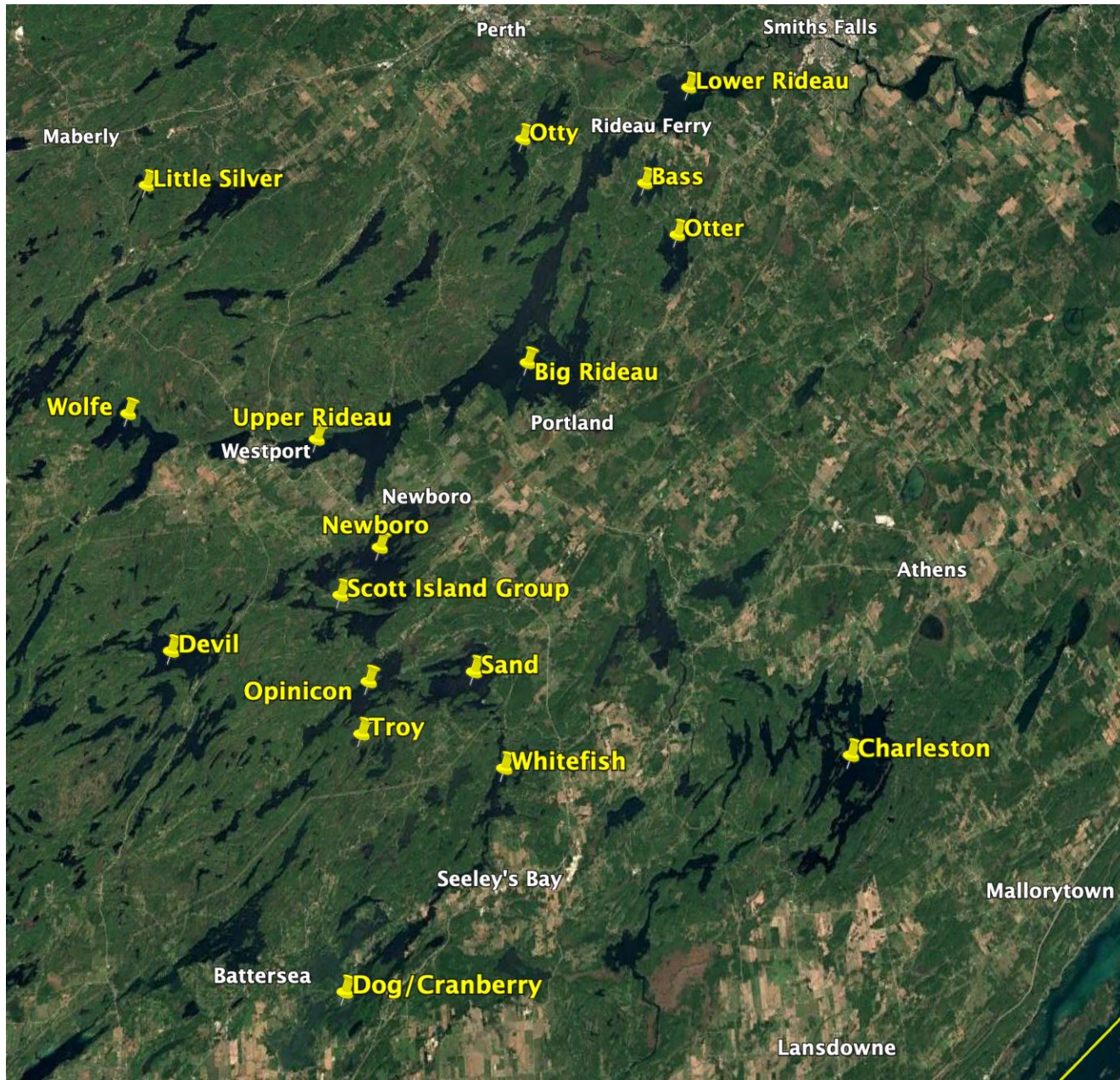


COALITION FOR INNOVATIVE FISHERIES CONSERVATION

BETA TEST

15 ADDITIONAL LAKES

Lakes in the CIFIC



**PROOF OF
CONCEPT**

OPINICON AND CHARLESTON



COALITION FOR INNOVATIVE FISHERIES CONSERVATION

BETA TEST

15 ADDITIONAL LAKES



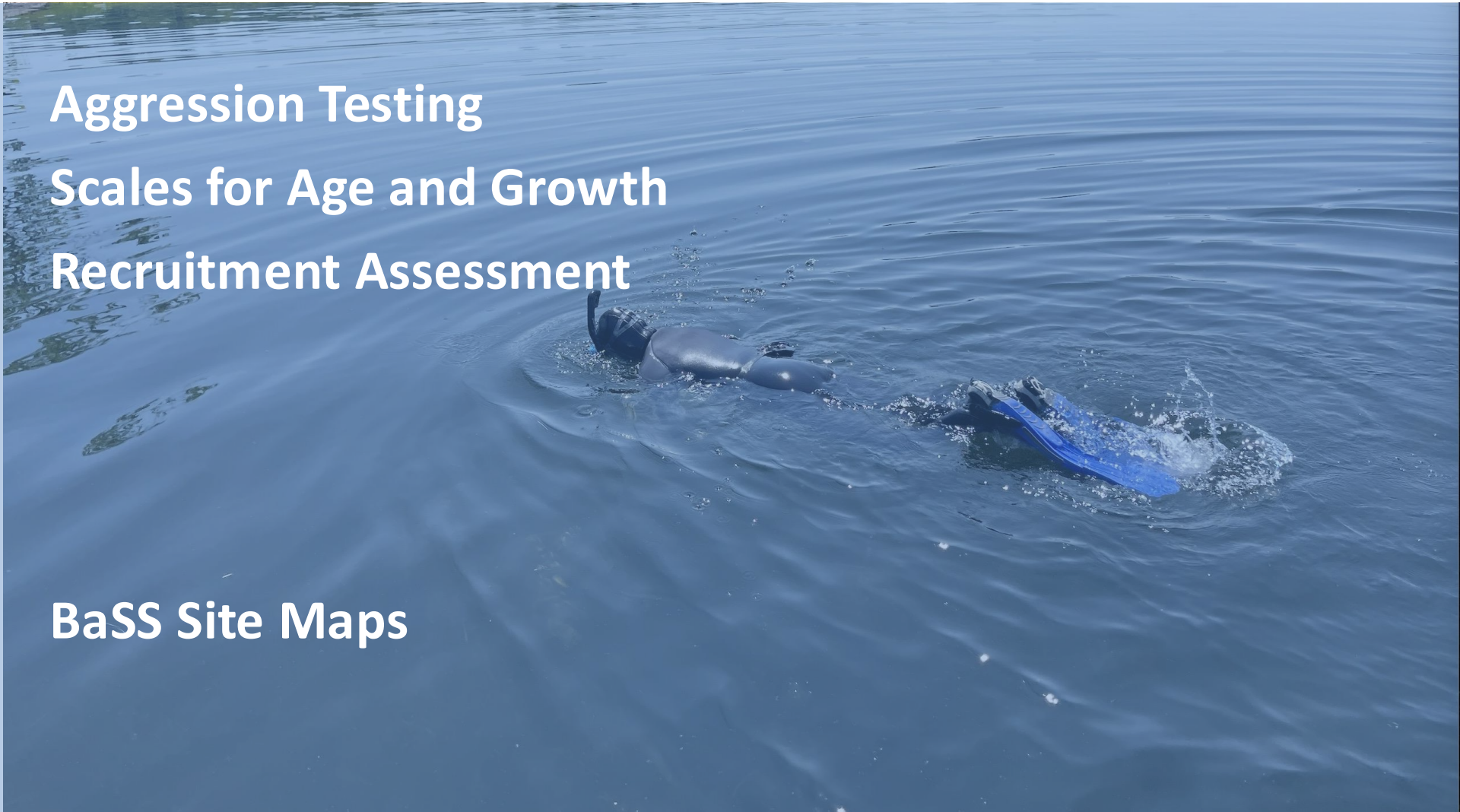
FORM LAKE TEAMS

**BASELINE
DATA**

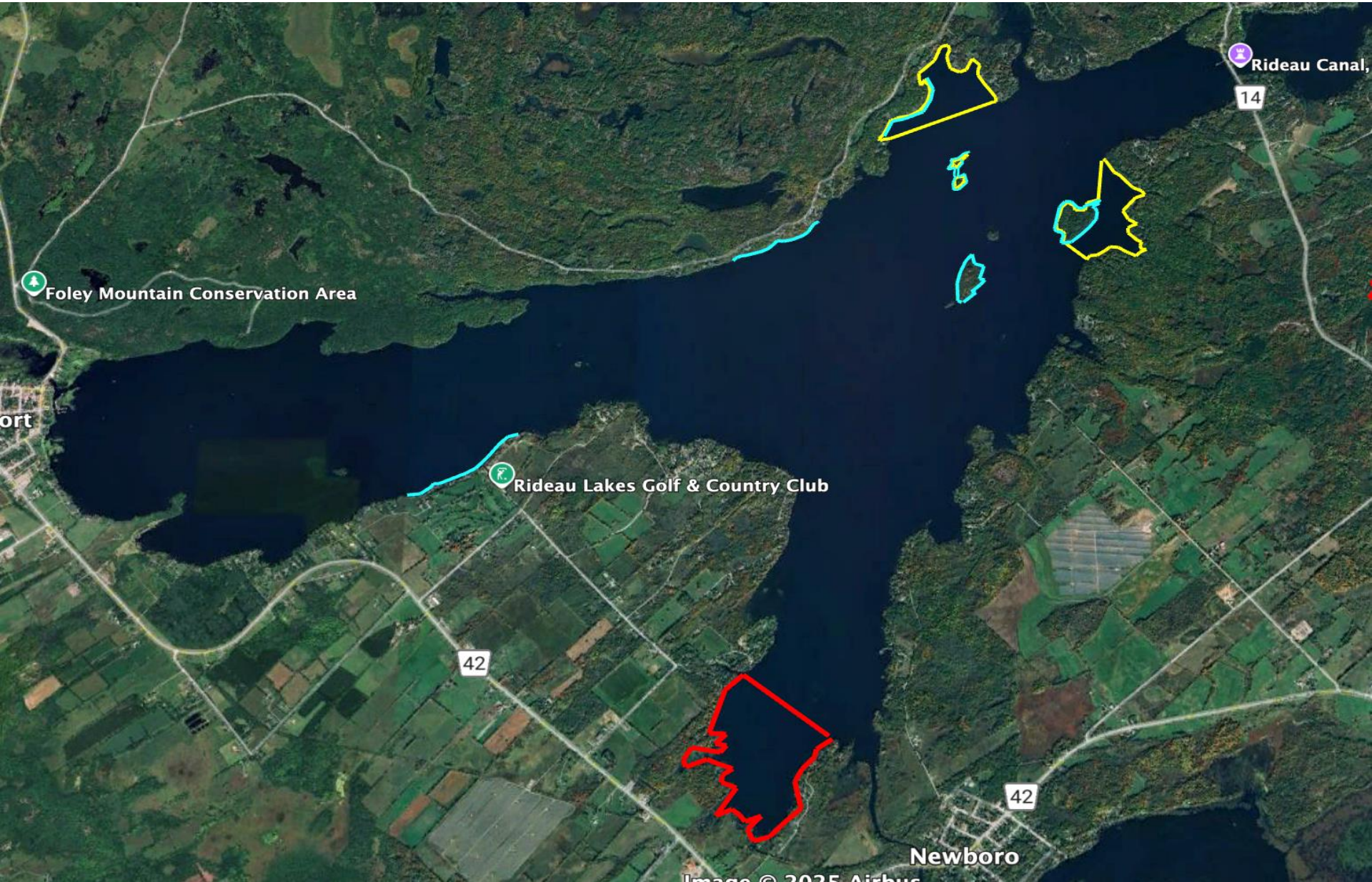
BASELINE DATA

Aggression Testing
Scales for Age and Growth
Recruitment Assessment

BaSS Site Maps



Potential BaSS Sites in Upper Rideau



**PROOF OF
CONCEPT**

OPINICON AND CHARLESTON



COALITION FOR INNOVATIVE FISHERIES CONSERVATION

BETA TEST

15 ADDITIONAL LAKES



FORM LAKE TEAMS

**BASELINE
DATA**



PROPOSAL TO OMNR

BaSS IMPLEMENTATION

STEPS TO IMPLEMENTATION

Gain Ministry Support (Meeting on 7/7)

Stakeholder Support (OFAH, Anglers, WC)

Public Comment Process

Public Education Campaign

QUESTIONS?

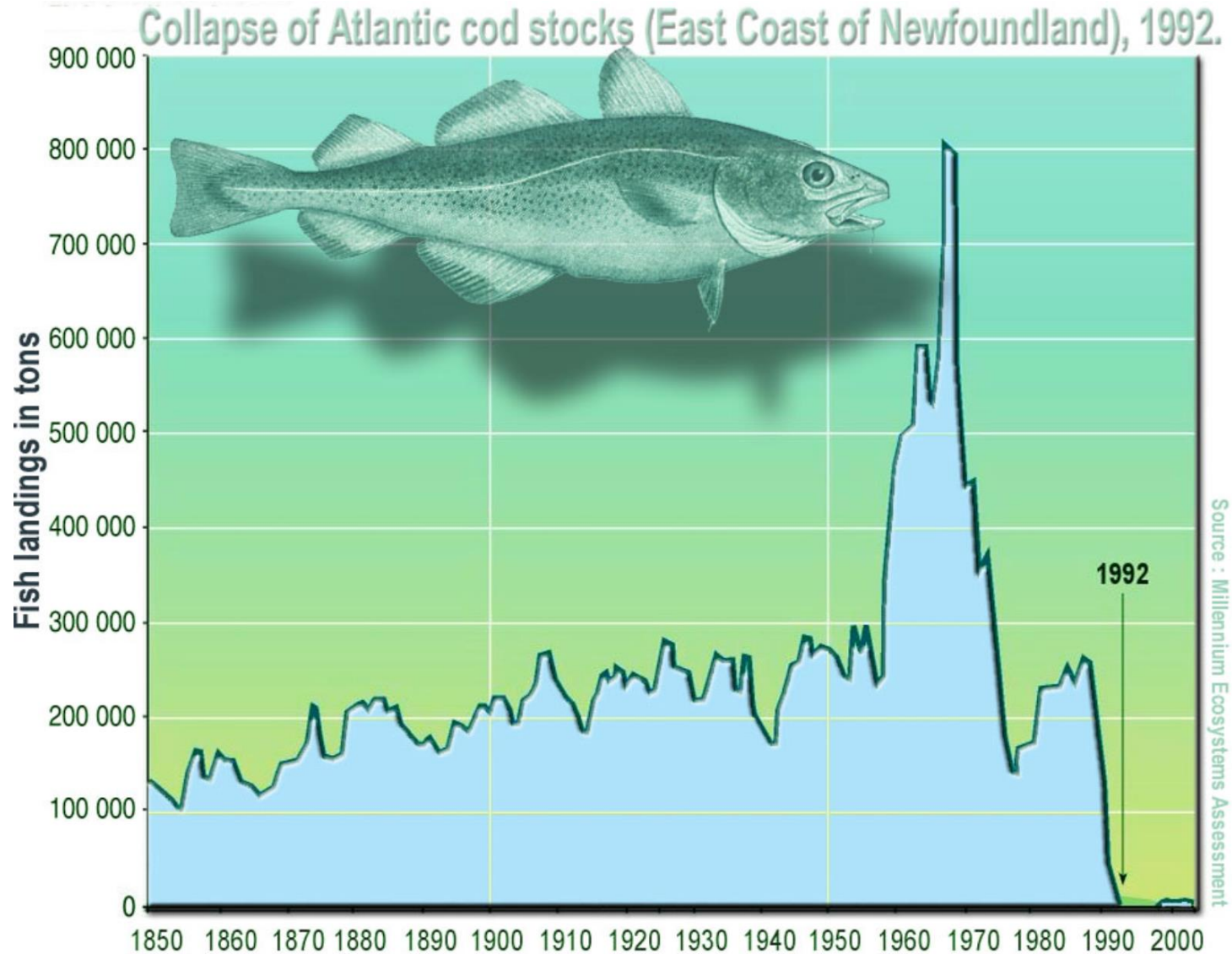


PRESENTATION OBJECTIVES

- EXPLAIN THE PROBLEM
- DESCRIBE OUR PROPOSED SOLUTION
- REPORT ON THE STATUS OF THE CURRENT STUDY
- PRESENT OUR PROPOSED FUTURE STUDY
- OUTLINE THE NEXT STEPS



CANADA'S MOST FAMOUS EXAMPLE



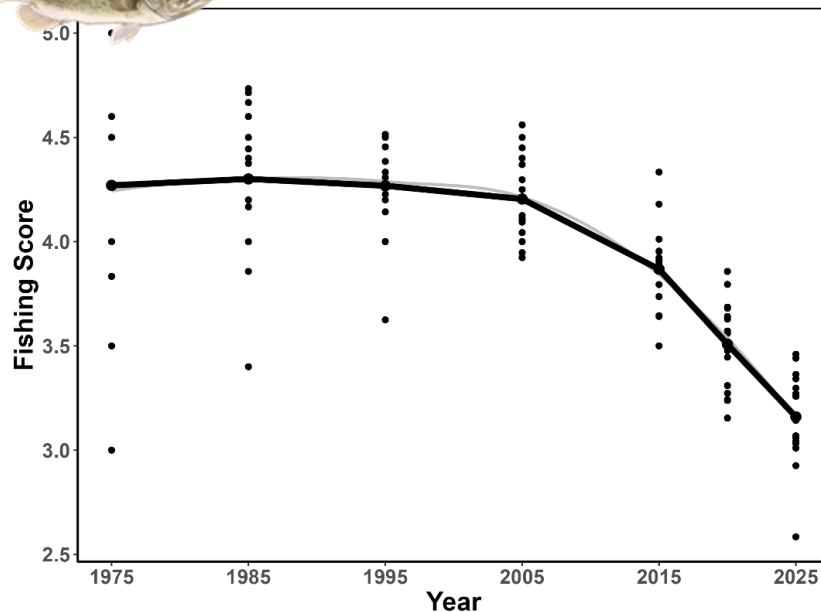


Local angler knowledge reveals declines in fishing quality for Black Bass in lakes of eastern Ontario

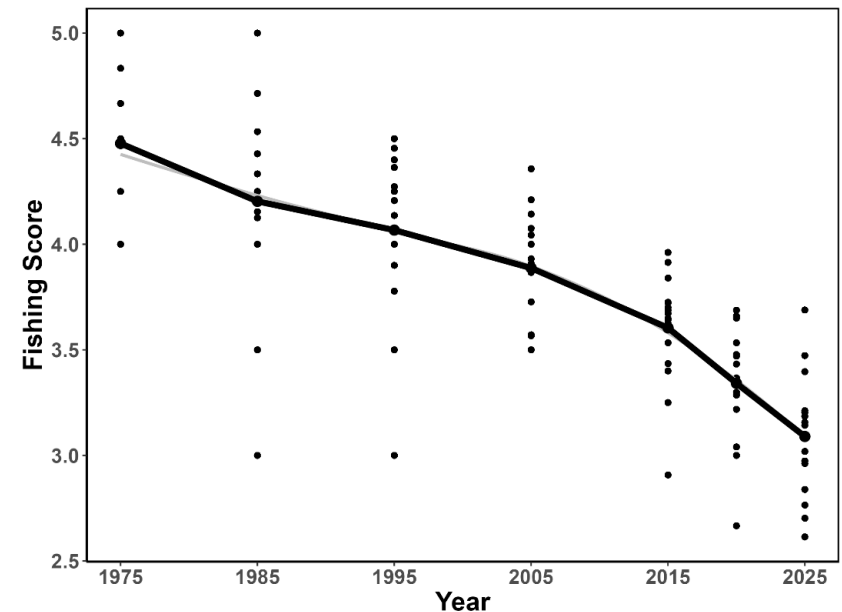
Joel Zhang^{1*}, David P. Philipp^{2,3}, Julie E. Claussen^{2,3}, Cory D. Suski⁴, Vivian M. Nguyen¹, Nathan Young⁵, Luc LaRochelle¹, Justin W. Lombardo⁴, Steven J. Cooke¹



Numbers

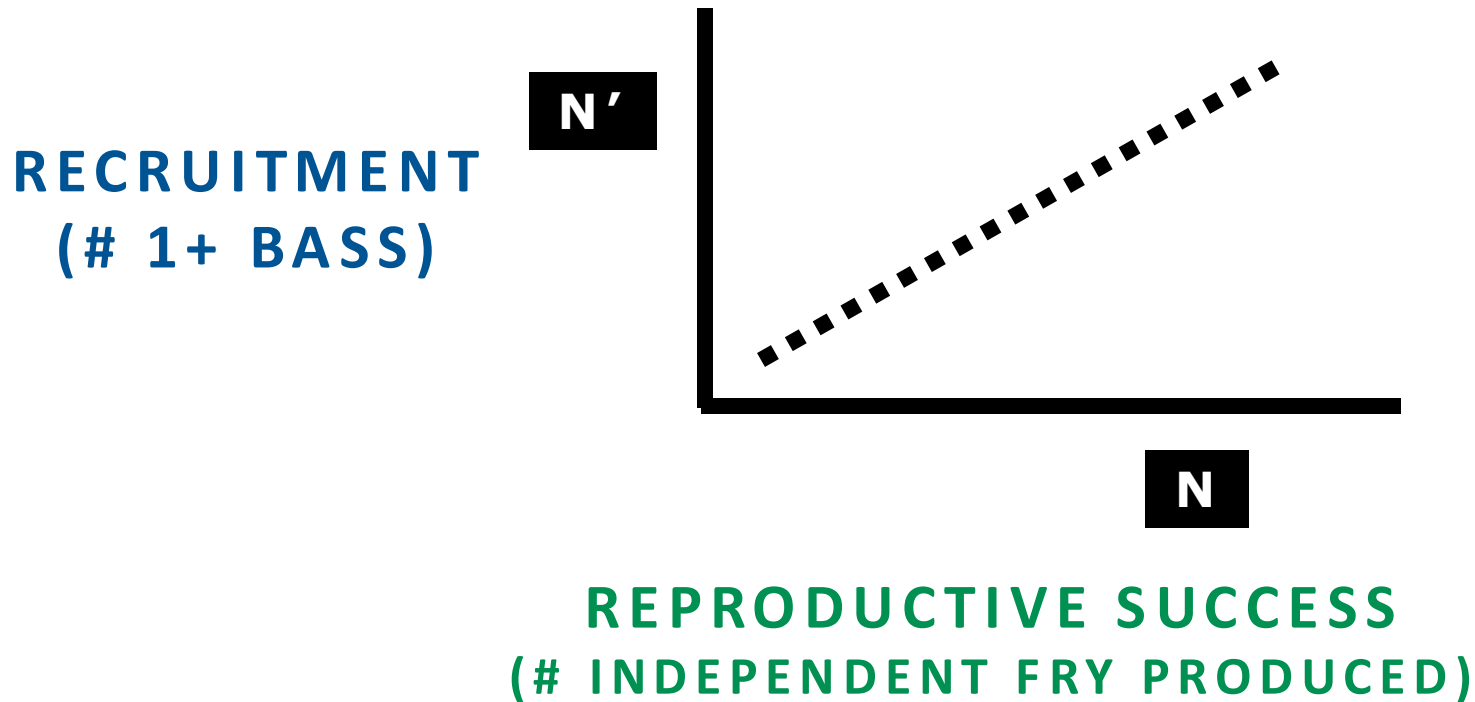


Sizes

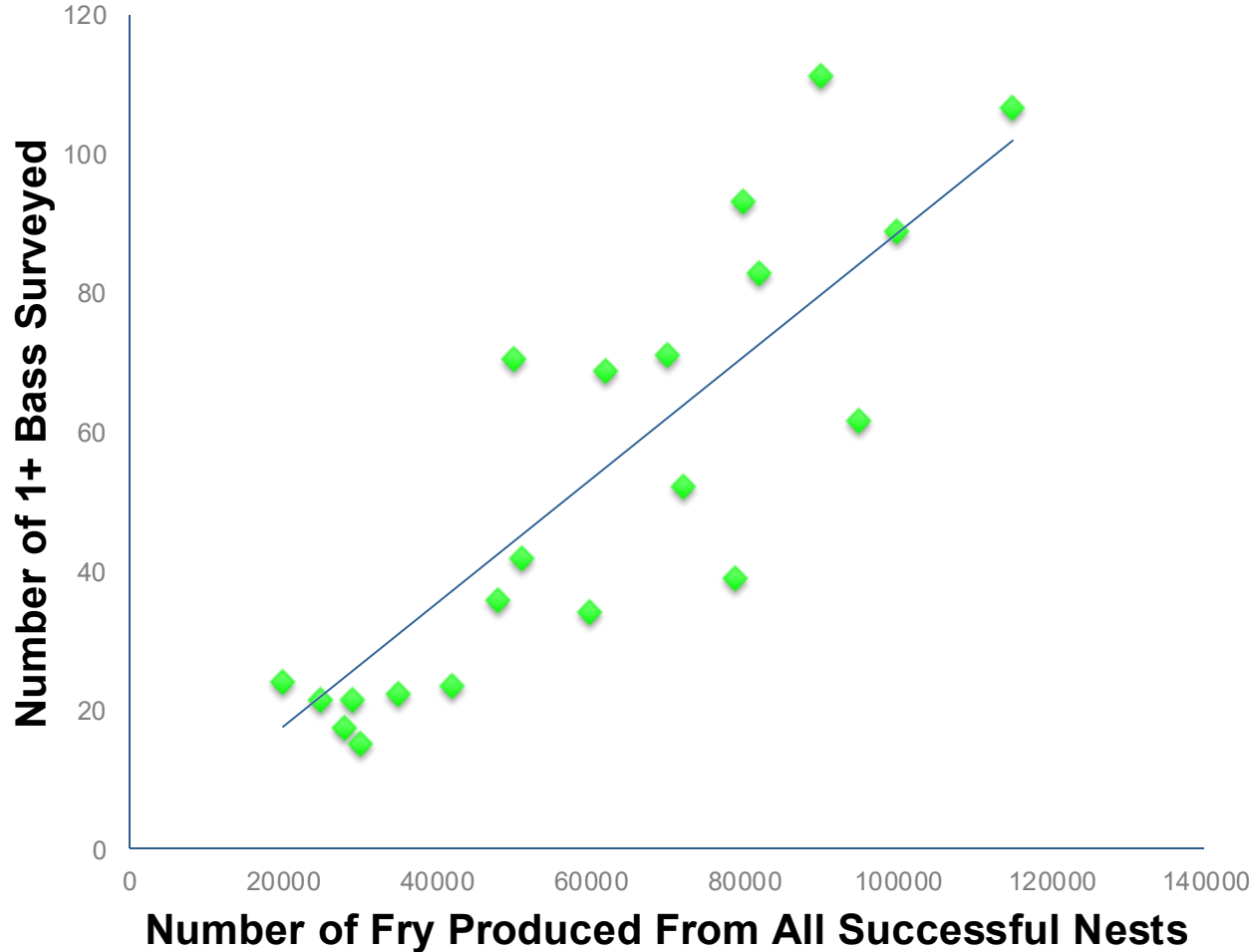


Zhang et al. In Review

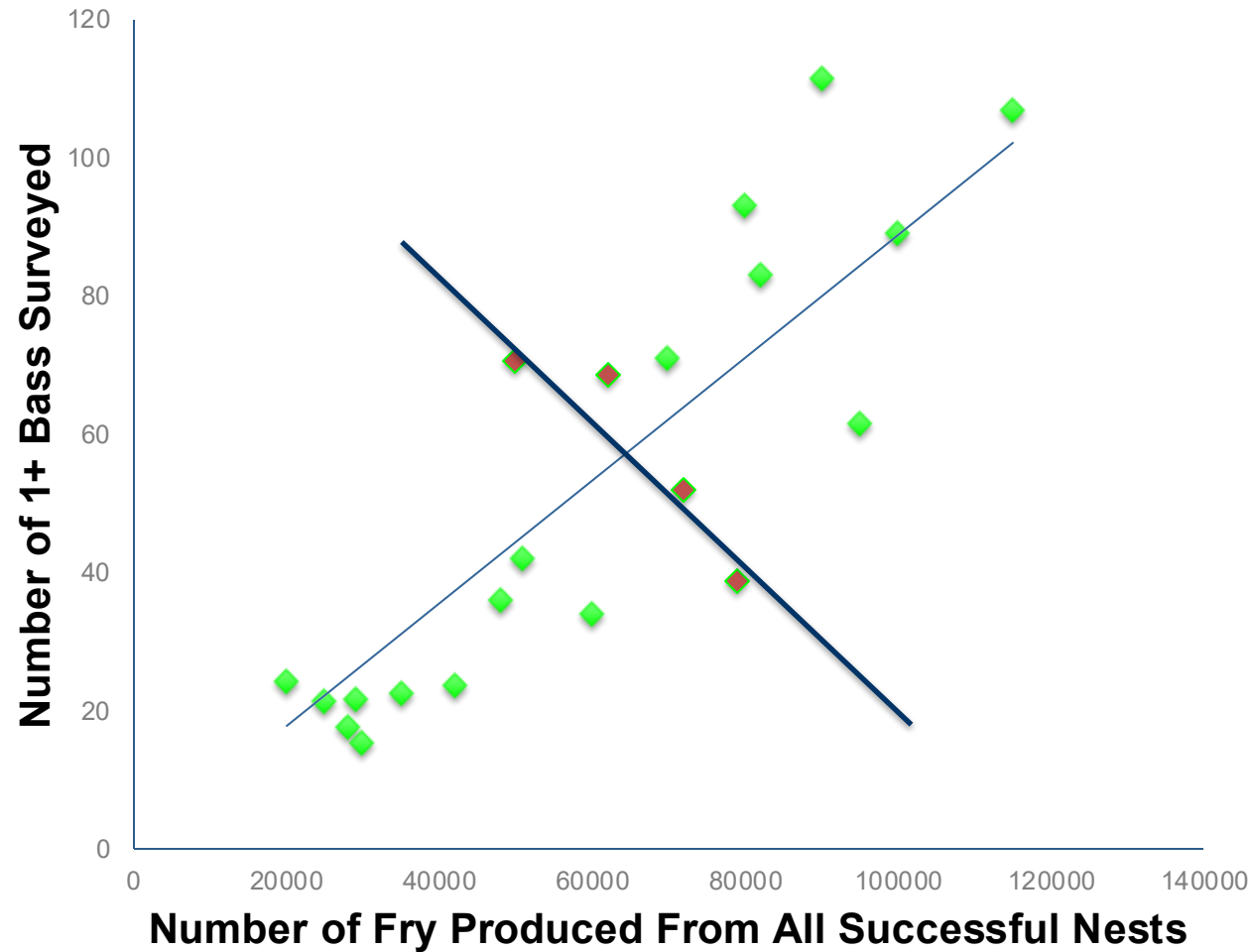
RS and RECRUITMENT?



RECRUITMENT vs FRY PRODUCED



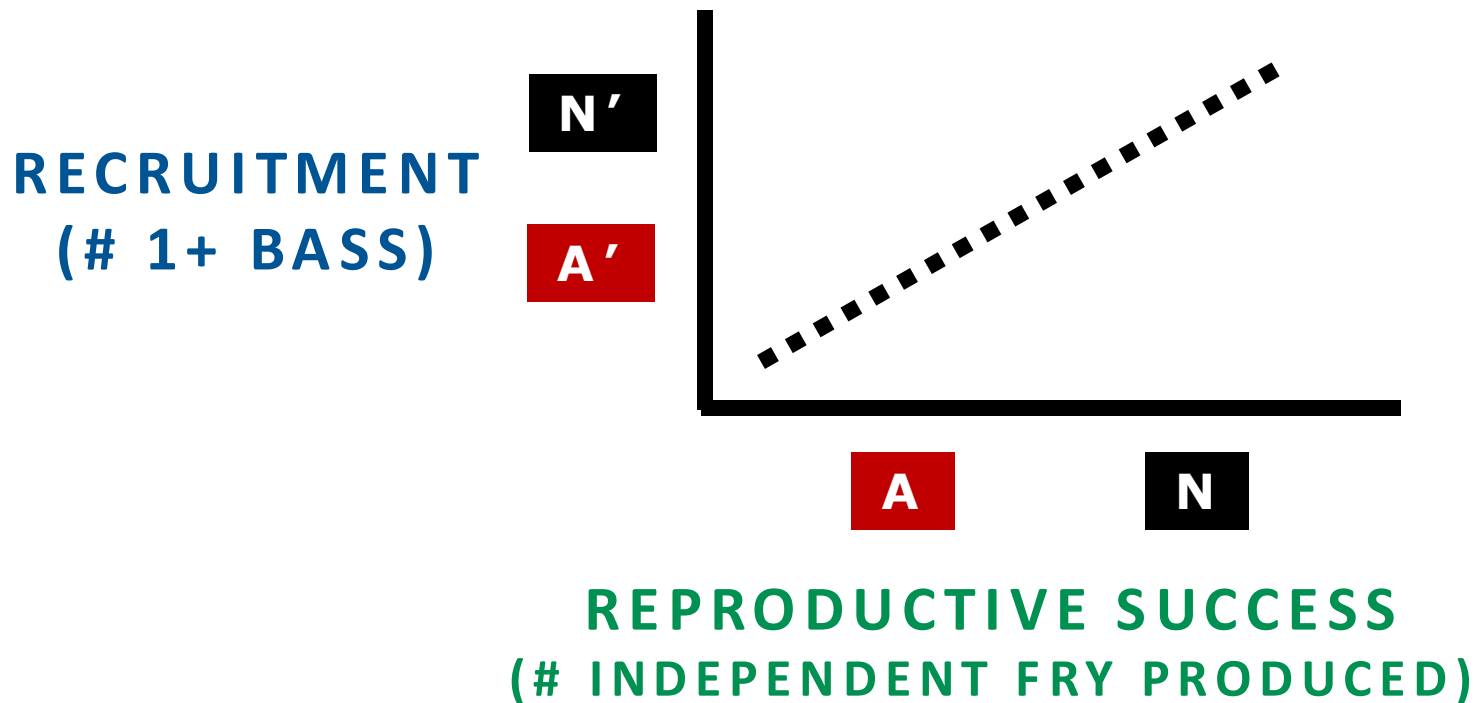
RECRUITMENT vs FRY PRODUCED



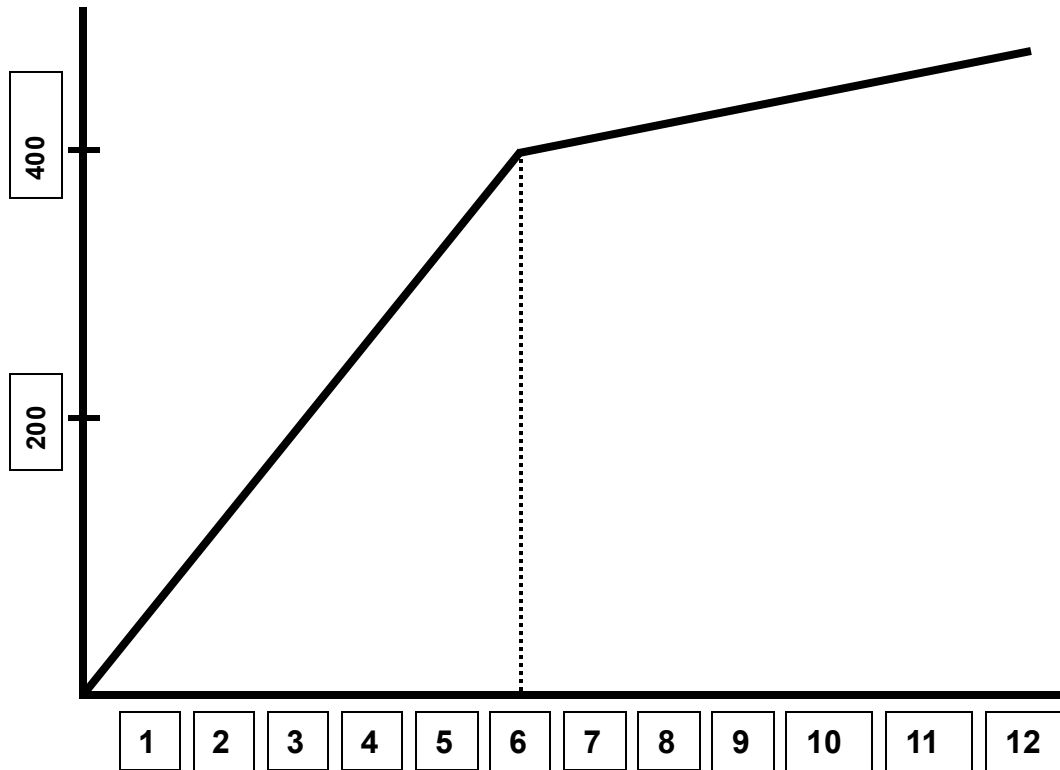
ANGLING and RECRUITMENT?

N = WITHOUT ANGLING

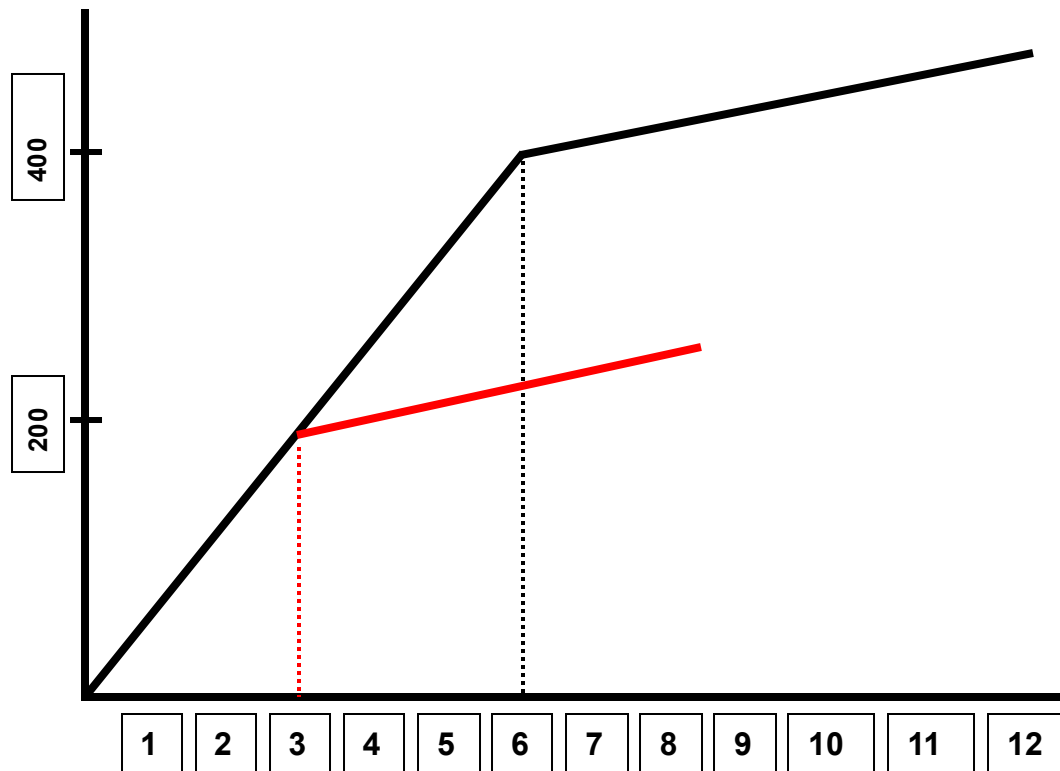
A = WITH ANGLING



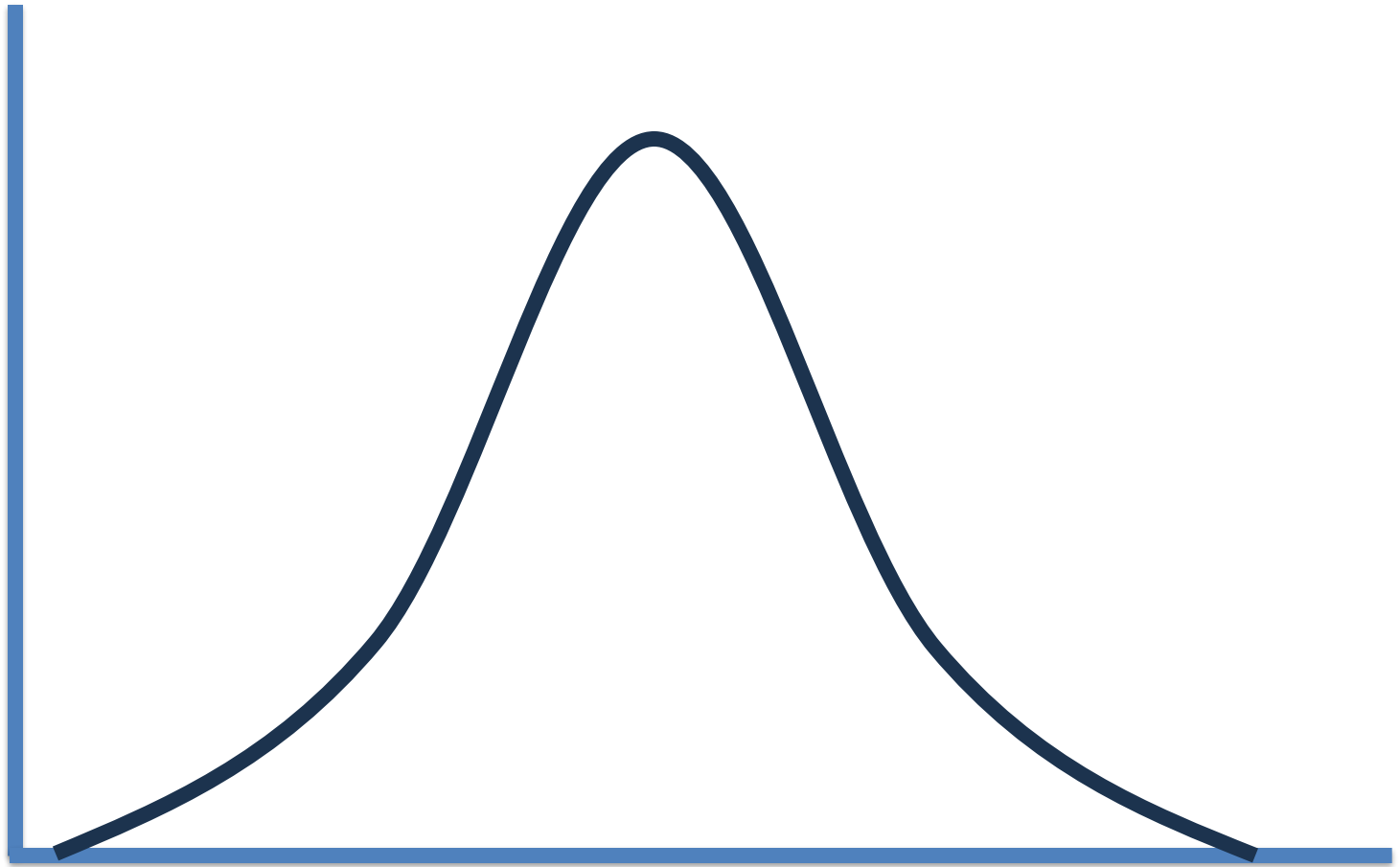
HOW DO BASS GROW?



HOW DO BASS GROW?



ADULT FISH IN A POPULATION

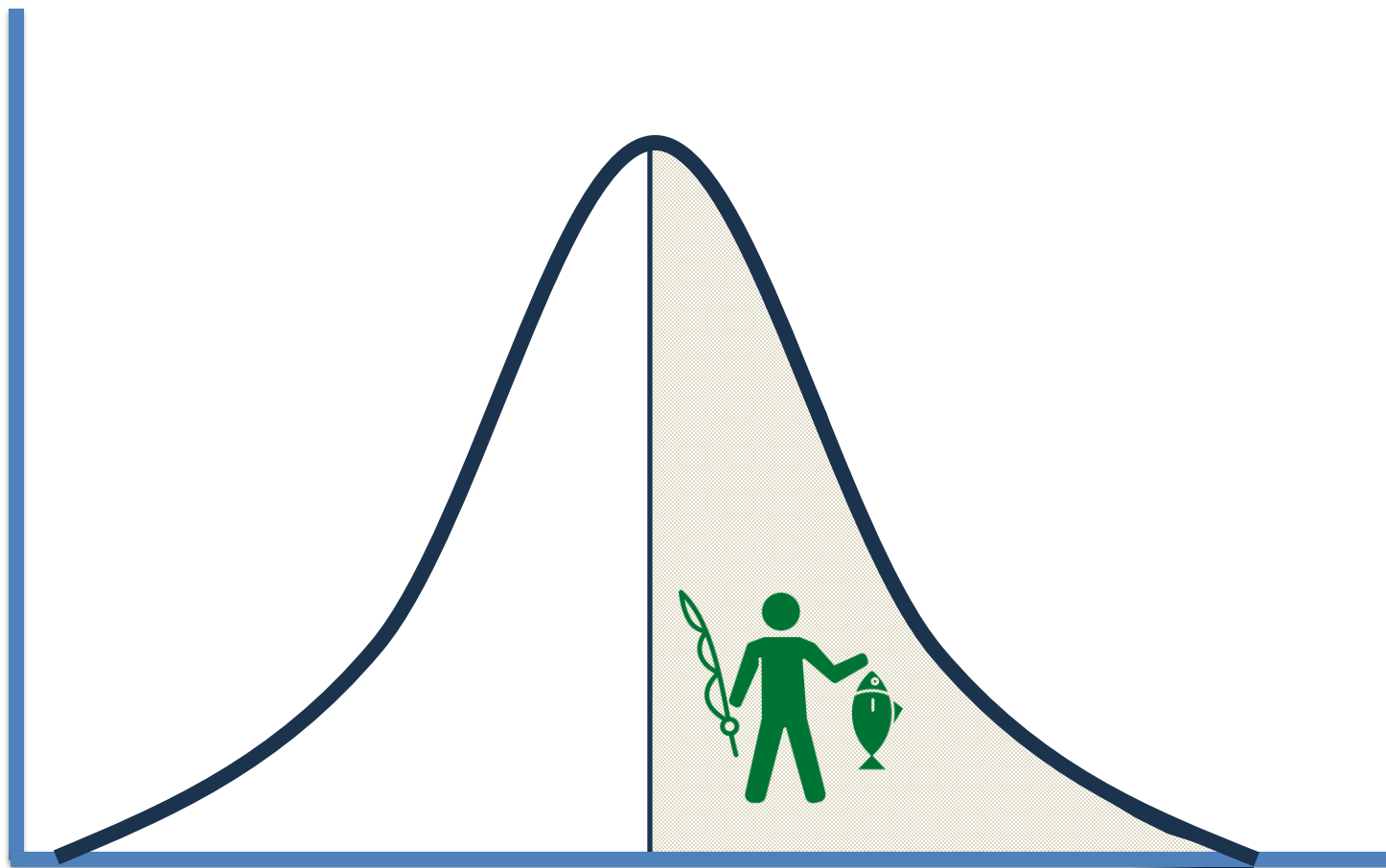


AGGRESSION

Less Aggressive

More Aggressive

ADULT FISH IN A POPULATION

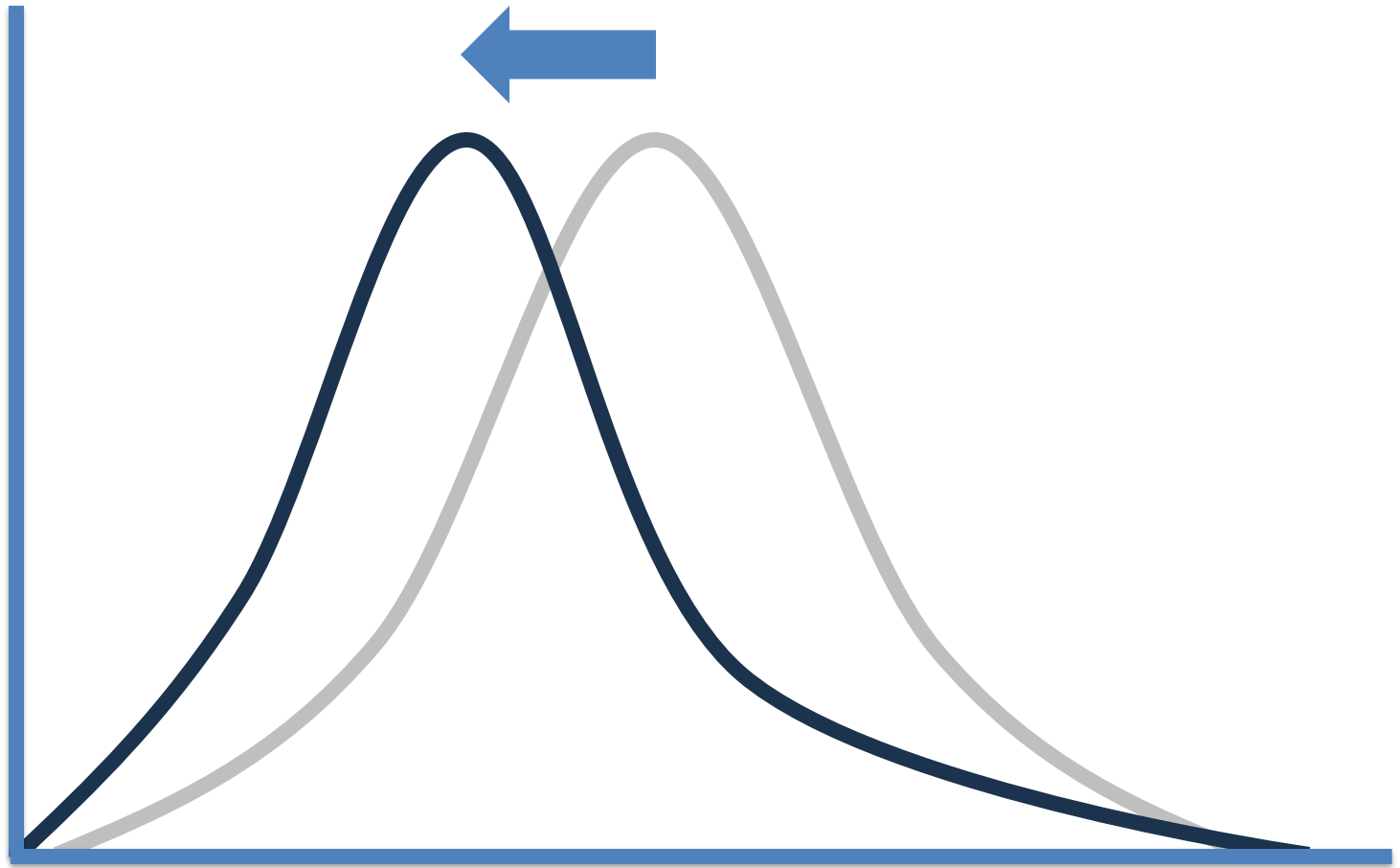


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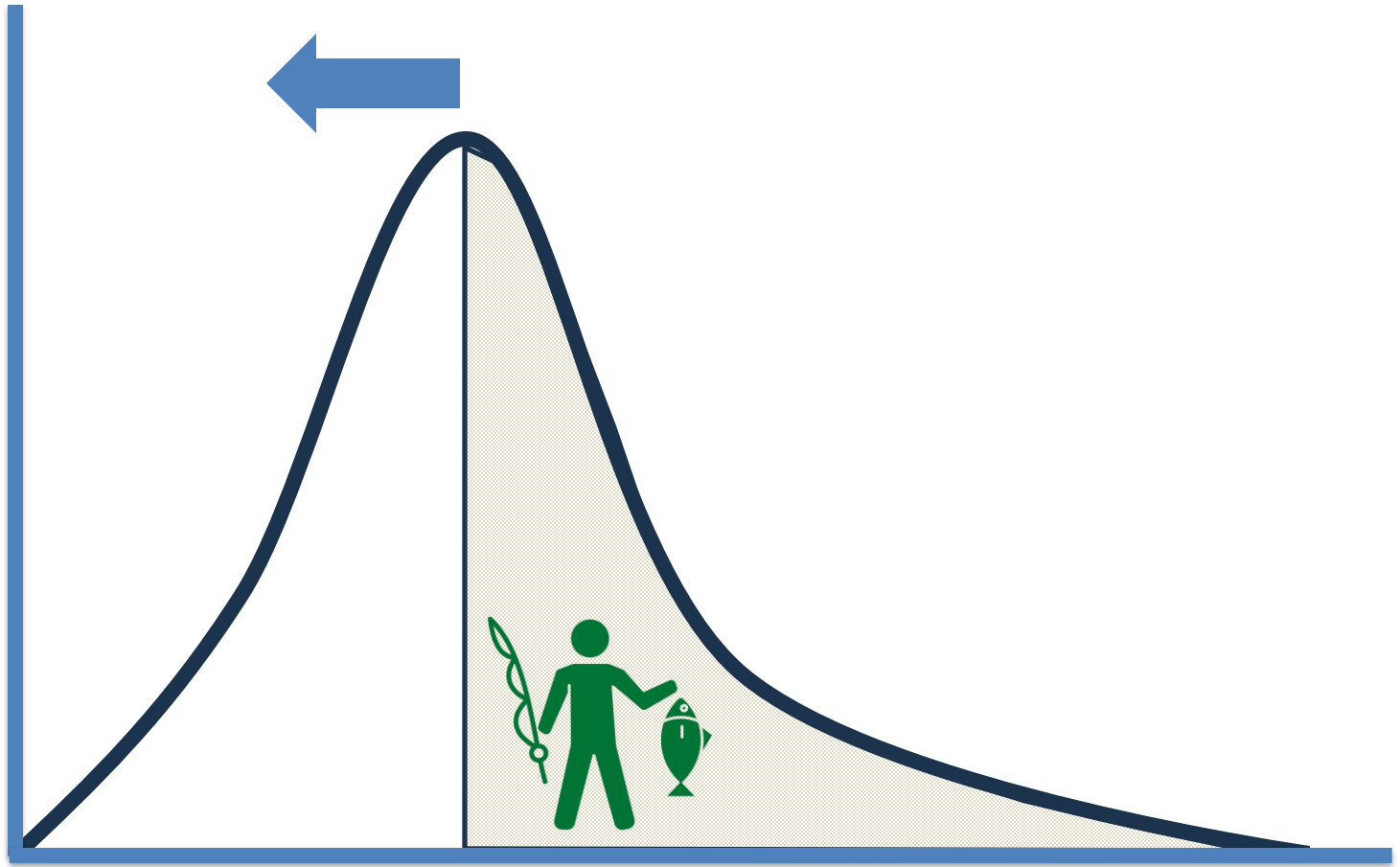
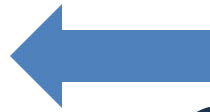


AGGRESSION

Less Aggressive

More Aggressive

ADULT FISH IN A POPULATION



AGGRESSION

Less Aggressive

More Aggressive

Coalition for Innovative Fisheries Conservation LAKES

- **CHARLESTON**
- **OPINICON**

BASS

DEVIL

DOG-CRANBERRY

LITTLE SILVER

NEWBORO

OTTY

RIDEAU LAKES

Upper

Big

Lower

SAND

SCOTT ISLAND GROUP

Indian

Clear

Mosquito

Benson

Loon

TROY

WHITEFISH

WOLFE

Moving from Proof of Concept to Beta Testing

The Coalition for Innovative Fisheries Conservation (CIFIC):

A partnership of different stakeholders dedicated to advancing long-term conservation of the fisheries in the lakes of southeastern Ontario.

Supporting institutions CLA, OPOC together with the Fisheries Conservation Foundation and Carleton University as implementing institutions are joining with other Lake Associations, related NGOs, Angler Groups

Current Total = 17 Lakes/Lake Groups

Need for each new lake:

- Collect Baseline data (aggression, size structure, age at maturation, growth rates)
- Recruitment data (for 2024 year class)
- Designate Proposed BaSS sites

Hurdles:

1. Convincing the OMNRF of the long-term problem brewing (OMNR Meeting = 7/7);
2. Moving through the process of public comment/special regulation changes;
3. Bringing certain stakeholder groups into the partnership (OFAH Meeting = 7/?);
4. Delivering a convincing narrative to the various groups that need to hear it.