

2016 Lake Ontario

Salmon Symposium

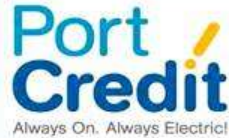
State of the Lake 2015 in Review



Gold Sponsors



Silver Sponsors



Bronze Sponsors

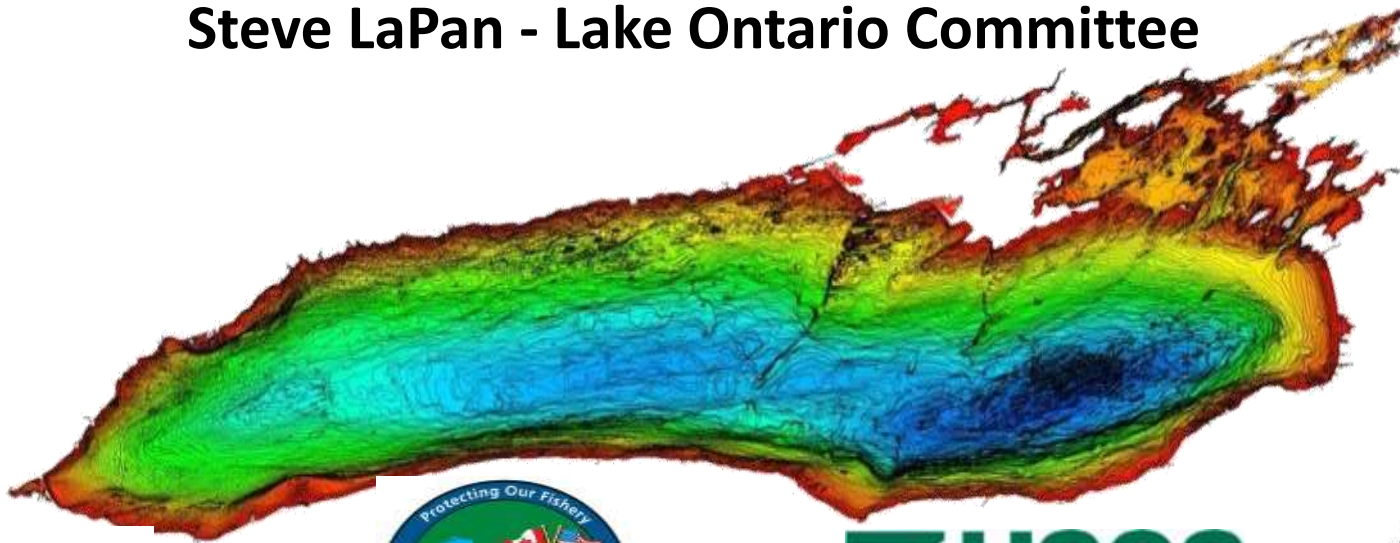


Lake Ontario – Salmon Symposium

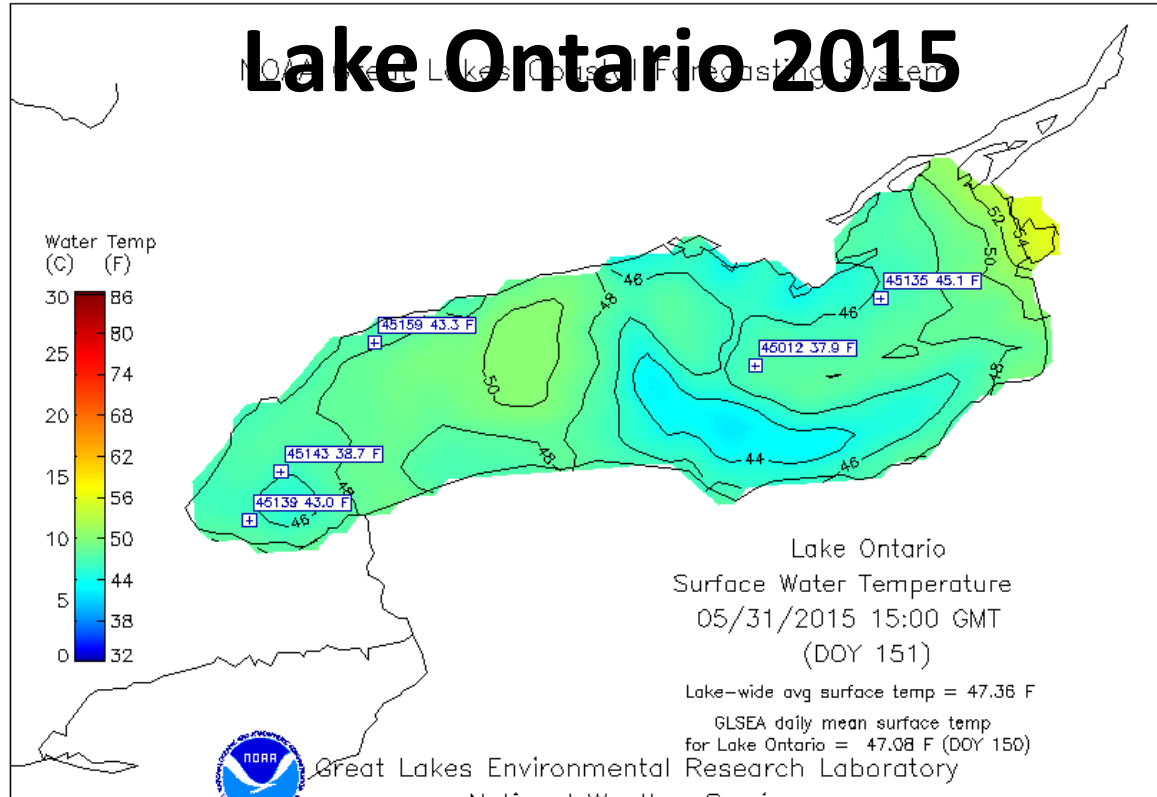
State of the Lake 2015

Port Credit - April 2016

Steve LaPan - Lake Ontario Committee



Environmental Context



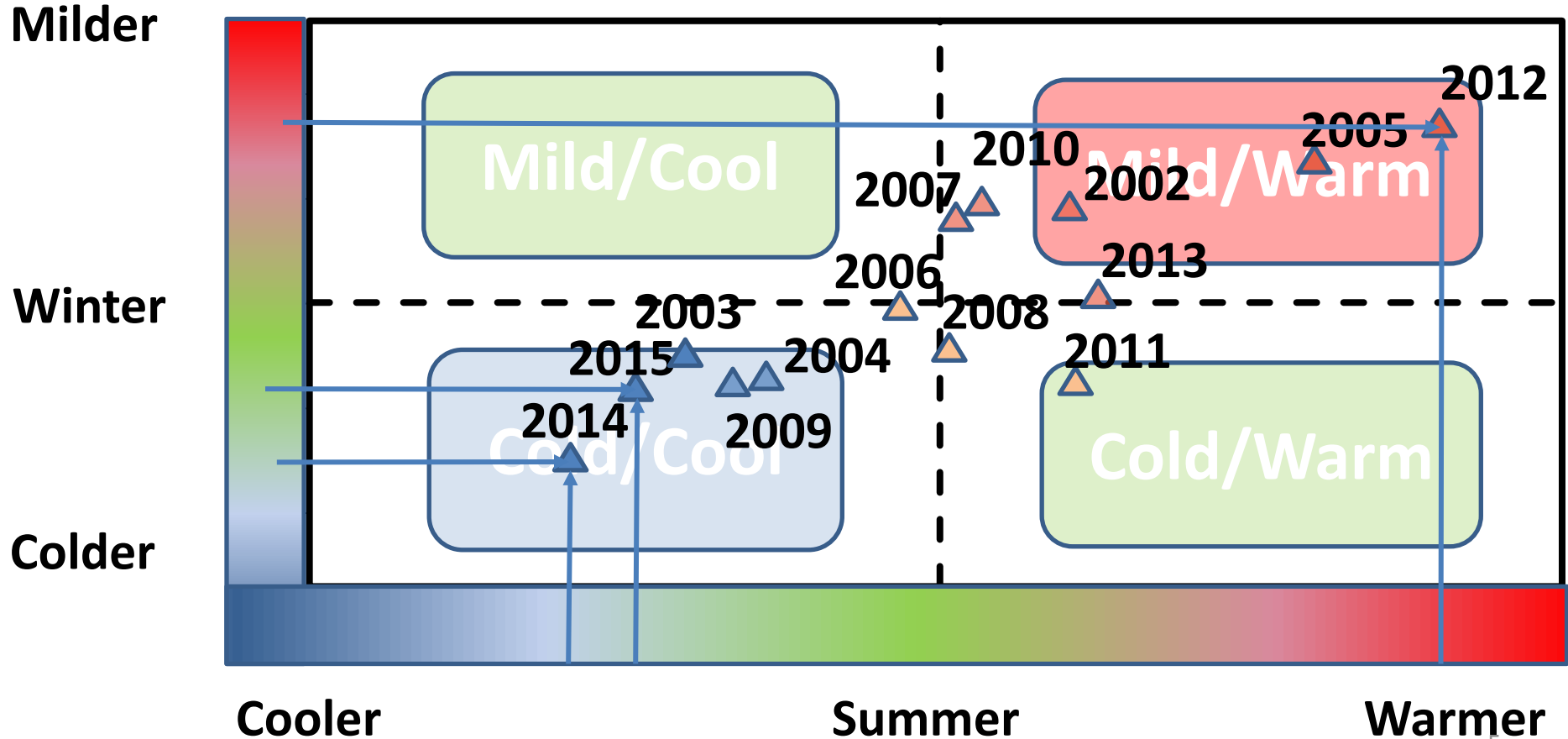
June

July

August

Sept⁴

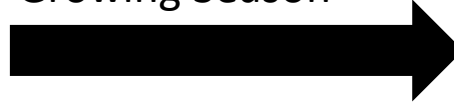
Lake Ontario Winter Severity/Summer Warming Index



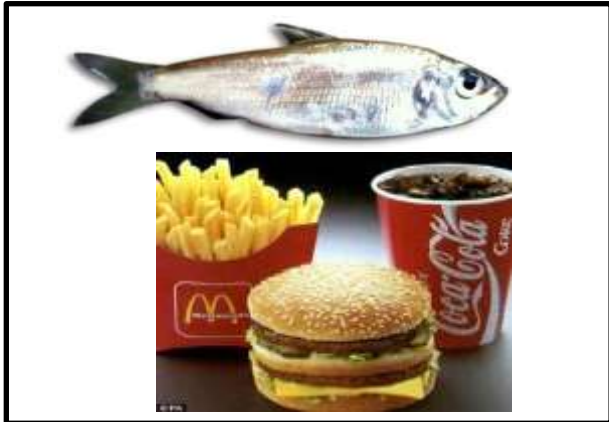
Temperature



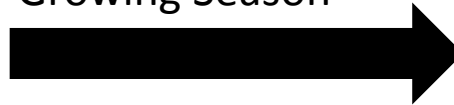
Growing Season



Smaller
Chinook



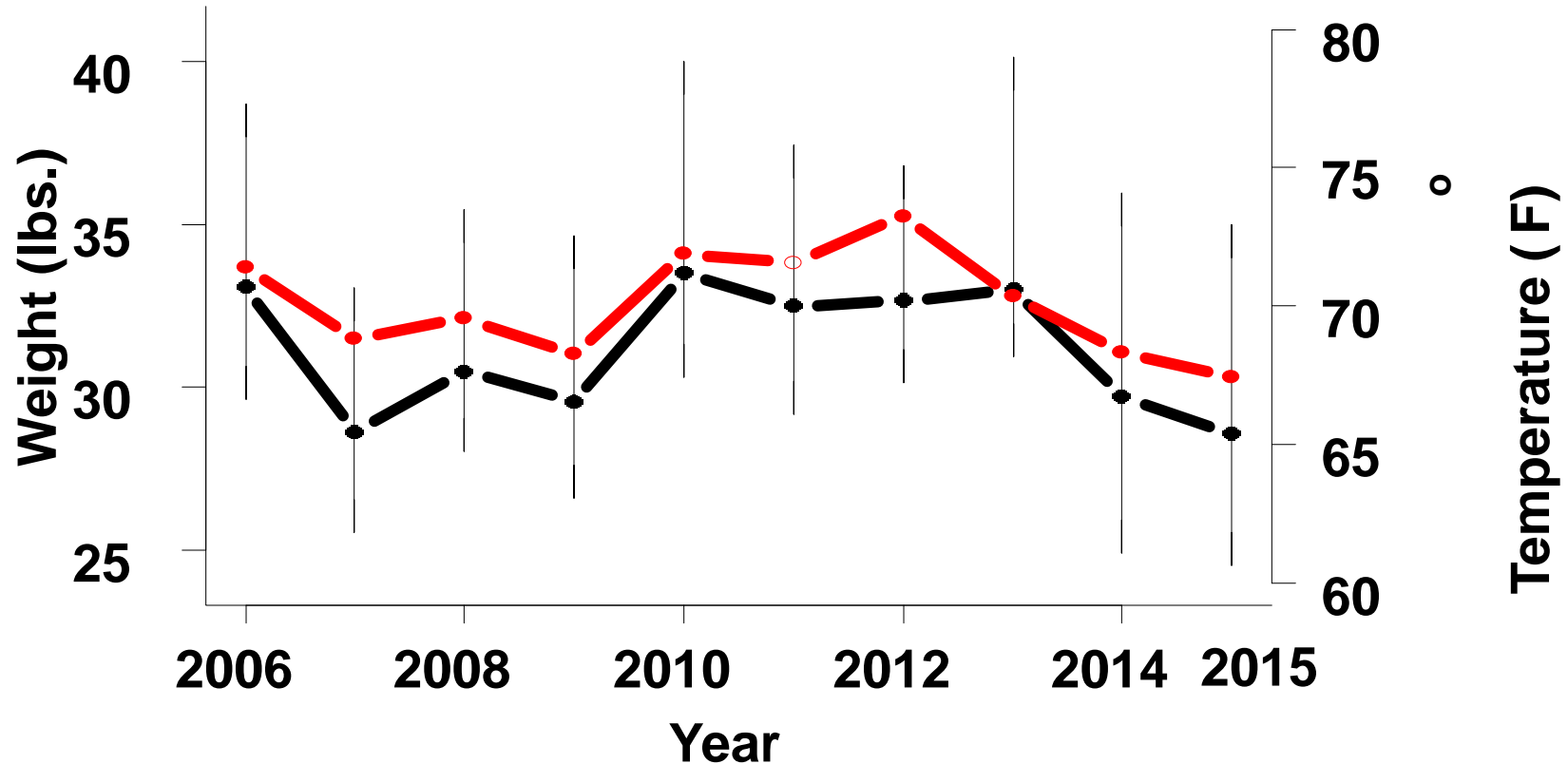
Growing Season



Larger
Chinook

Great Ontario Salmon Derby

Average Lake Temperatures and Trophy Kings

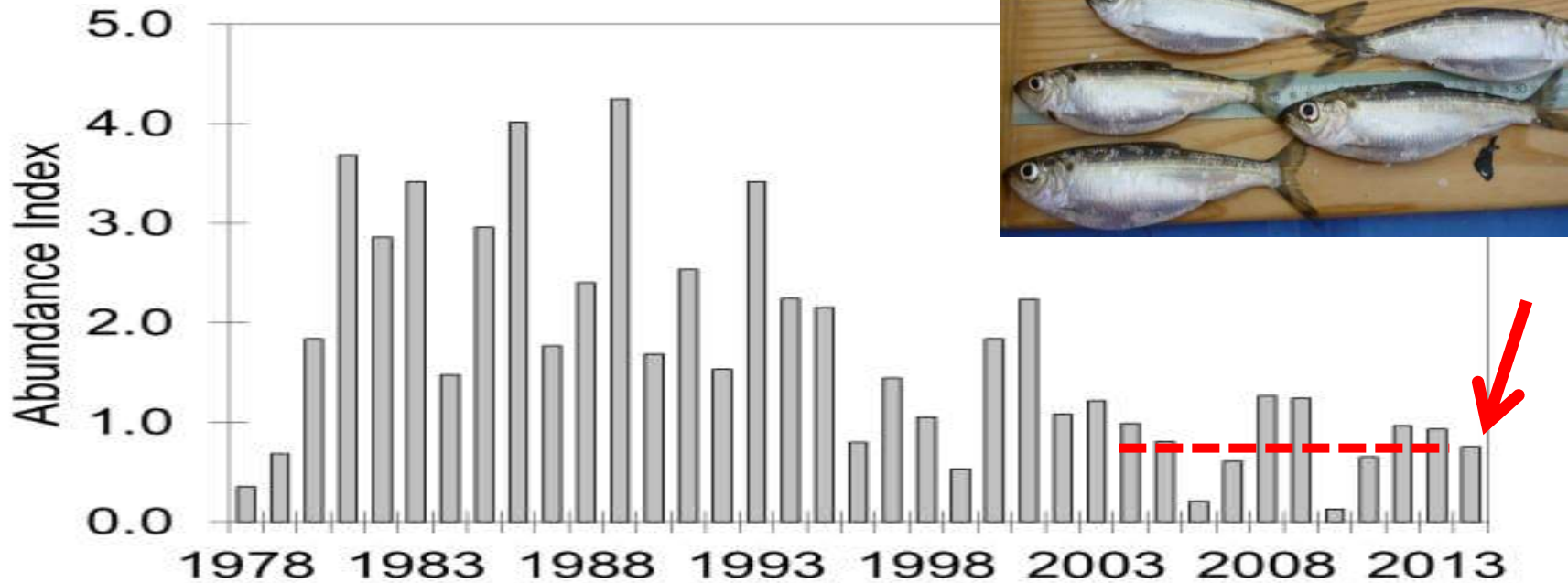


Alewife

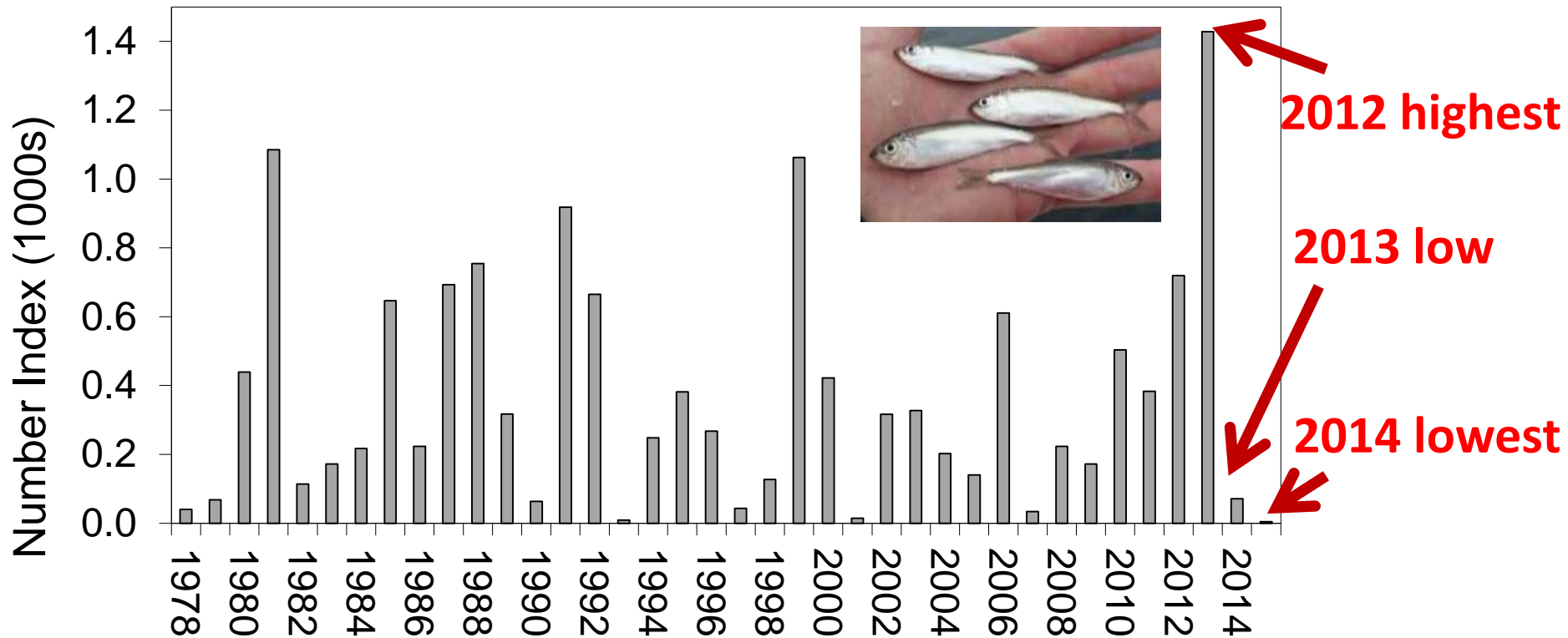
Video

Alewife – Adult Age 2+

2015 adult (age 2+) Alewife abundance, down slightly – likely due to limited recruitment in 2013 & 2014



Yearling Alewife in U.S. Waters of Lake Ontario USGS/NYSDEC (1978-2015)



Alewife Summary

- Adult abundance down slightly in 2015,
- 2 years of poor recruitment (2013 & 2014)
- Alewife condition increased in 2015



Rainbow Trout



Rainbow Trout - Thiamine Issue 2014

- Fall 2014 – NYSDEC reports distressed Rainbow in Salmon River
- Ontario did not observe issue to same magnitude
- Coordinated response: OMNRF & NYSDEC
- Suspected Thiamine (Vitamin B1) deficiency
- Tissues sent to testing



2014 Rainbow Trout - Thiamine

- Results from Thiamine tests:

	Normal (nmol/g)	SR SHD (nmol/g)
Liver	20-25	4.3 – 9.5
Muscle	2 – 4	0.4 – 0.6

Why this likely happened?

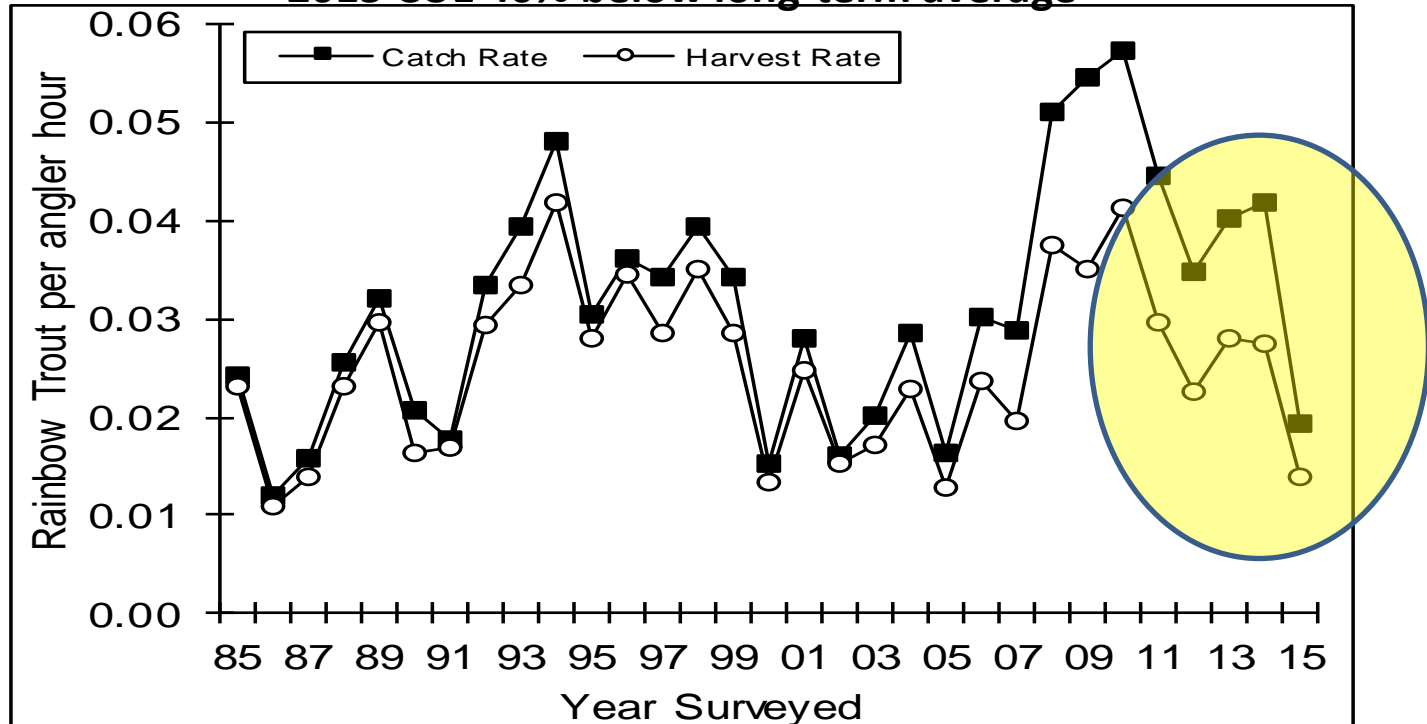
- Alewives = **thiaminase**
- Reduced body fat (2014)
 - Predators eat more alewife
 - Leads to more thiaminase



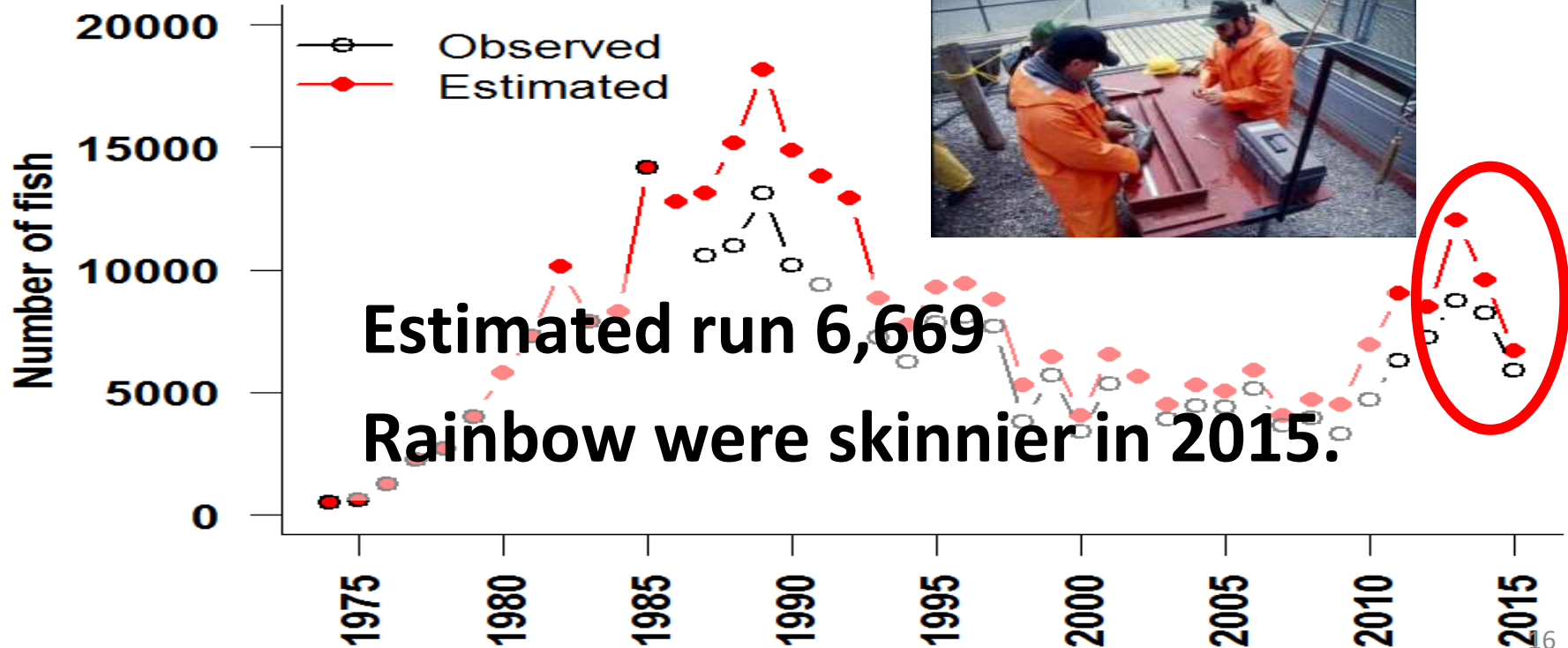
2015 NYSDEC Angler Survey

Rainbow Trout CUE ↓ in 2015

2015 CUE 40% below long-term average



OMNRF Ganaraska River Rainbow Trout Assessment 2015



Rainbow Trout Summary

- Ganaraska run size ↓ in 2015
- Condition ↓ in 2015 - lowest since 1974
- NYSDEC boat angler CUE ↓ 40% from long-term average
- Thiamine issues less prevalent in 2015
- 2014 impact uncertain
 - Tissue sampling ongoing

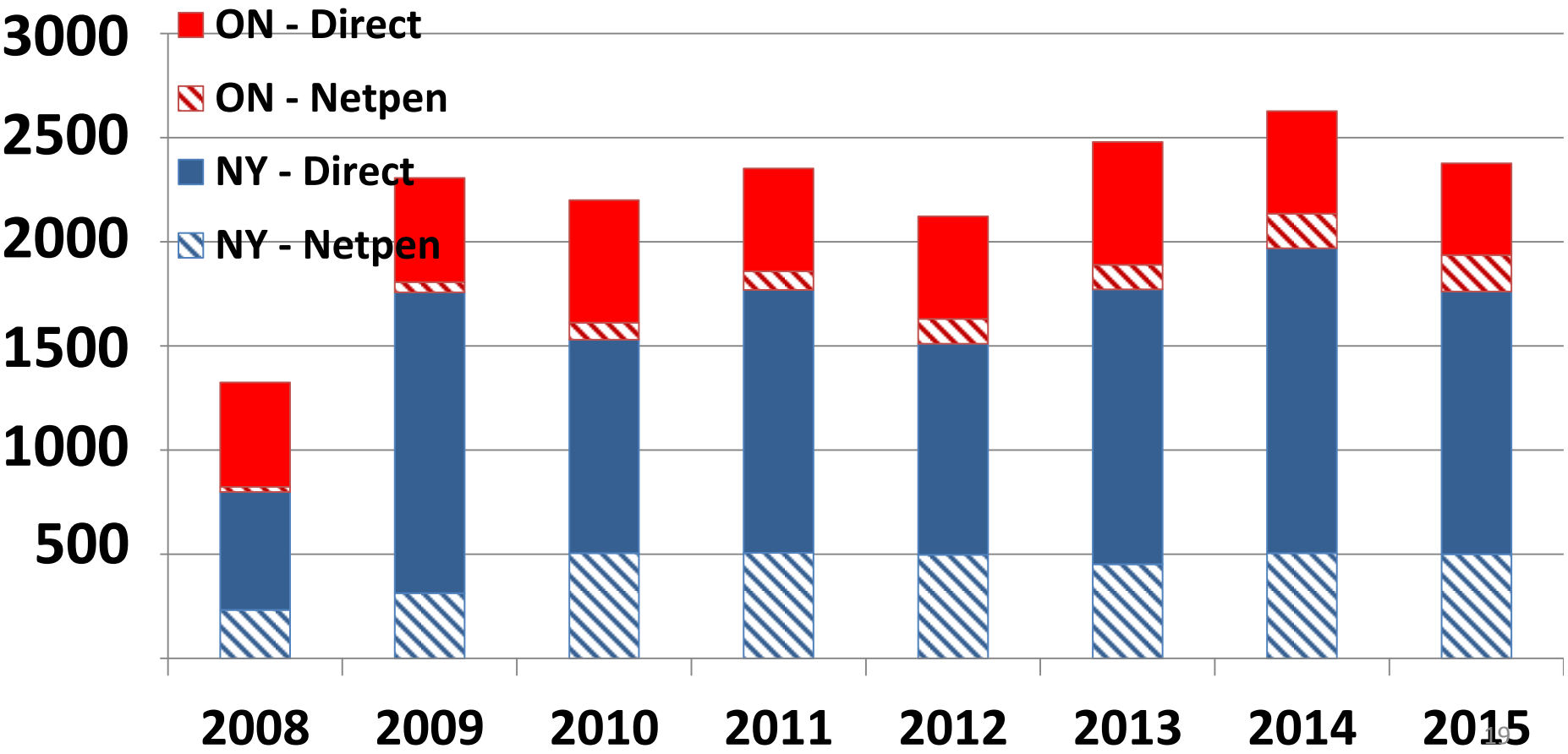


Chinook Salmon



Cameron and Cher
Spring King 2016

Chinook Stocked (000s) - Whole Lake

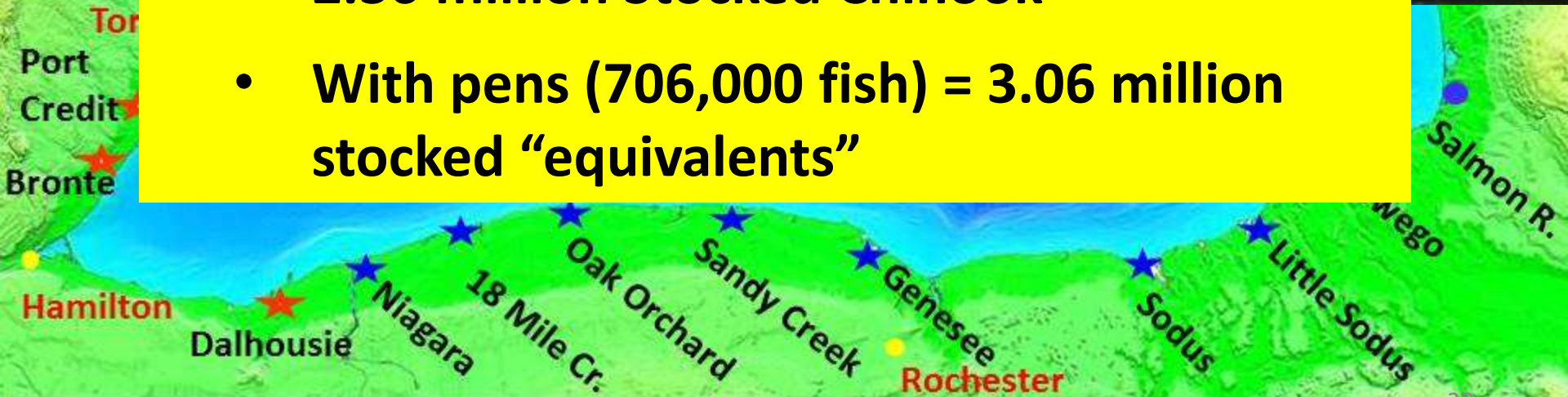


Chinook Net Pen Program

Pen Chinook Survive Twice as Well as Direct Stocked



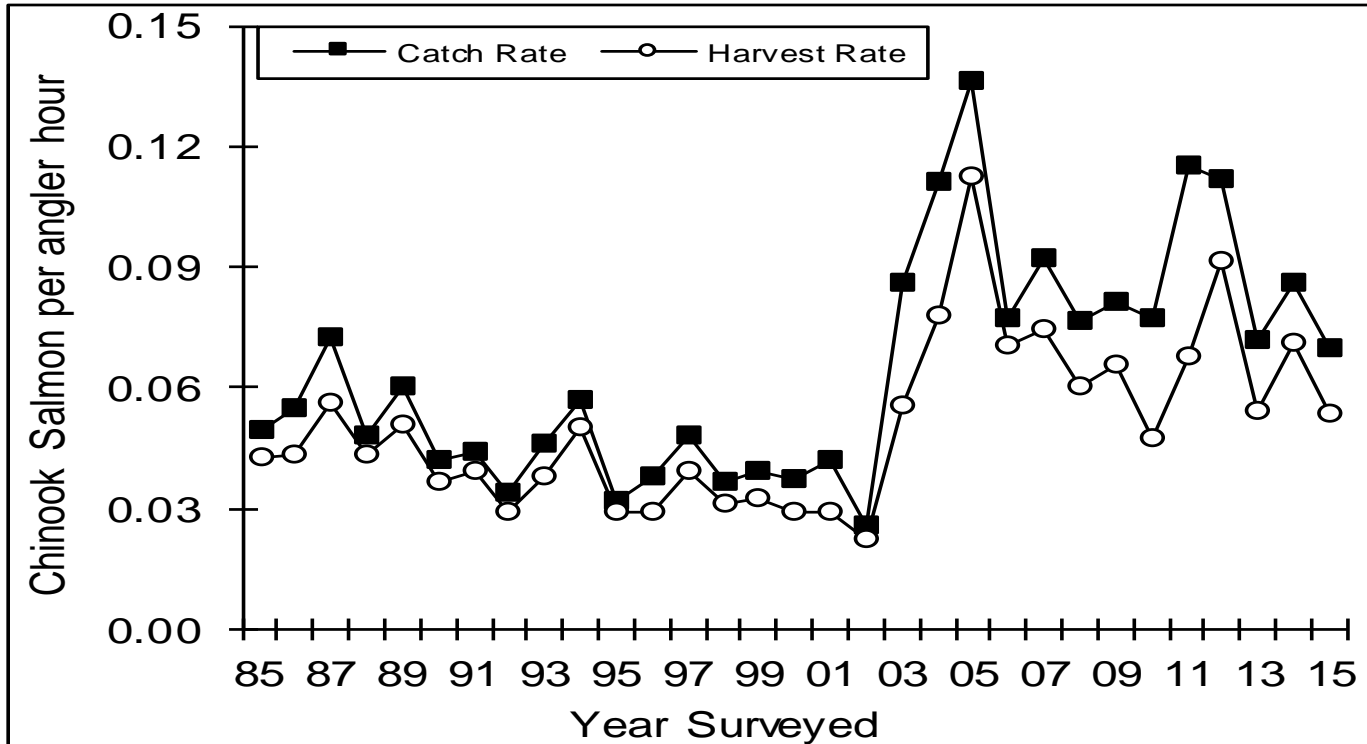
- 2.36 million Stocked Chinook
- With pens (706,000 fish) = 3.06 million stocked “equivalents”



2015 New York Angler Survey

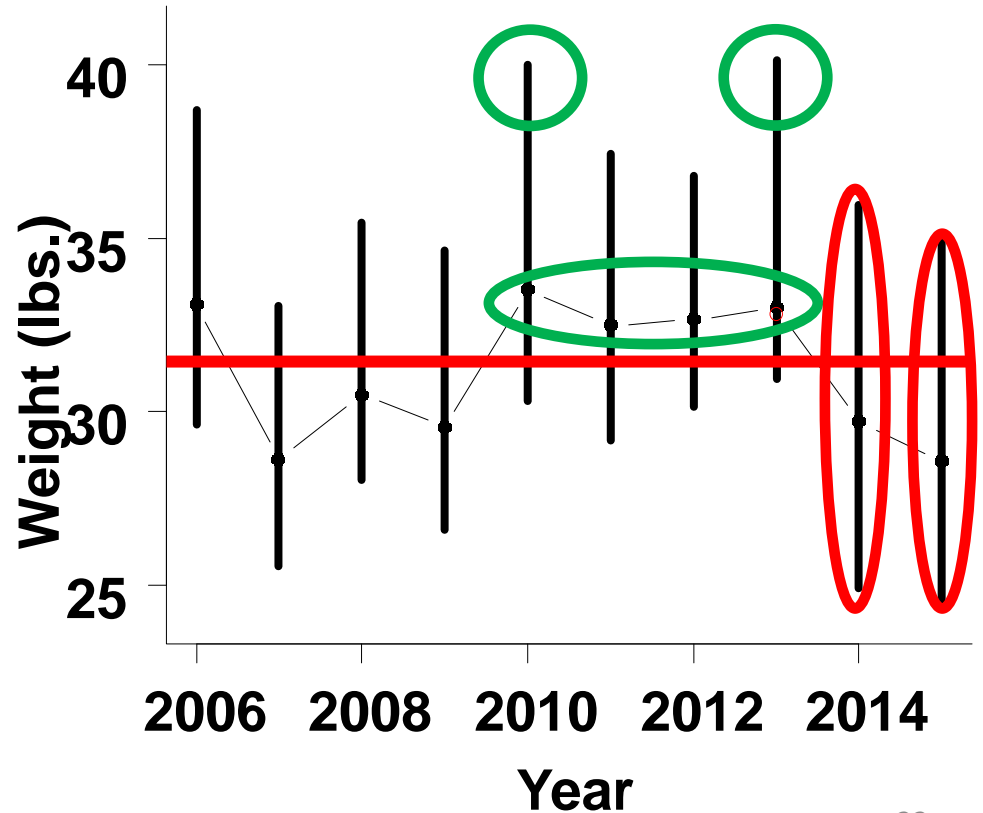
Chinook CUE declined in 2015.

Chinook catch ↓ 26% previous 12 year average.

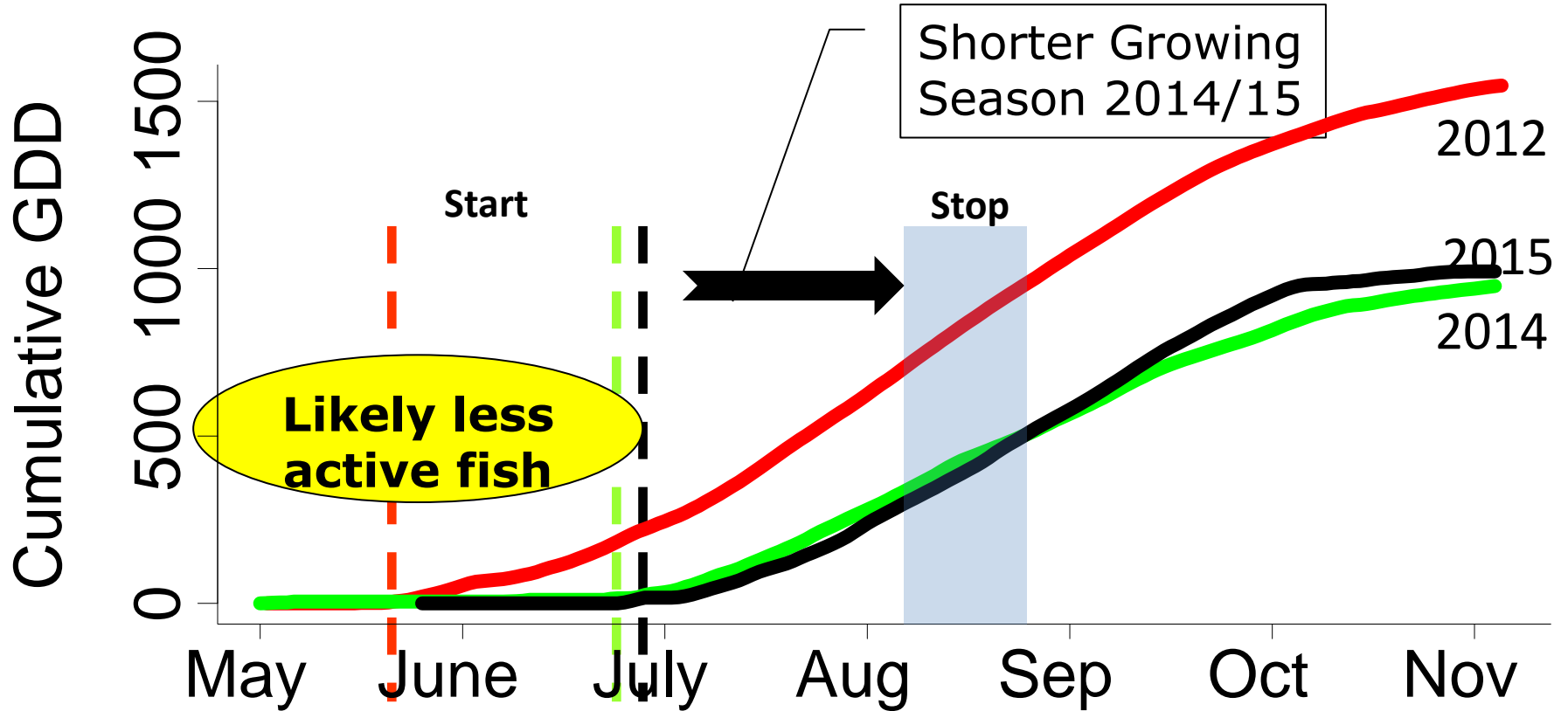


Great Ontario Salmon Derby

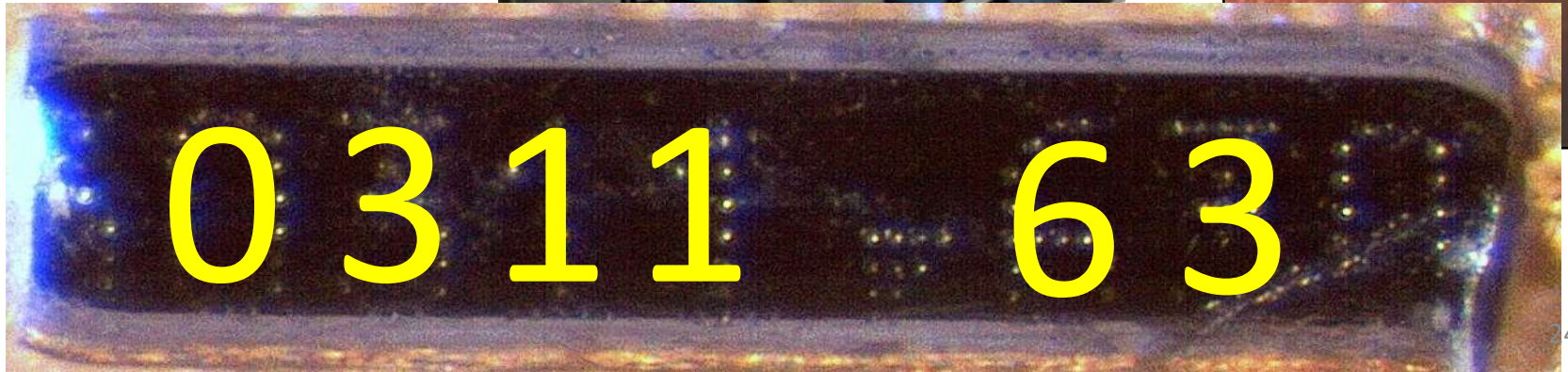
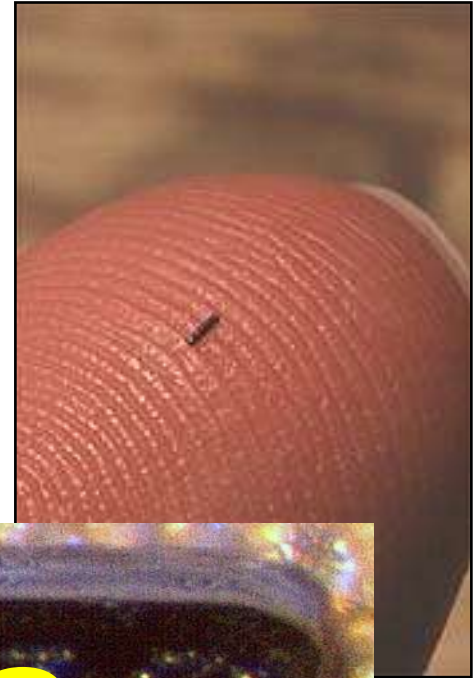
- 2015 below average; lowest in series
- 2010 to 2013 above long-term average
- 2014 – largest size range for winners
- 40+ lbs winners in 2010 and 2013



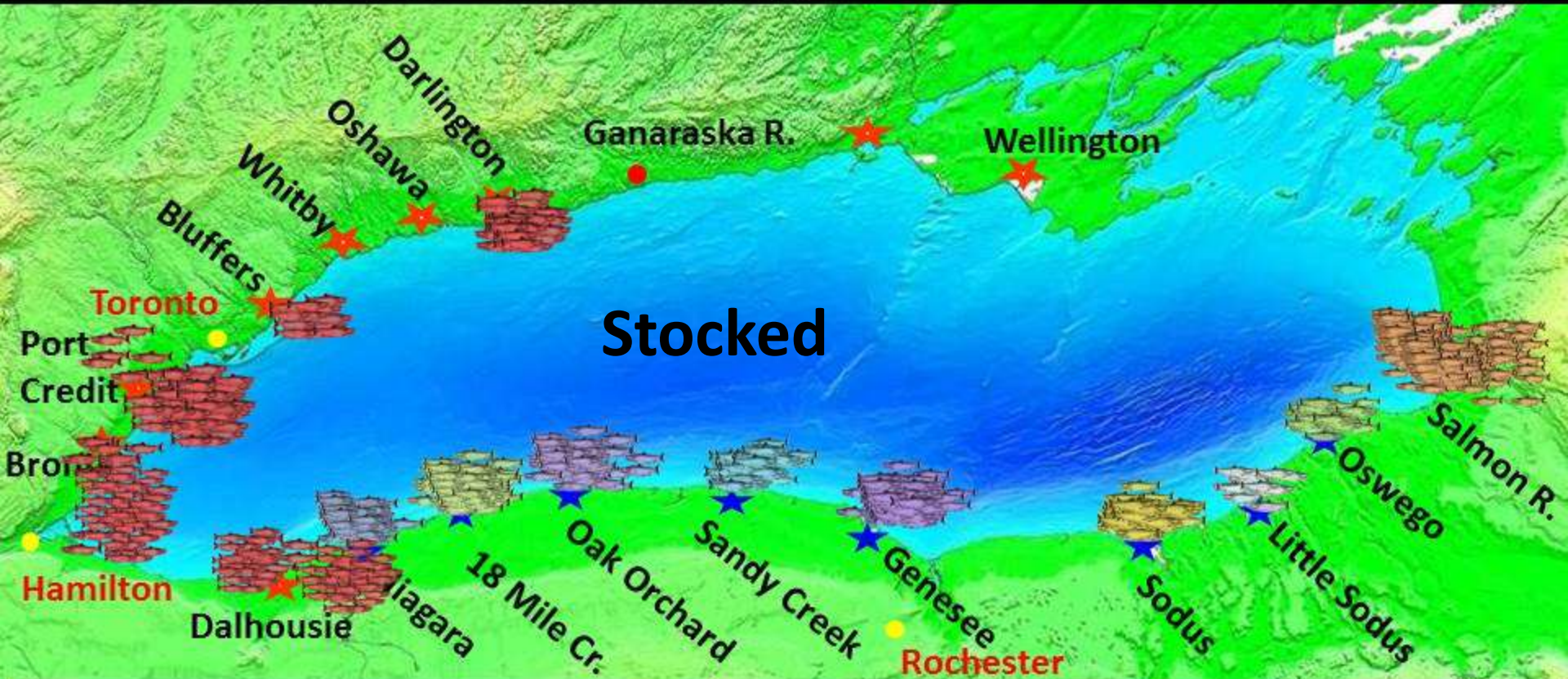
Mature Chinook Cumulative Growing Degree Days



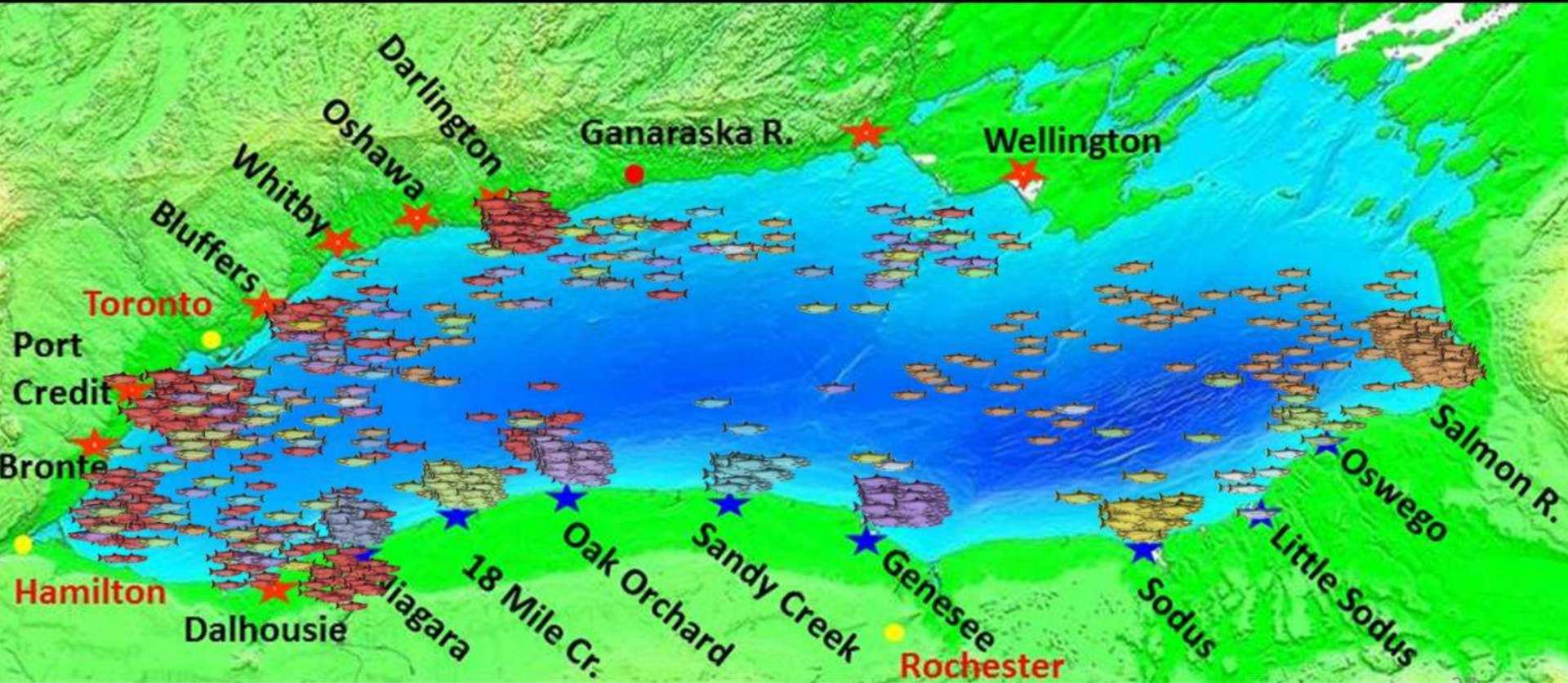
Mass Marking – Tag Recovery



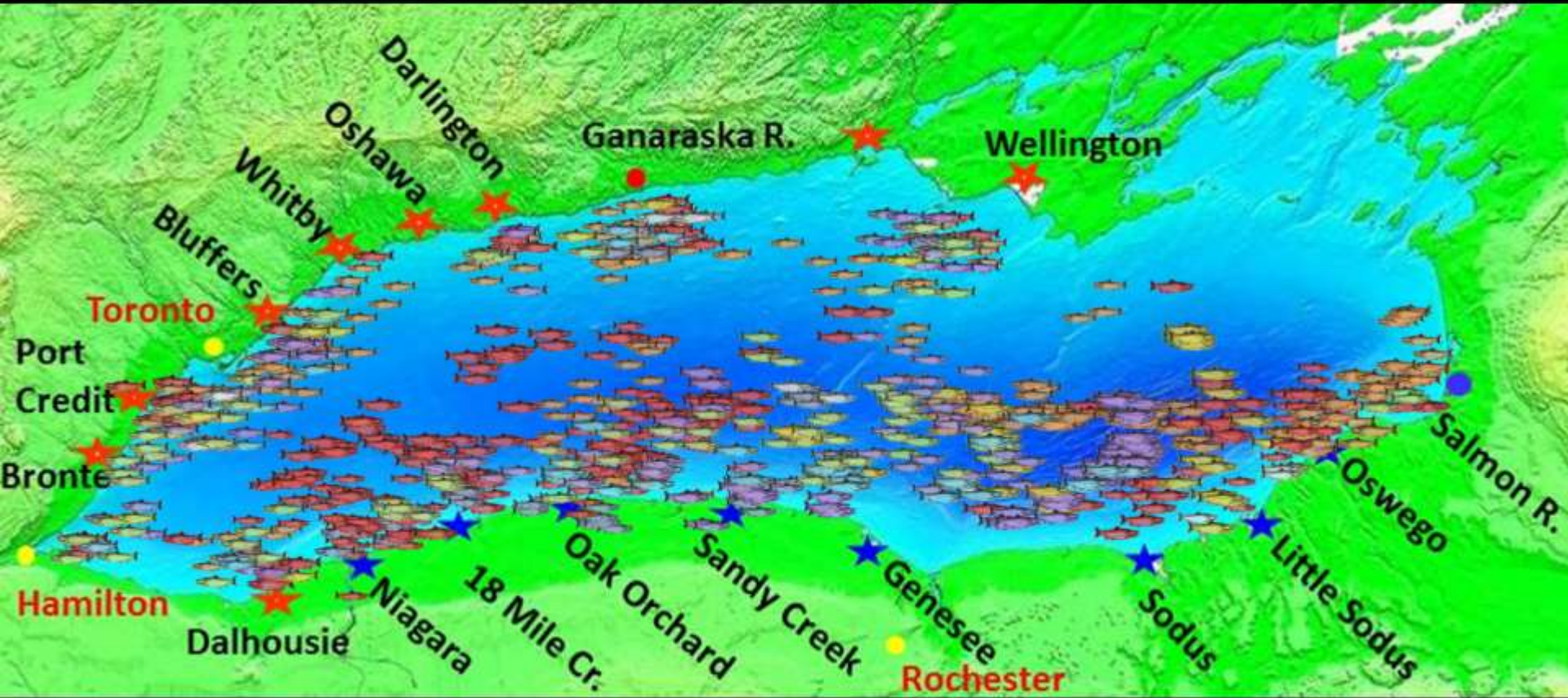
Lake Ontario 825 Tagged Chinook Salmon Stocking and Recovery Location 2011-2014



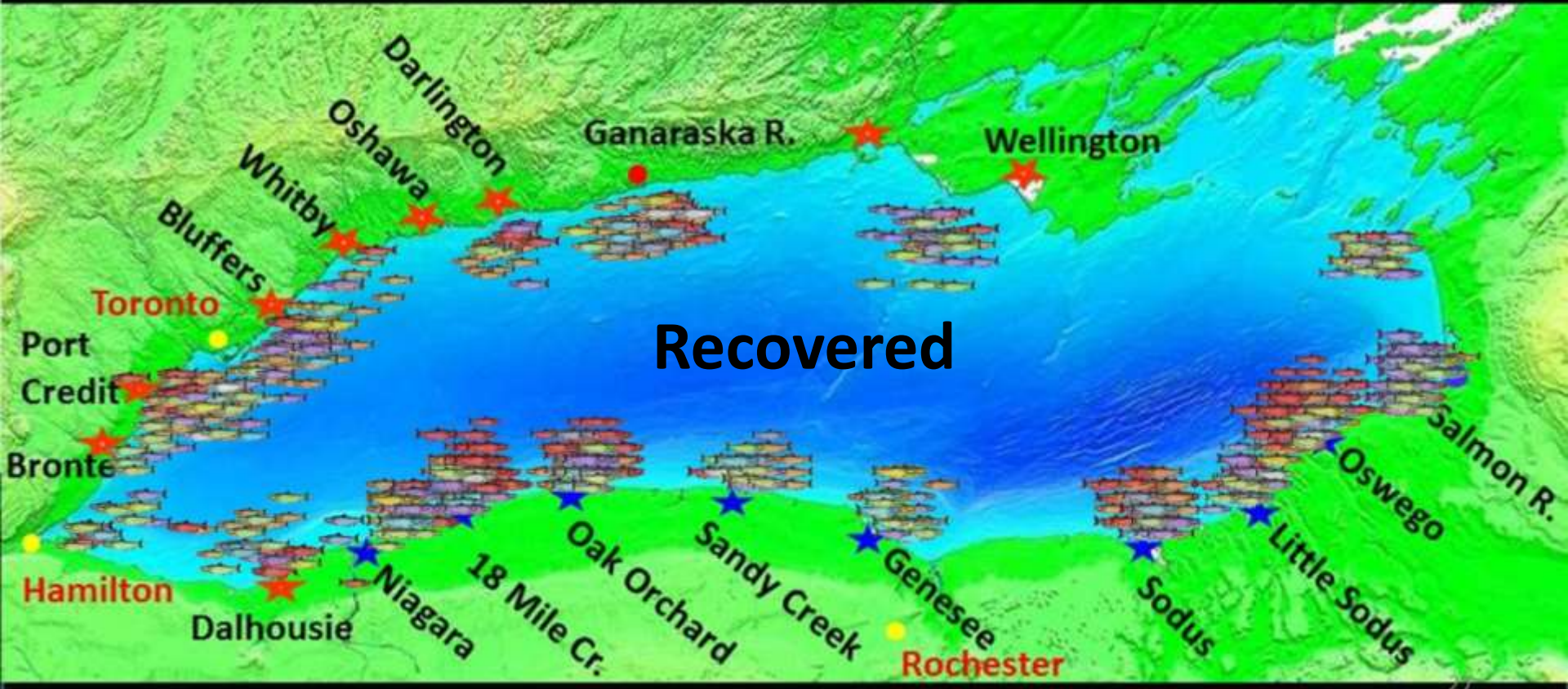
Lake Ontario 825 Tagged Chinook Salmon Stocking and Recovery Location 2011-2014



Lake Ontario 825 Tagged Chinook Salmon Stocking and Recovery Location 2011-2014



Lake Ontario 825 Tagged Chinook Salmon Stocking and Recovery Location 2011-2014



Recovered

2015 Chinook Salmon Summary

- Stocking - numbers are up slightly
- Pens – about 700K in pens with about a 2:1 return
- Growth and Condition - smaller fish but plump
- Catch Rate - ↓ (NYSDEC survey)
- Outlook

