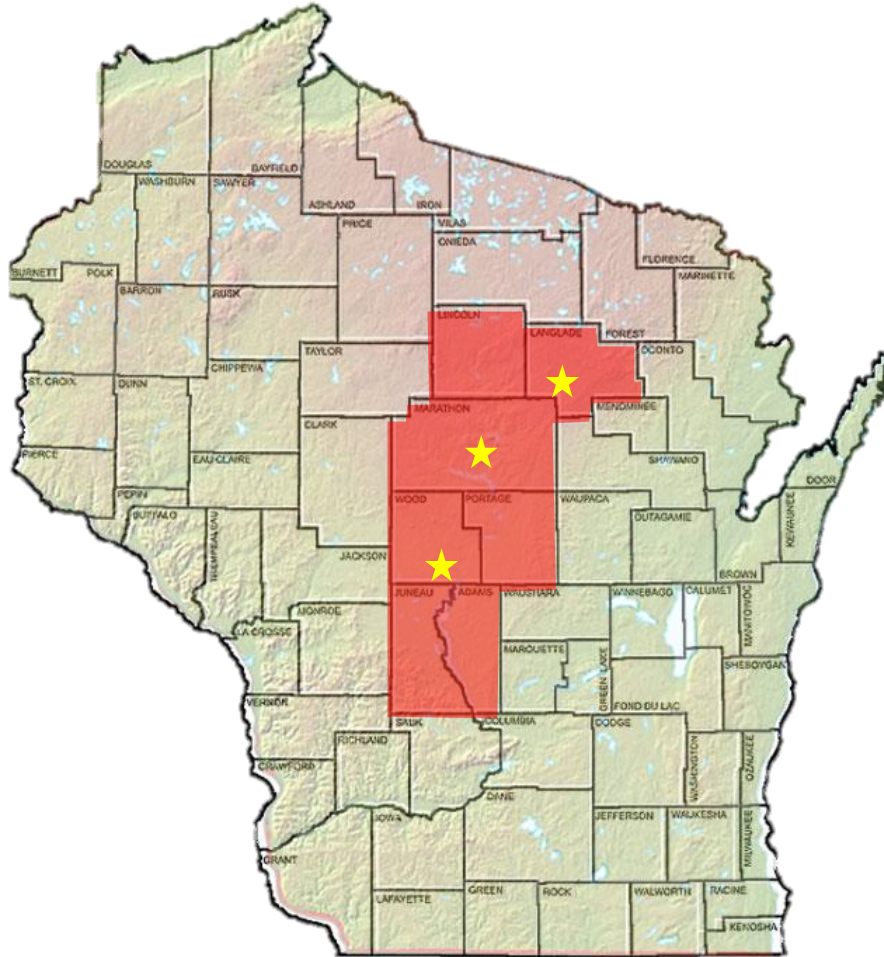


2017 Big Eau Pleine Comprehensive Survey Review

Jake Thompson, WDNR
BEPCO Spring Mtg- April 15, 2018



Wausau Fisheries Work Unit



Fisheries Resources

- *Wisconsin River*
- *Wisconsin River Flowages*
 - *Lake DuBay*
 - *Lake Wausau*
 - *Petenwell*
 - *Castlerock*
- *2083 Lakes (111,000 + acres)*
- *1000+ miles of Trout Streams*
 - *Tomorrow/Waupaca*
 - *Prairie*
 - *Wolf*
 - *Plover*

Wausau Staff

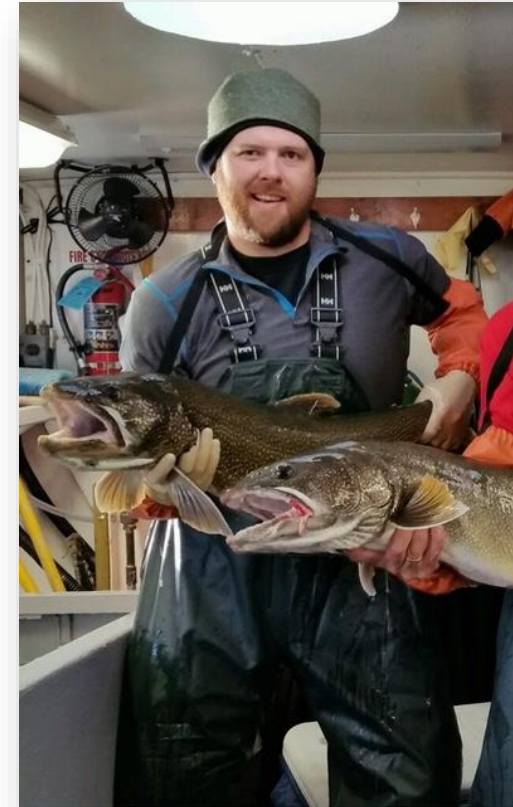
Portage and Marathon Counties



Al Niebur
Team Supervisor



Jake Thompson
Fisheries Technician



Tim Parks
Fisheries Biologist



What I Will Cover

- Survey Schedule
- 2017 Big Eau Pleine Survey Design
- Survey Results
- Upcoming Plans

Survey Schedule

- Comprehensive Fish Survey
 - 7 year rotation
 - Last successful survey in 2003
- Annual Spring EF
 - 4.2 mile station
 - Sampled at “peak” of walleye spawn
- Annual Fall Recruitment Survey



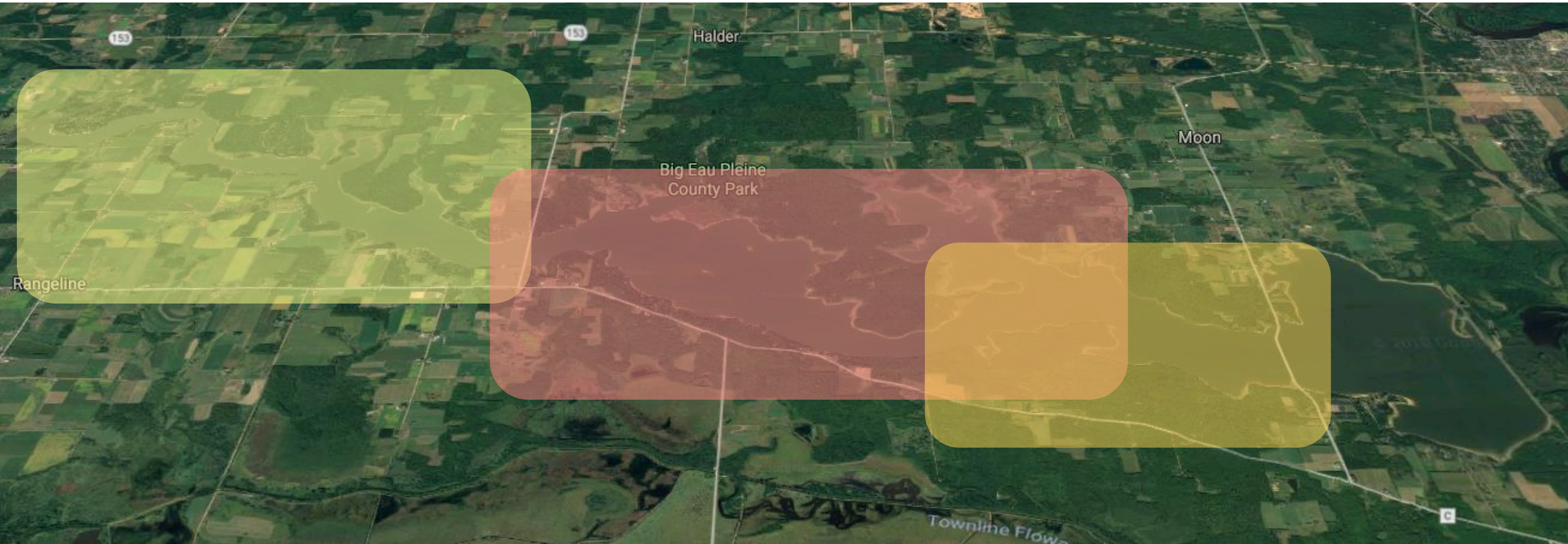


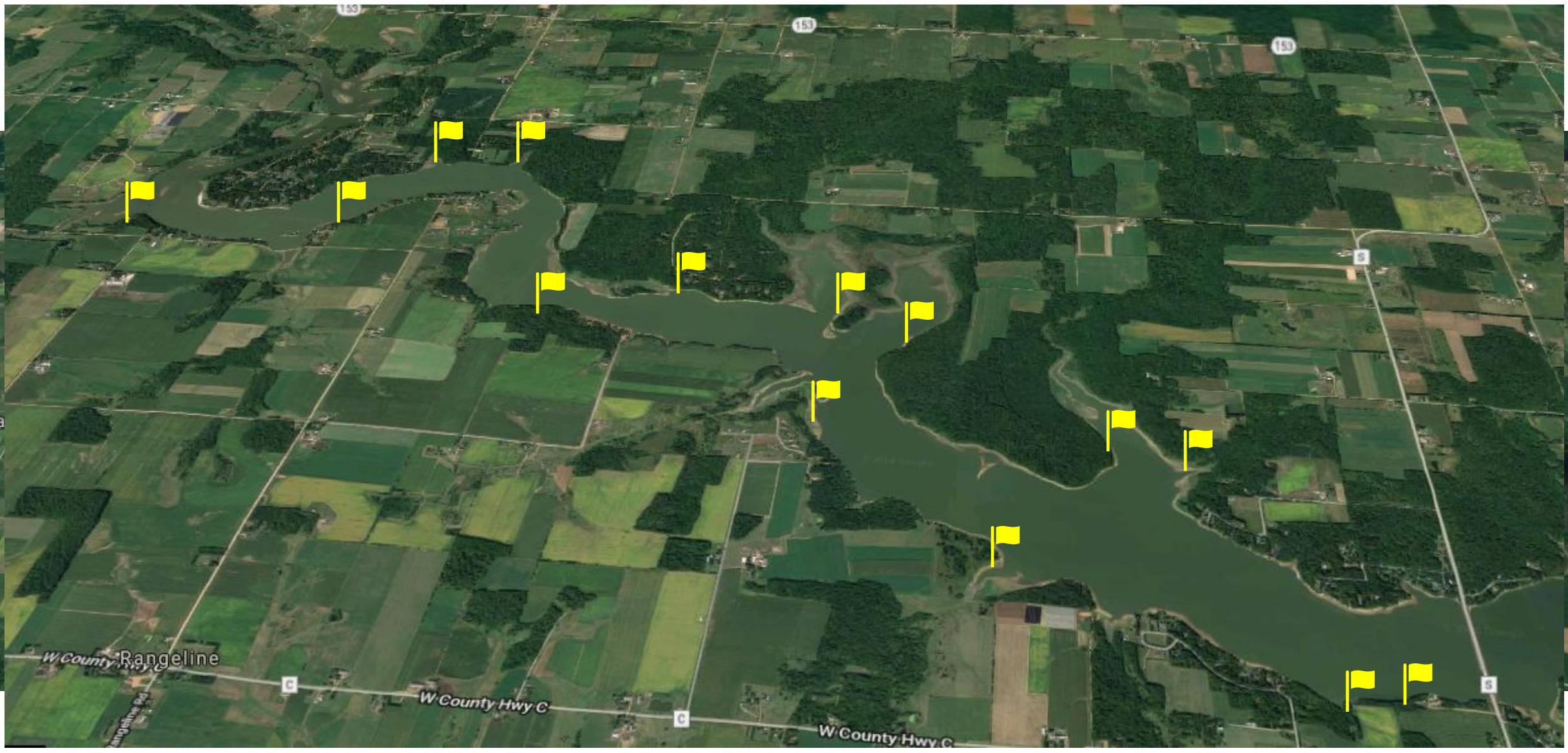


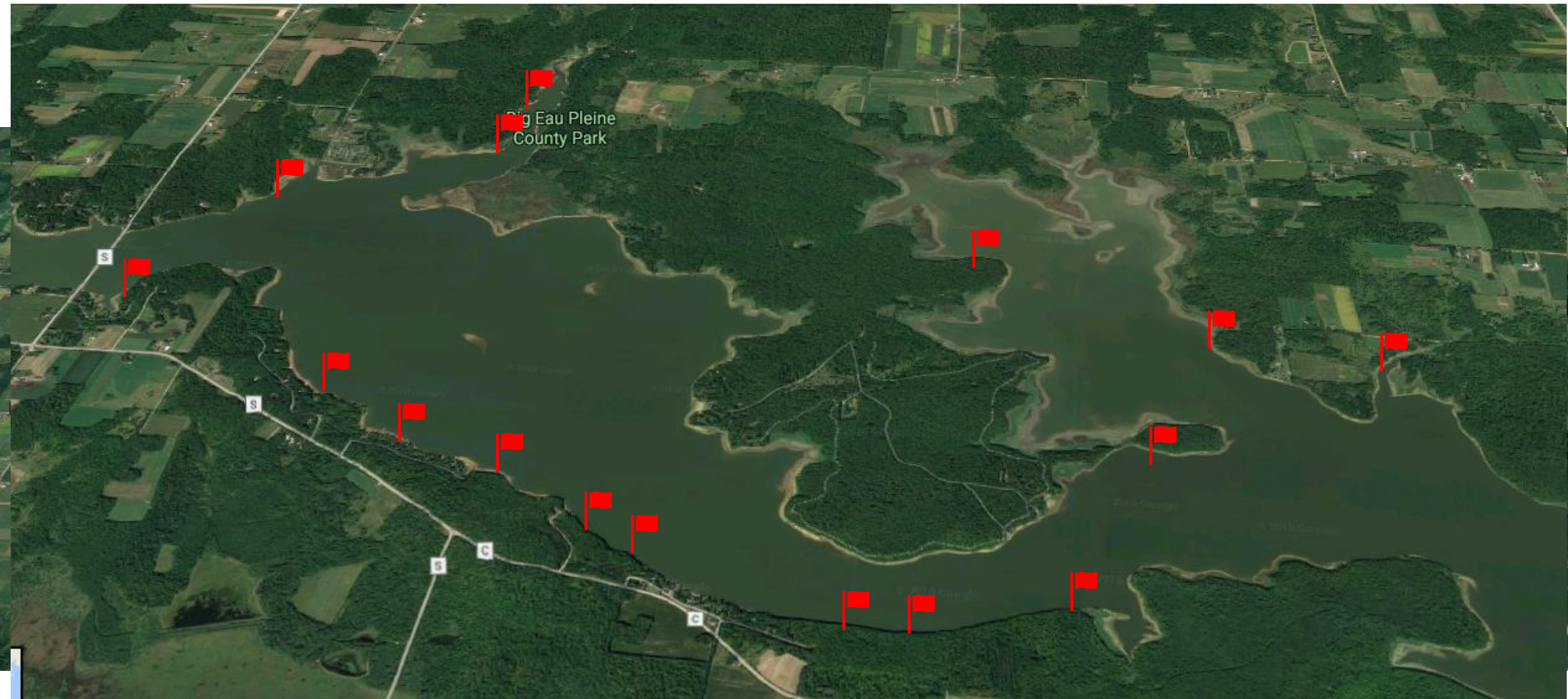




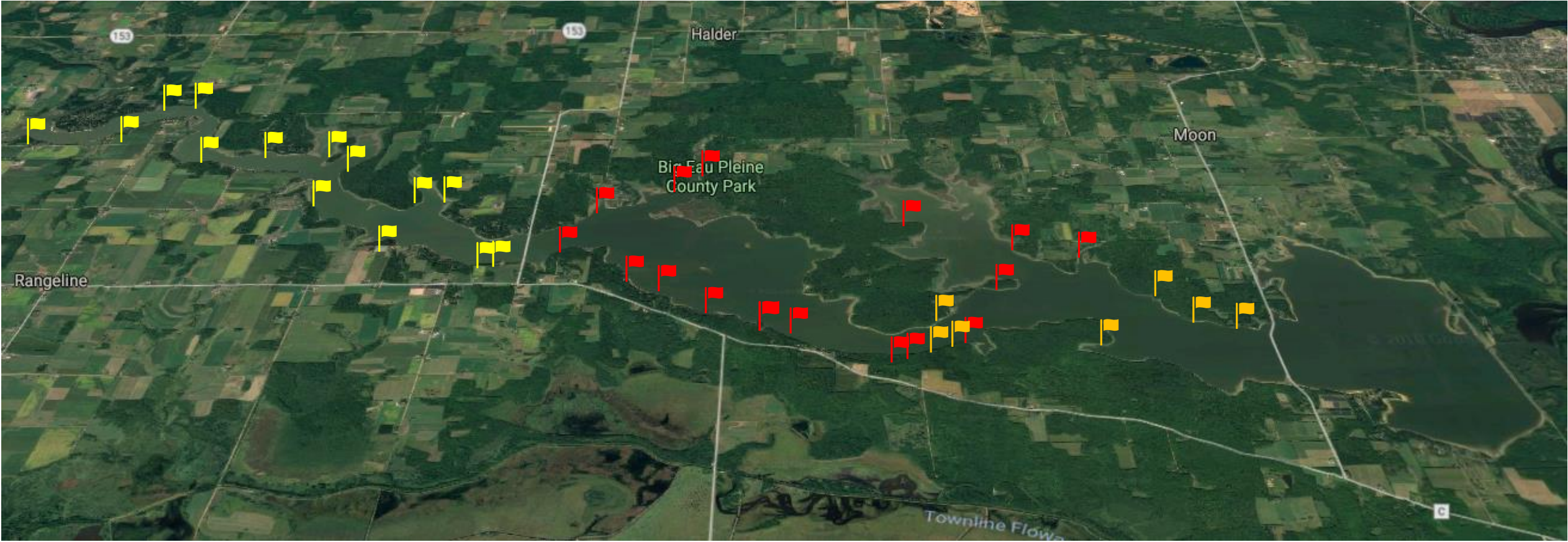
2017 Big Eau Pleine Comp Survey Desgin











What is collected?

- Length
- Weight
- Gender
- Age Structure
- Marks/Tags





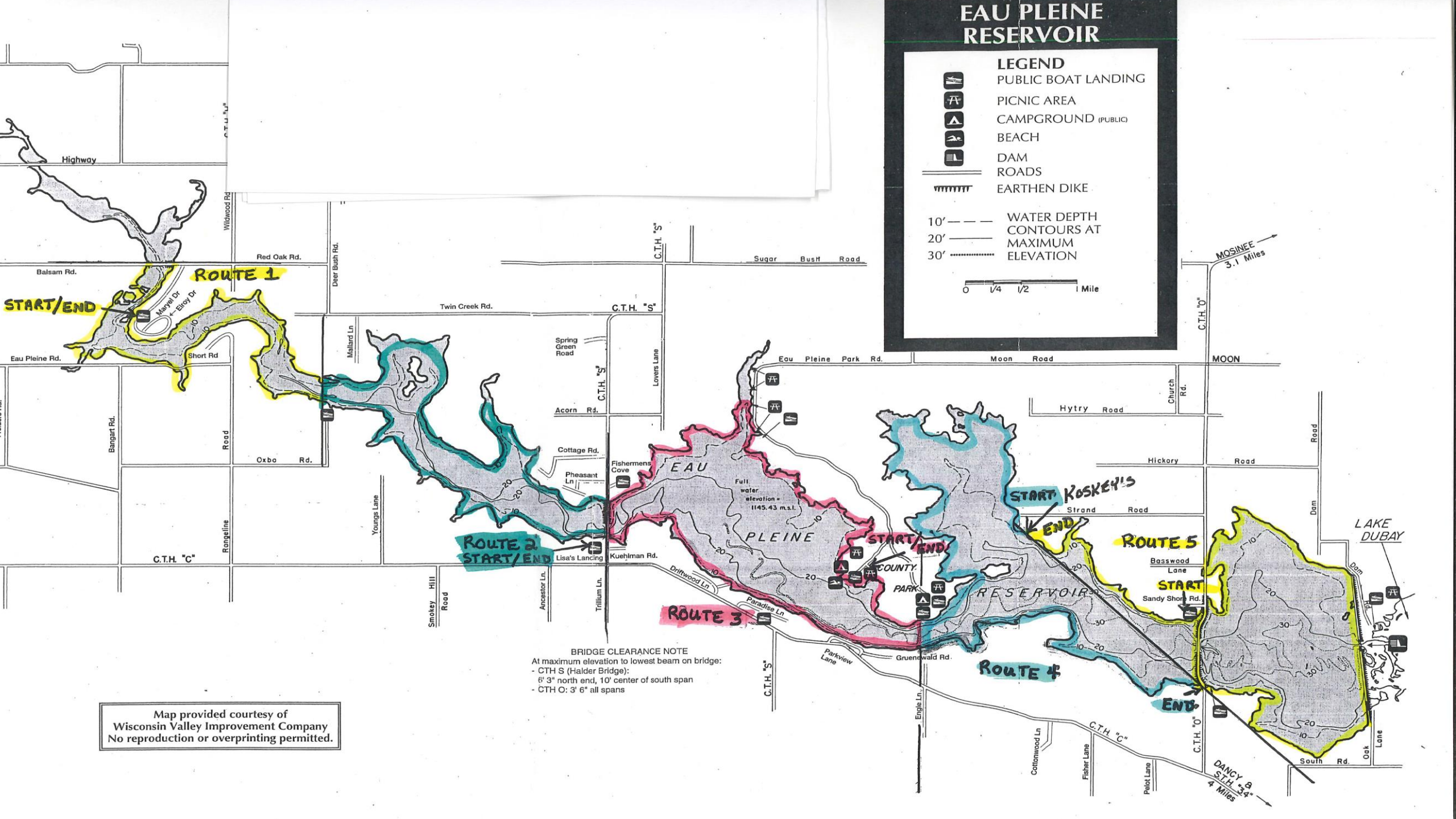
EAU PLEINE RESERVOIR

LEGEND

-  PUBLIC BOAT LANDING
-  PICNIC AREA
-  CAMPGROUND (PUBLIC)
-  BEACH
-  DAM
-  ROADS
-  EARTHEN DIKE

- 10' --- WATER DEPTH
- 20' --- CONTOURS AT
- 30' MAXIMUM
- ELEVATION

0 1/4 1/2 1 Mile



BRIDGE CLEARANCE NOTE
At maximum elevation to lowest beam on bridge:
- CTH S (Halder Bridge):
8' 3" north end, 10' center of south span
- CTH O: 3' 6" all spans

Map provided courtesy of
Wisconsin Valley Improvement Company
No reproduction or overprinting permitted.



Survey Results

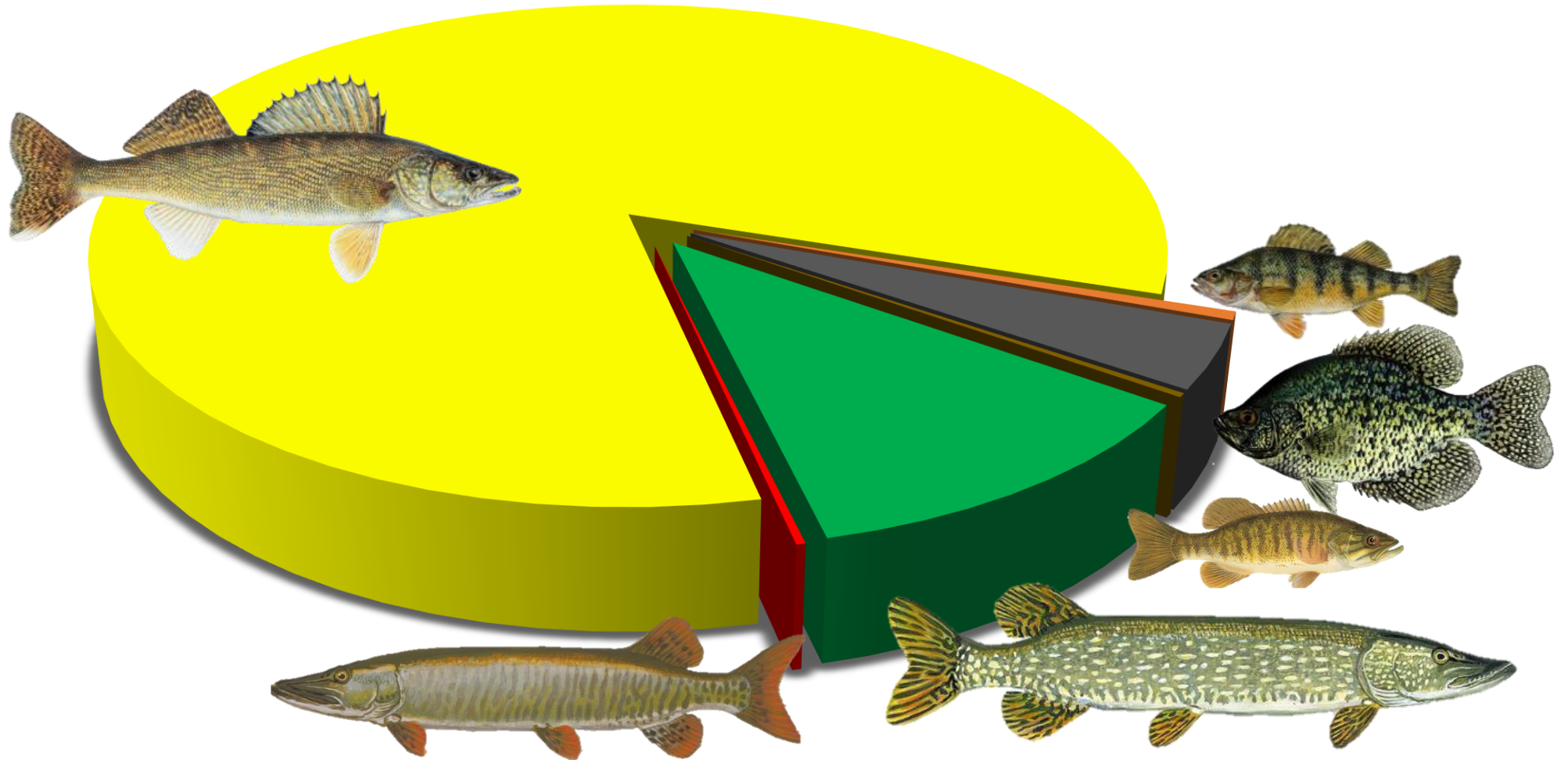
How does the DNR gauge a fish population?

Metrics:

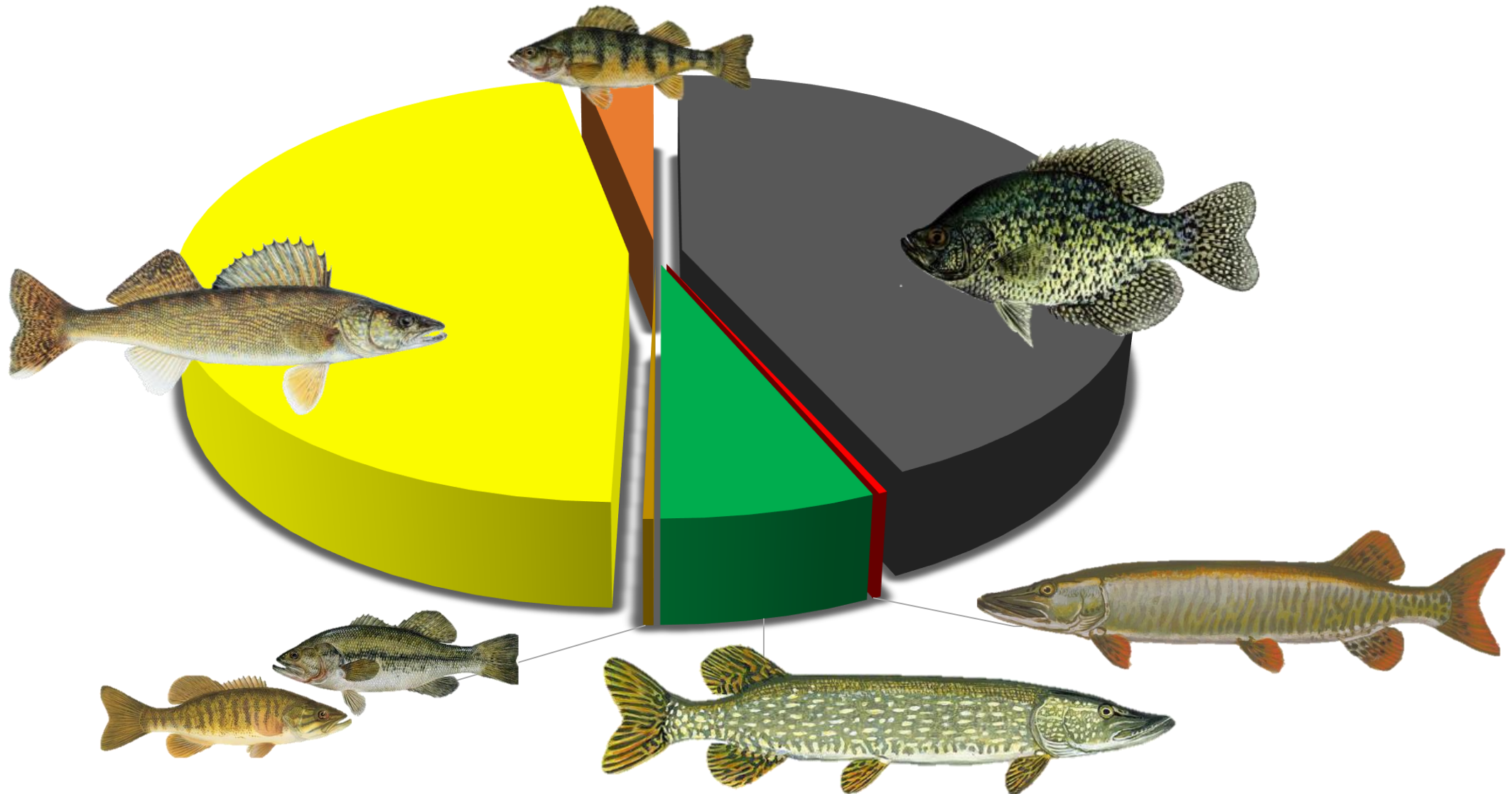
- **Abundance**
 - CPE (catch per effort)
 - Population Estimate
- **Size Structure**
 - PSD (proportional size distribution)
- **Growth**



Gamefish Catch-2003

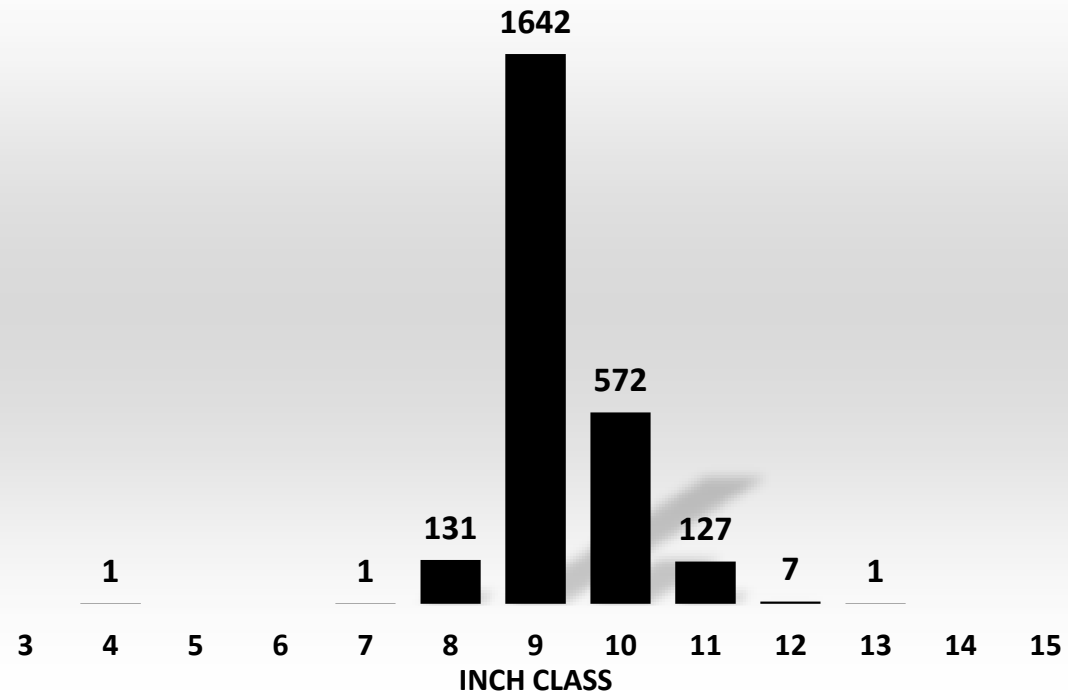


Gamefish Catch-2017

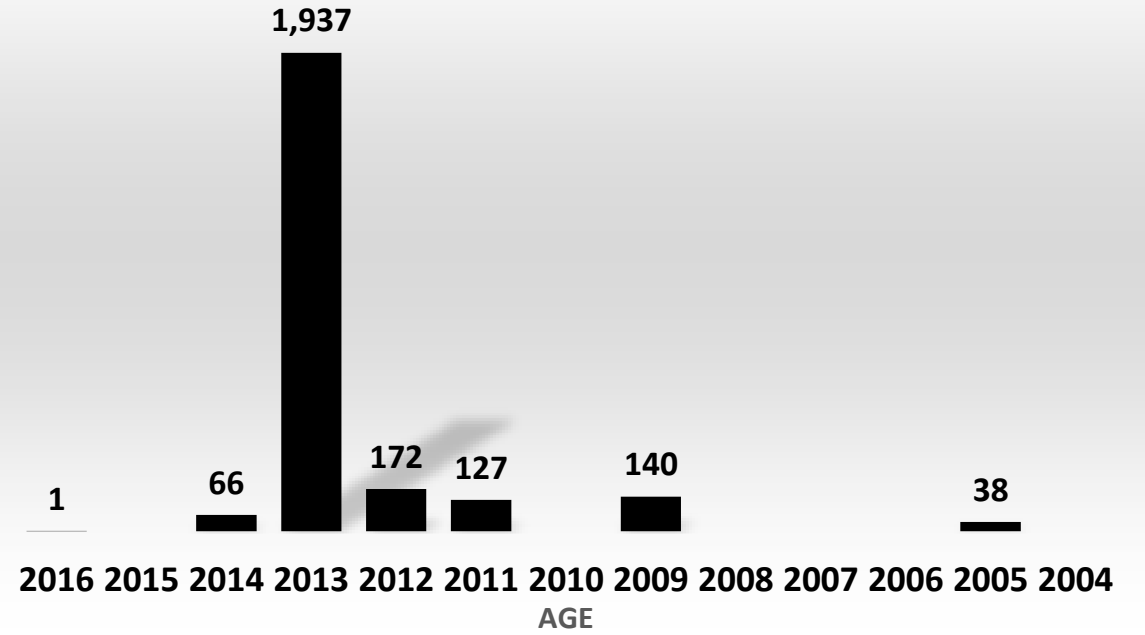




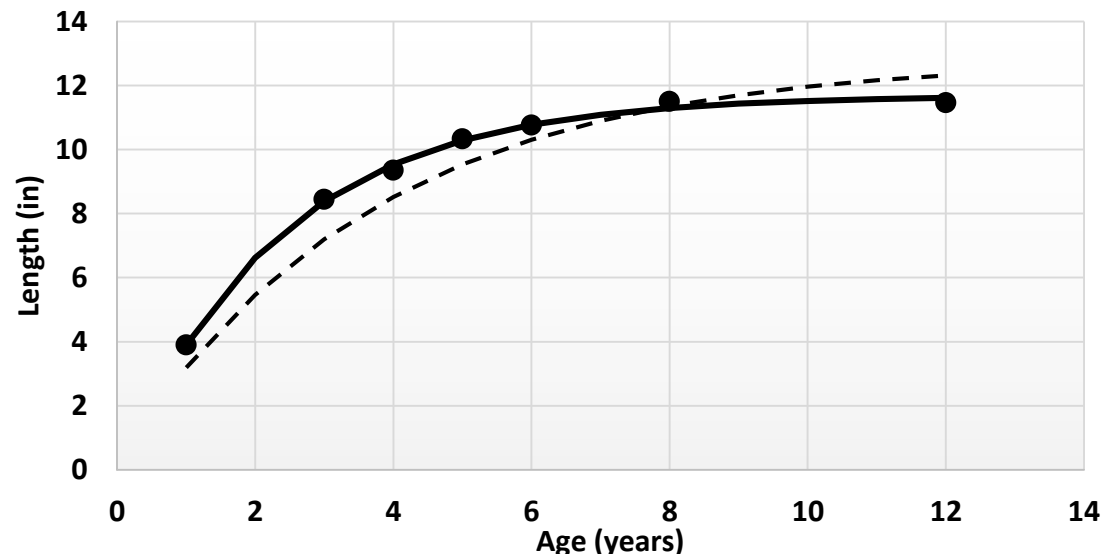
Black Crappie Length Frequency

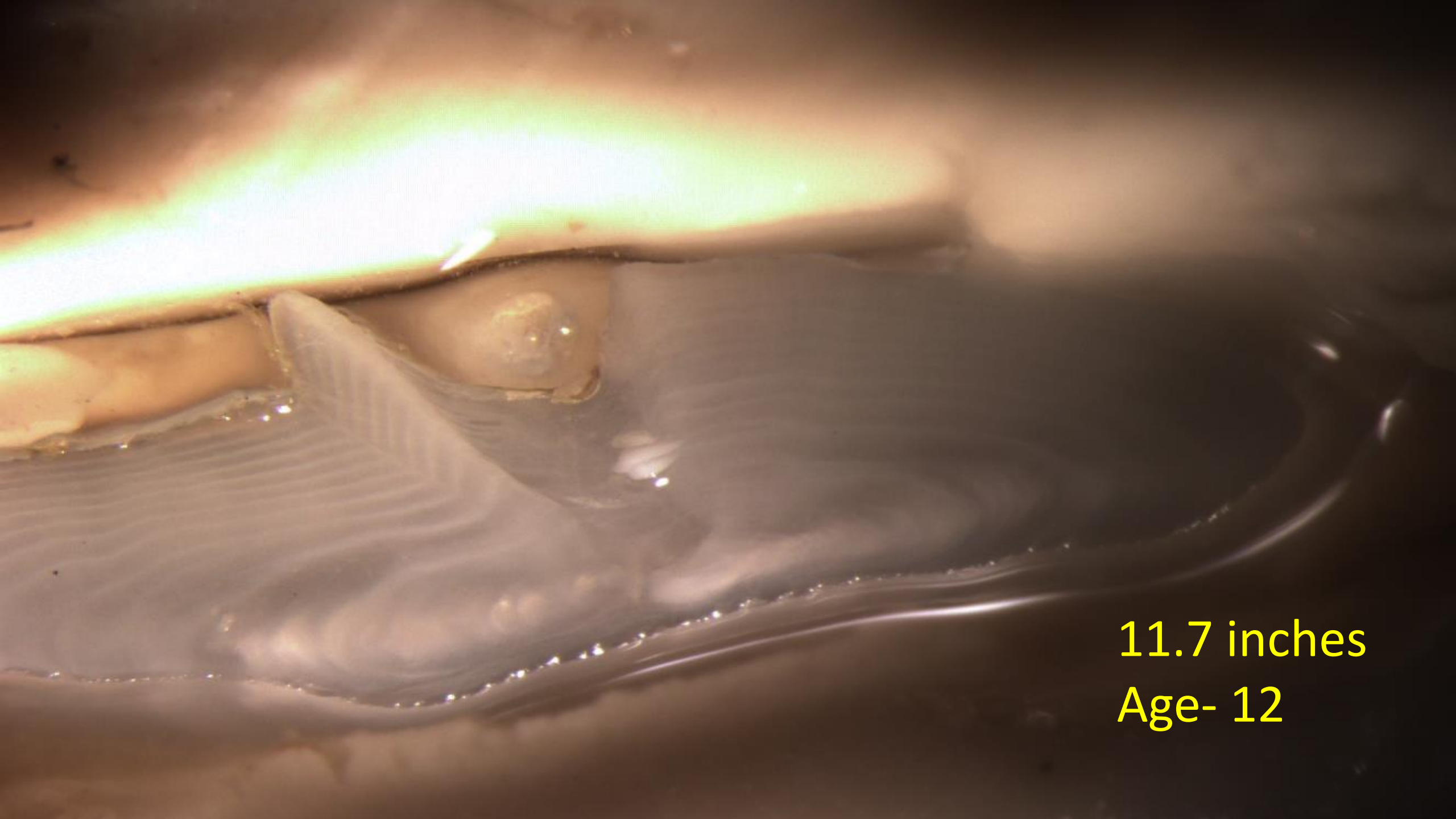


Black Crappie Age Composition



2017 Black Crappie Von B Growth Curve





11.7 inches
Age- 12

Control Panel

Imaging Control

Capture Control

2x

Remove

Update

Add



Capture

White Balance

Area WB

Camera Control

Preview



Exposure (ms)

0.062 20.9235 500

☐ Enable extended exposure

Average Intensity [0.,255]

Darker 155 Brighter

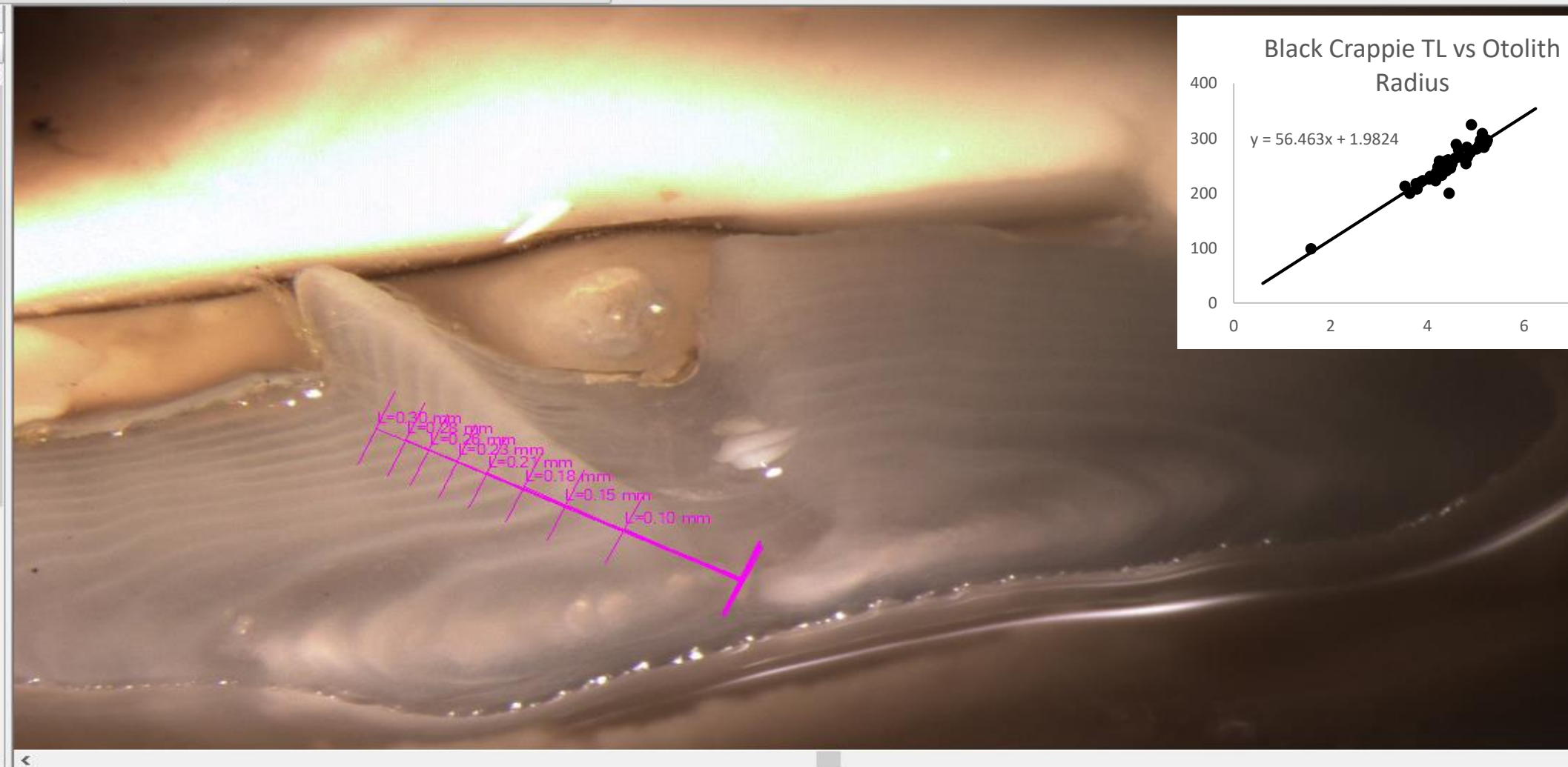
☐ Continuous Auto Exposure

Gain

1 1.81 23.81

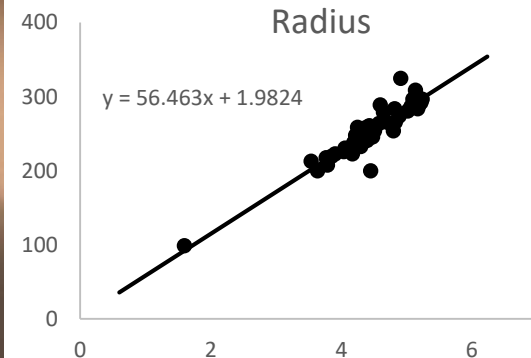
Gamma

Command	Parameter	Value	Unit
Point to Point	Distance	0.21	mm
Point to Point	Distance	0.23	mm
Point to Point	Distance	0.26	mm
Point to Point	Distance	0.28	mm
Point to Point	Distance	0.30	mm



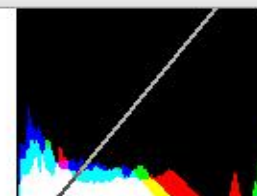
Black Crappie TL vs Otolith Radius

$$y = 56.463x + 1.9824$$



Command	Parameter	Value	Unit
Point to Point	Distance	0.21	mm
Point to Point	Distance	0.23	mm
Point to Point	Distance	0.26	mm
Point to Point	Distance	0.28	mm
Point to Point	Distance	0.30	mm

Histogram

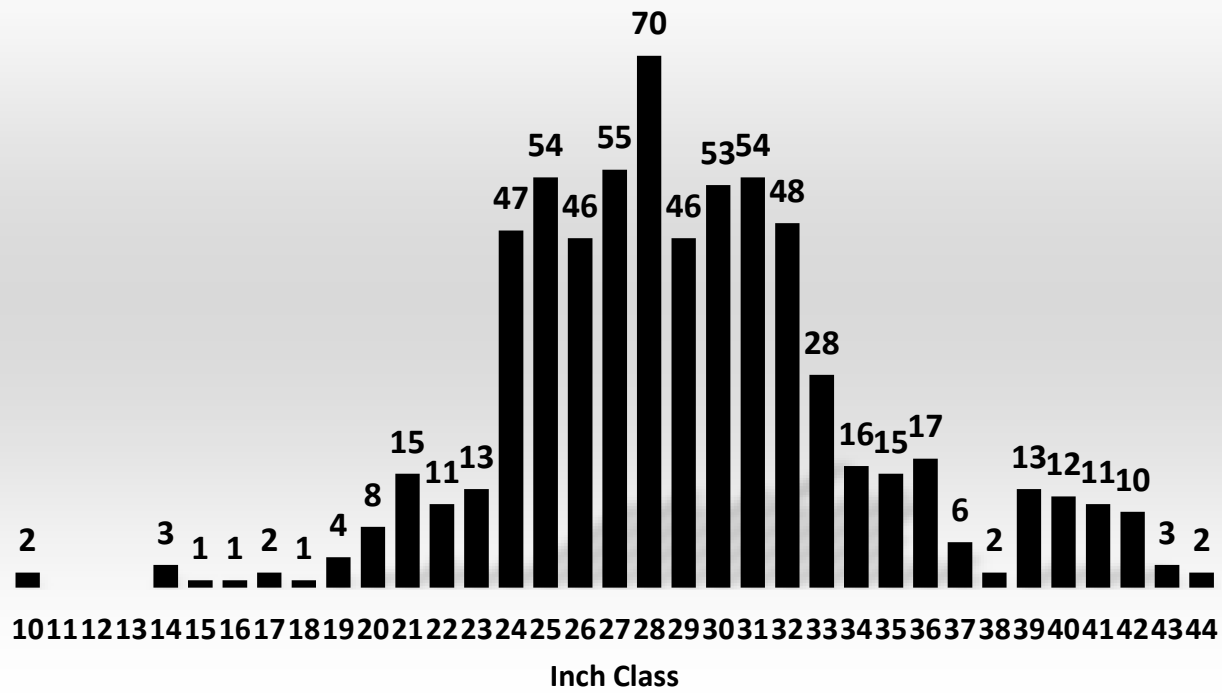




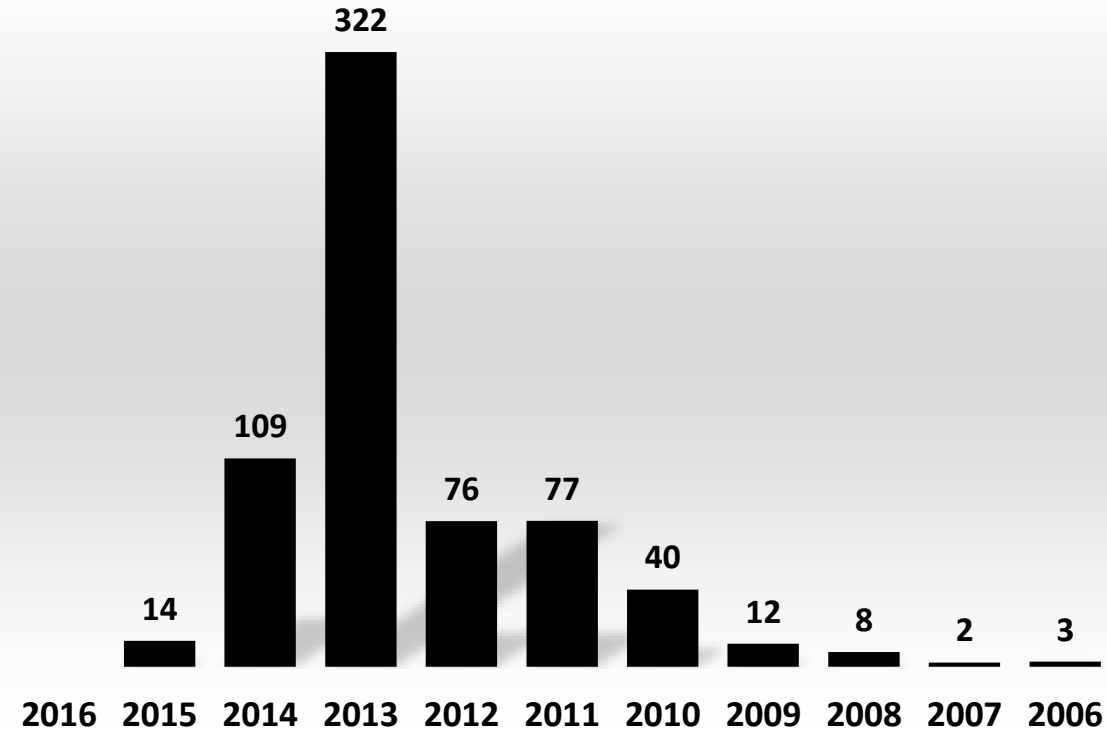




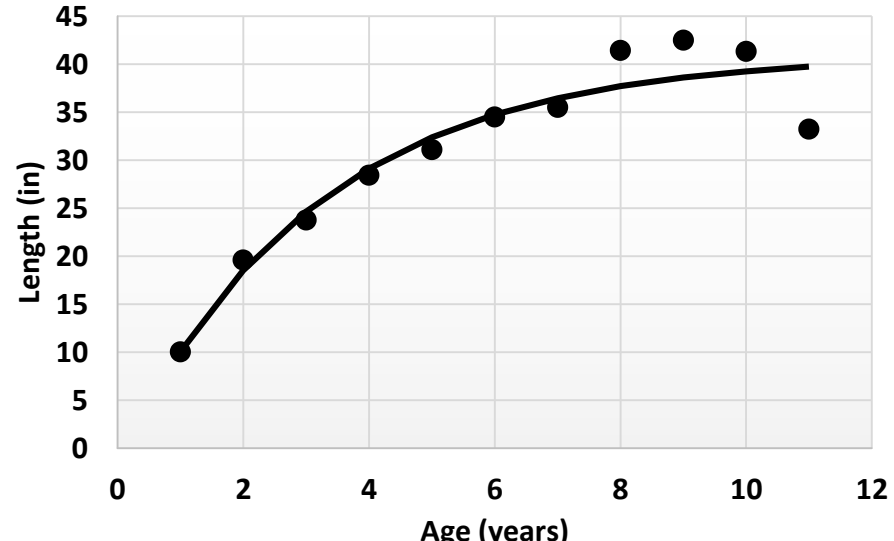
Northern Pike Length Frequency



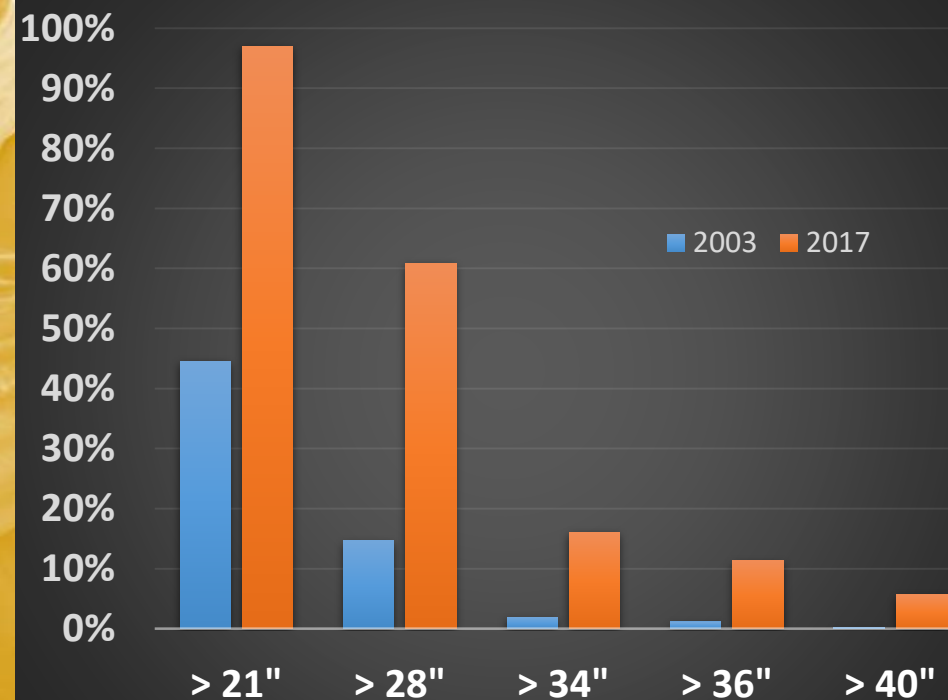
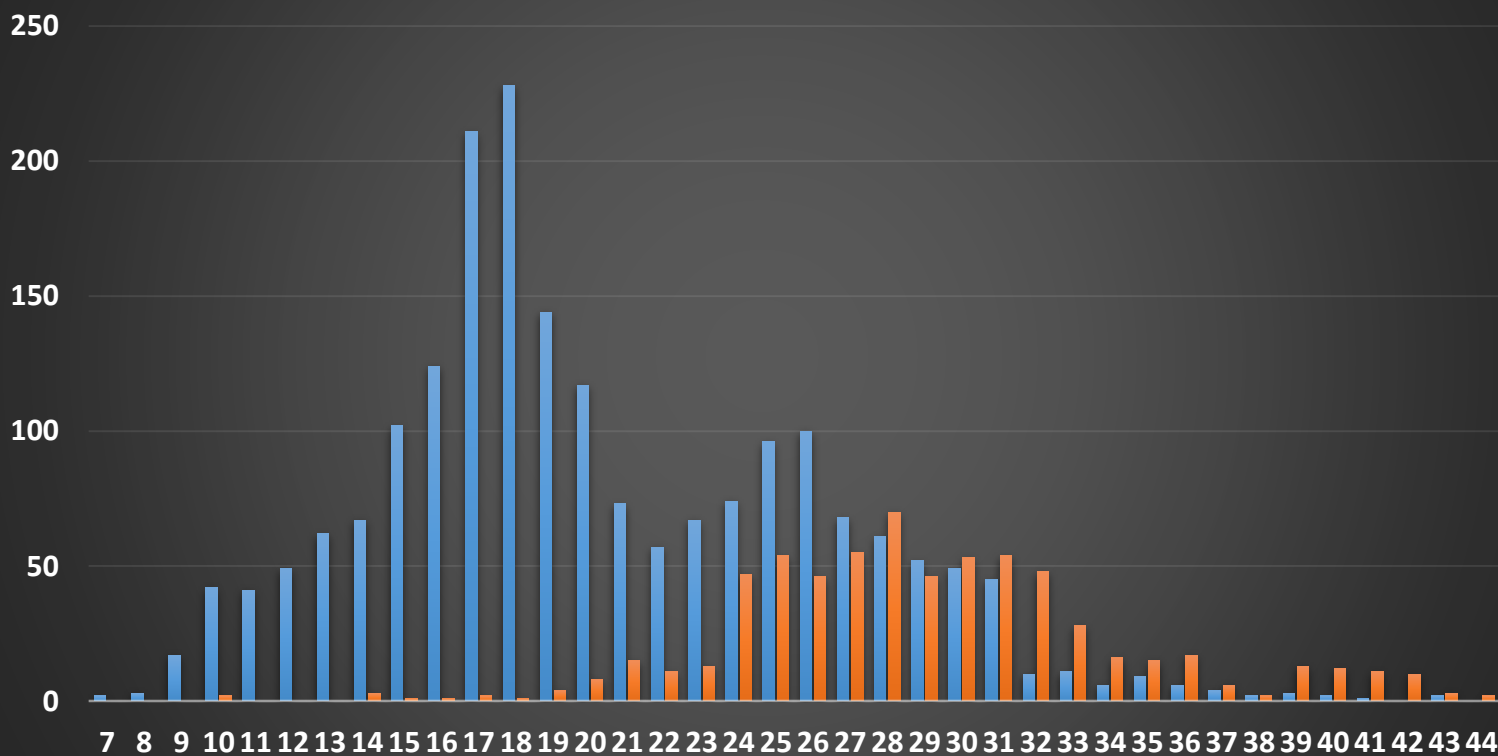
Northern Pike Age Composition



2017 Northern Pike Von B Growth Curve



2003 vs 2017 Northern Pike Length Frequency



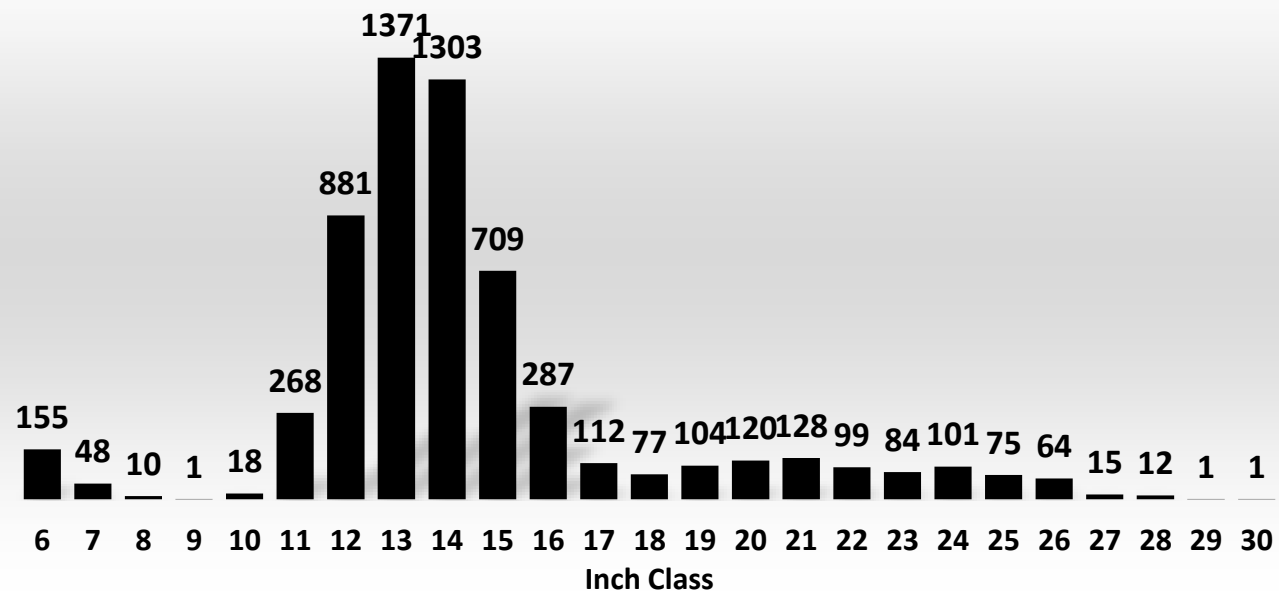
Population estimate- 2,413

0.4 per acre

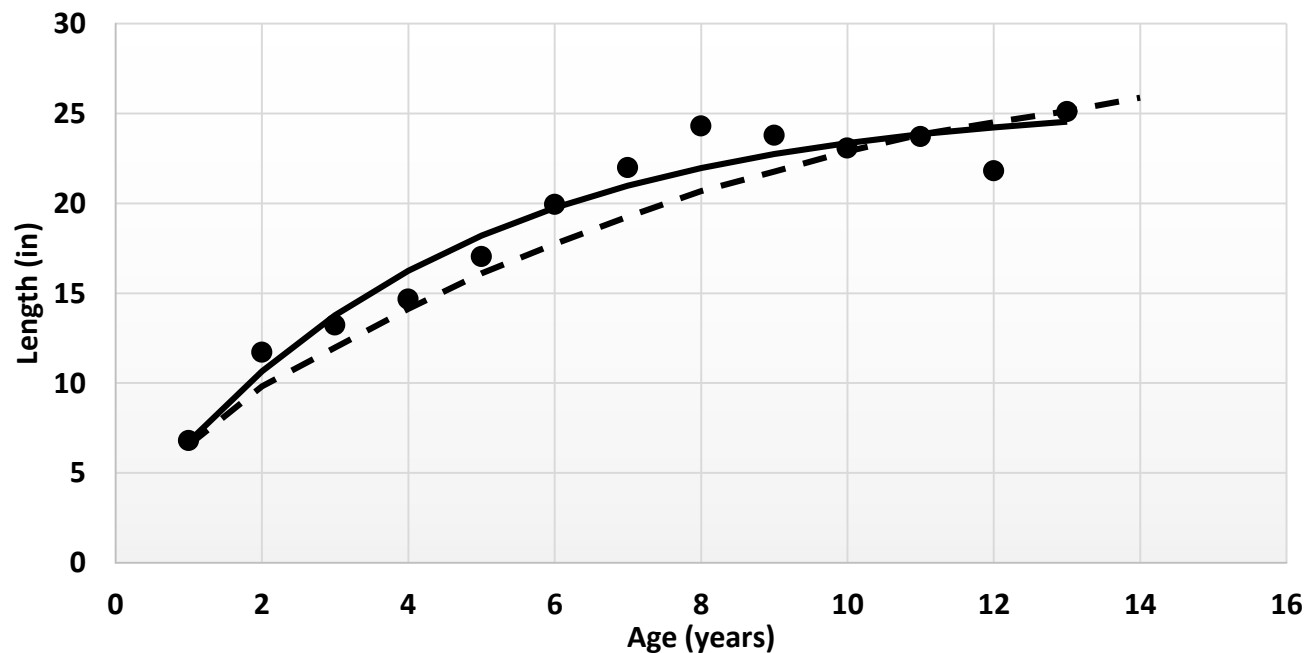
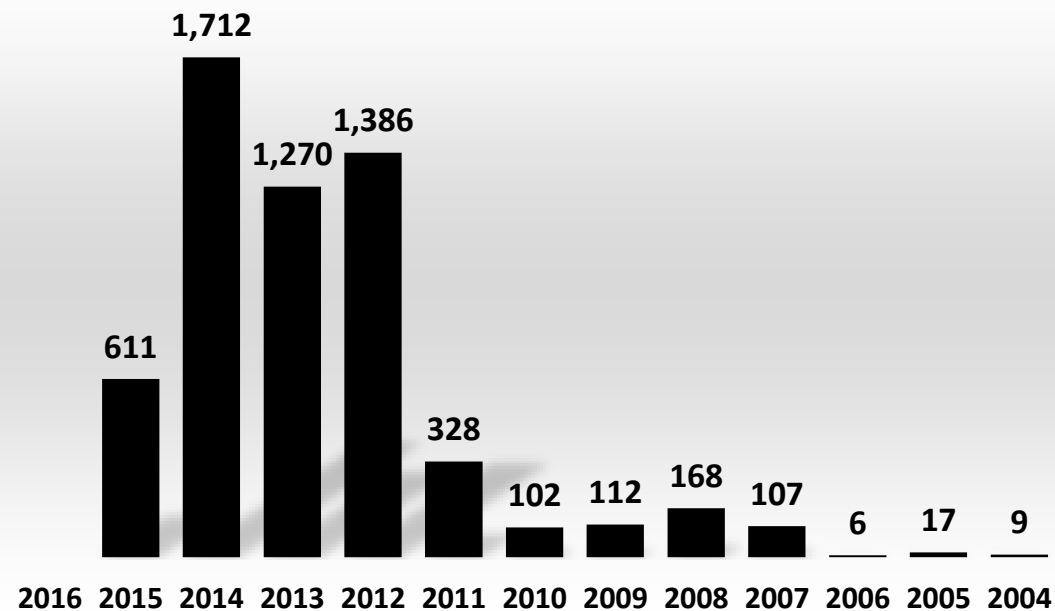




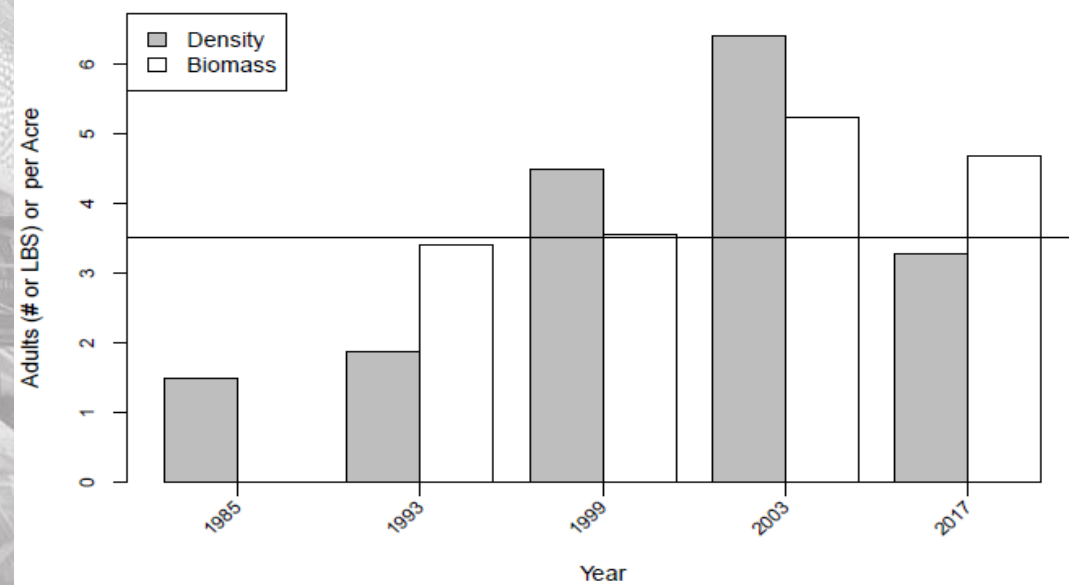
Walleye Length Frequency



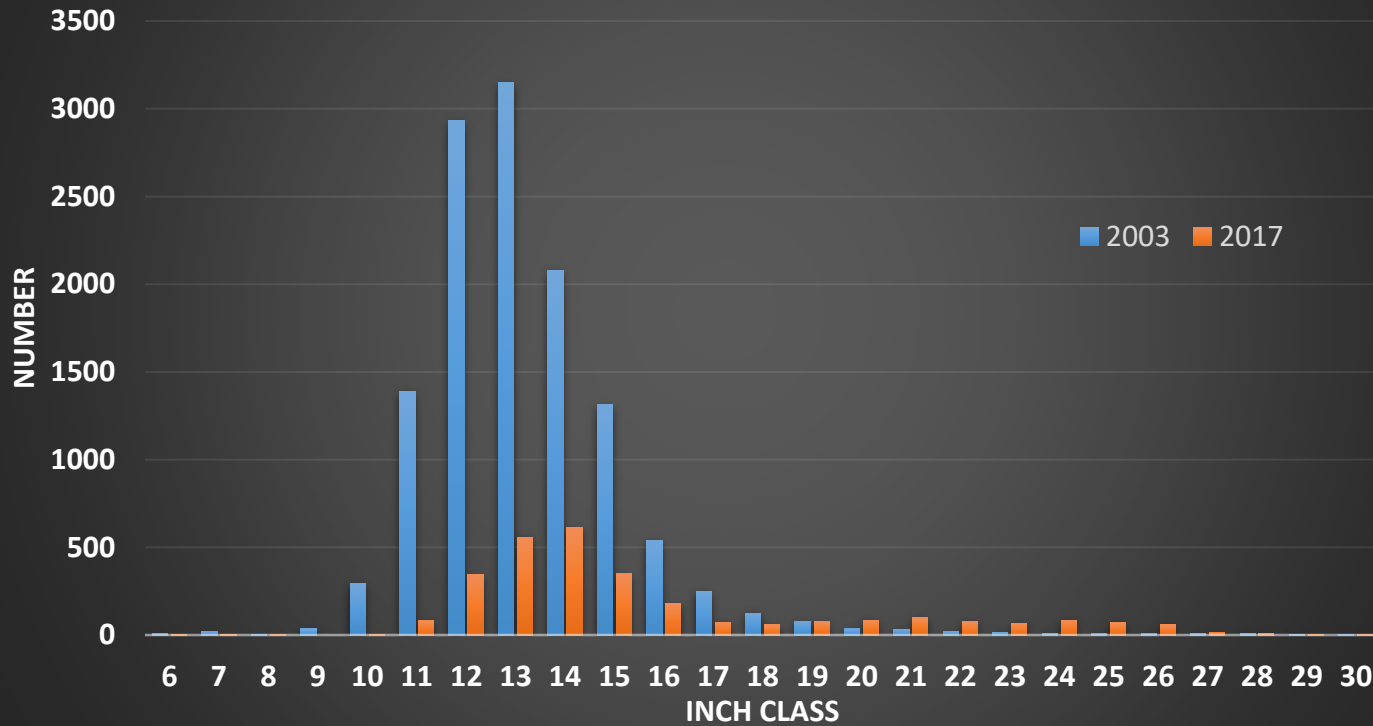
Walleye Age Composition



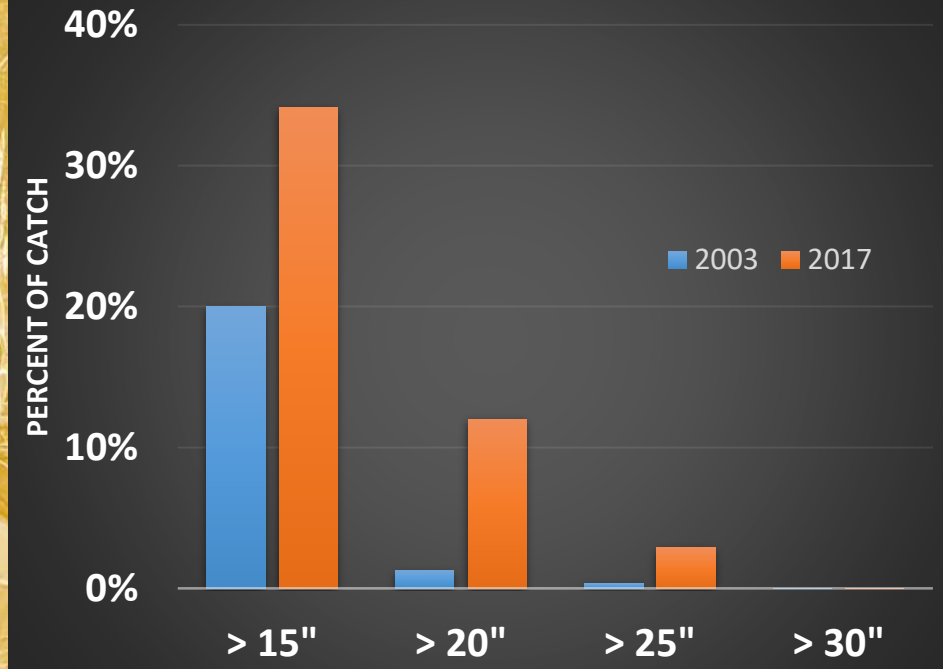
BIG EAU PLEINE RESERVOIR, MARATHON



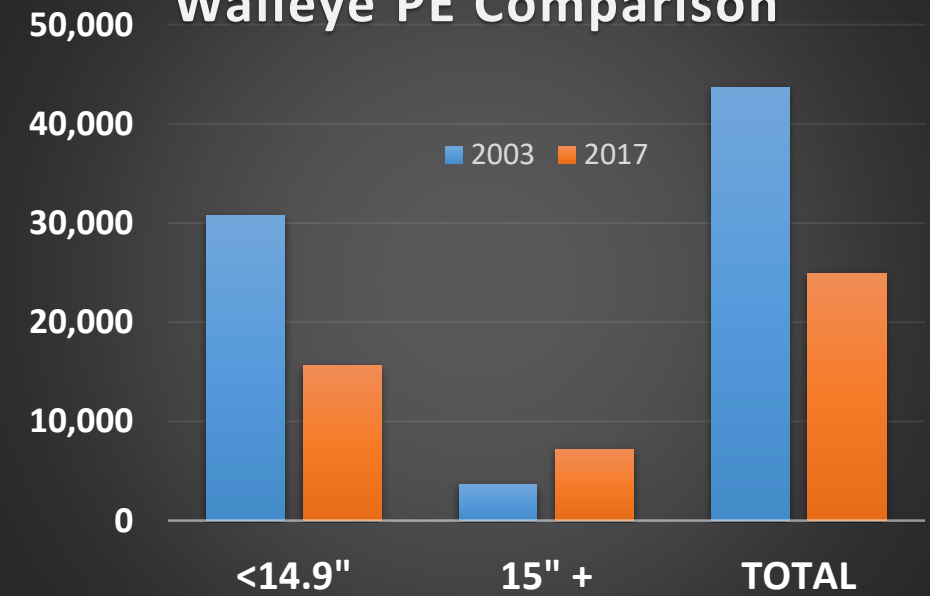
2003 vs 2017 Walleye Length Frequency



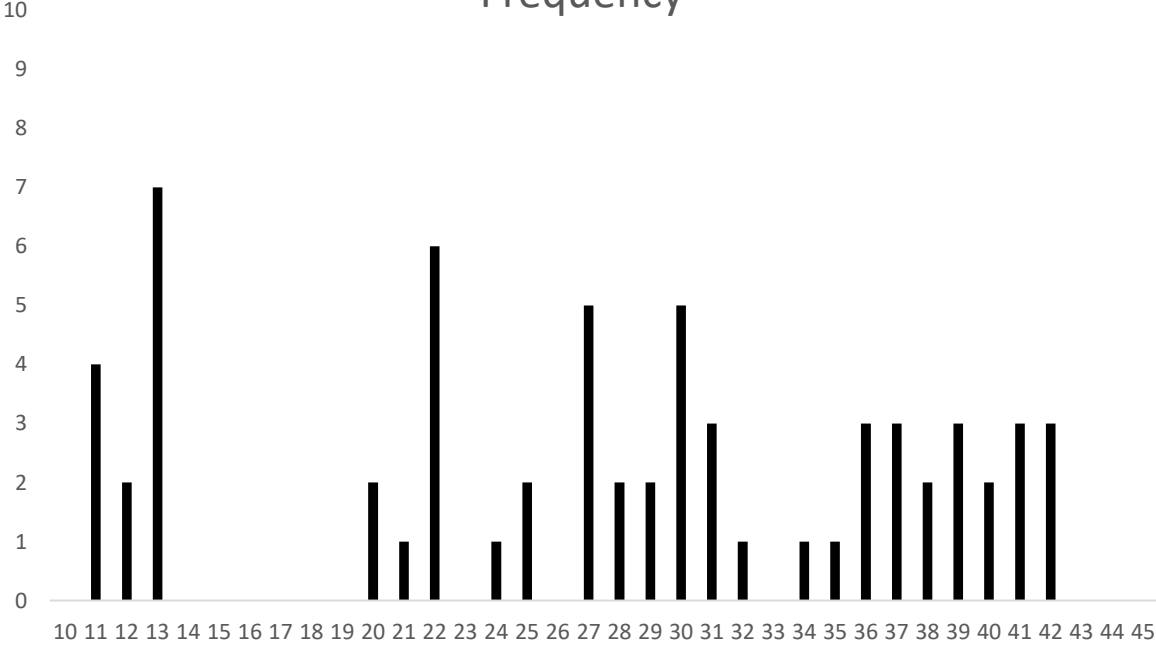
Population Estimate- 24,922
3.6/acre



Walleye PE Comparison



2017 Big Eau Pleine Muskellunge Length
Frequency



Future Management?

- Fish Sticks?
- Walleye Wagon parentage analysis



Thank You