

Invasion of Northern Pike in the Threemile Creek Drainage



November 14, 2018

Mat-Su Salmon Science Symposium

Presenter: Jillian Jablonski

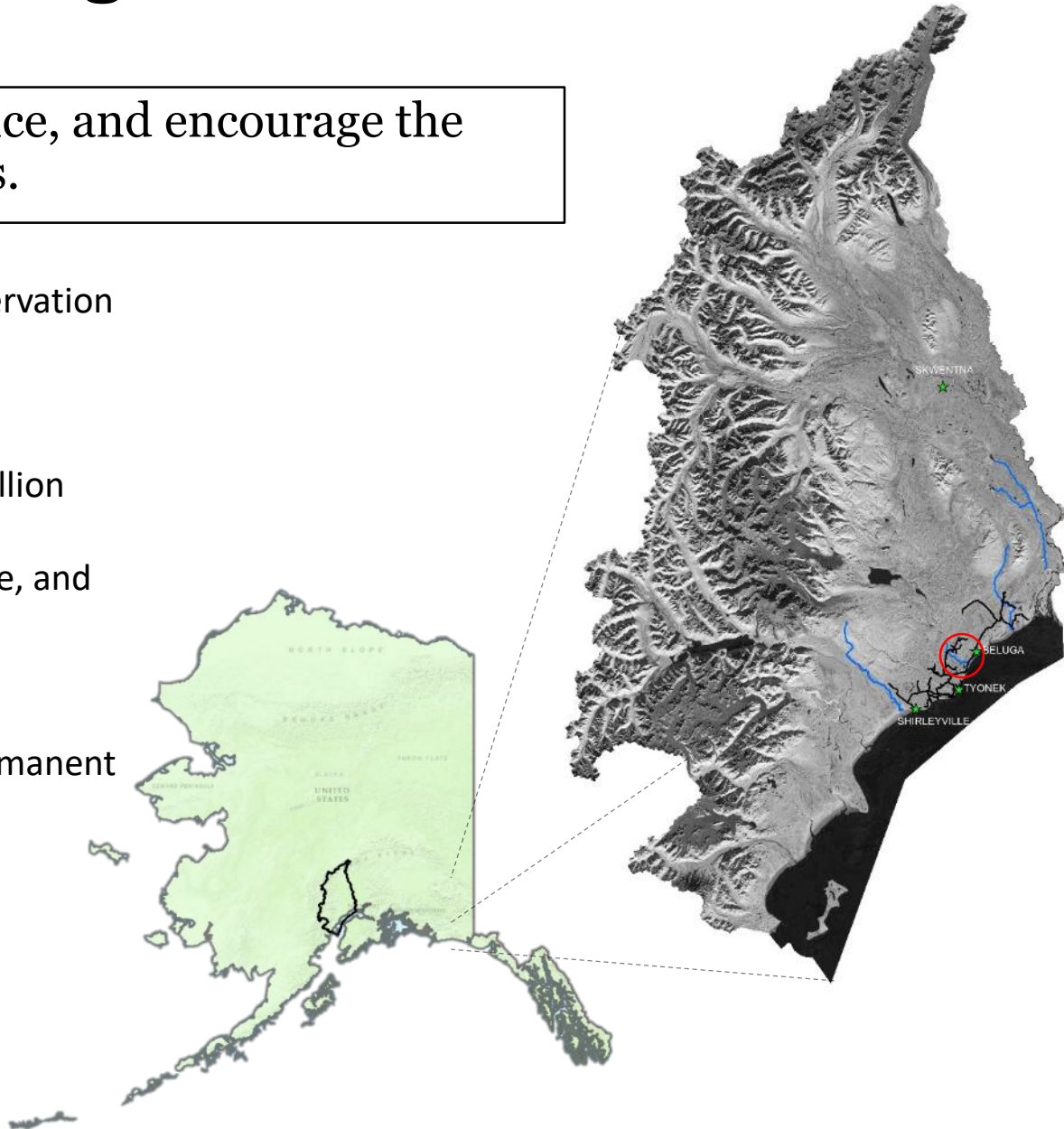
Program Director: Nicole Swenson



TTCD Background

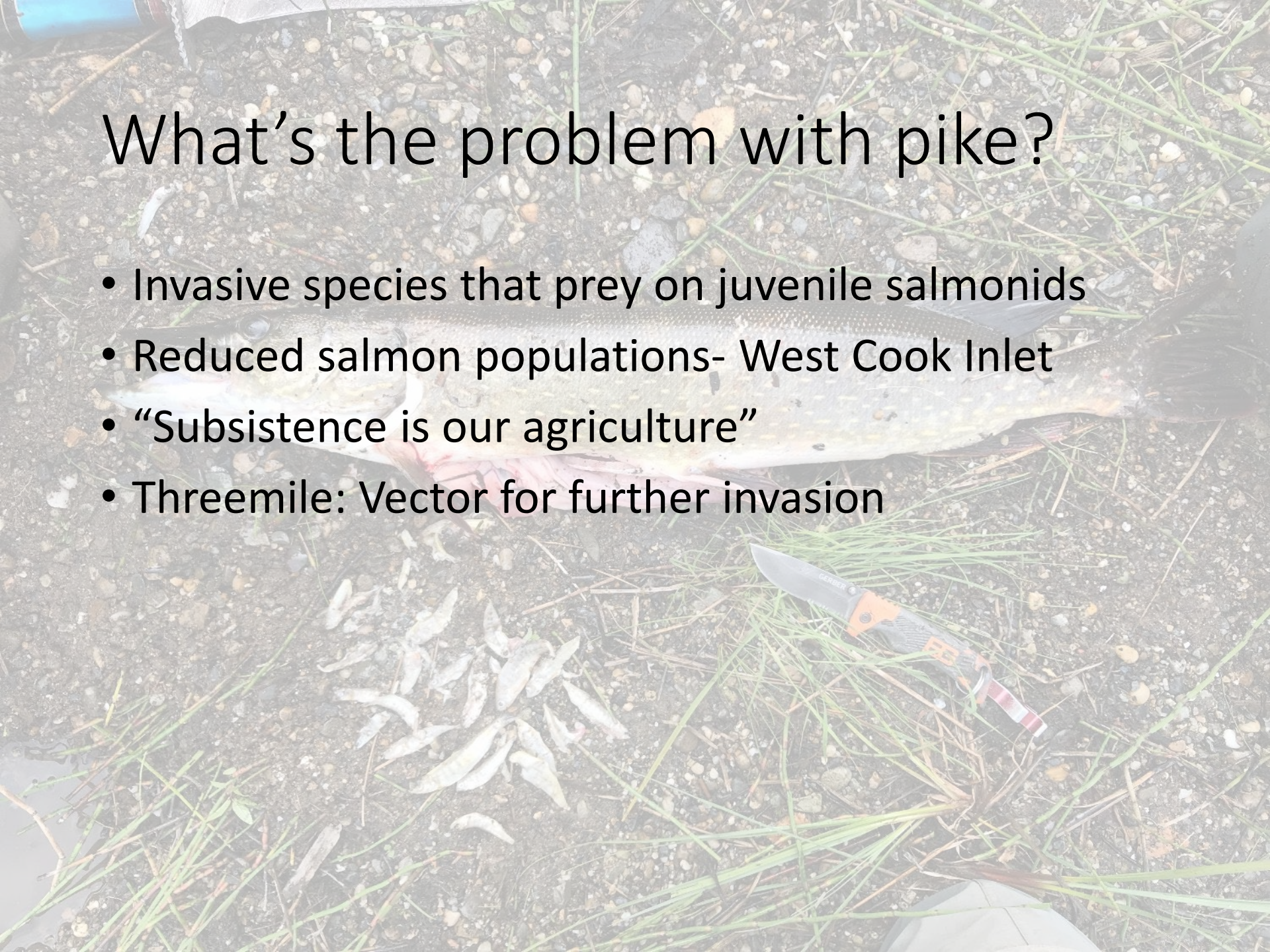
Mission: To conserve, enhance, and encourage the wise use of natural resources.

- Founded in 2005- First Tribal Conservation District in Alaska.
- Shares its boundaries with Game Management Unit 16B.
- The District covers a total of 6.6 million acres of land.
- Includes Tyonek, Beluga, Shirleyville, and Skwentna.
- Tyonek-Beluga corridor hosts three airstrips, ~80 miles of unpaved roads, and supports a permanent population of ~200 people.

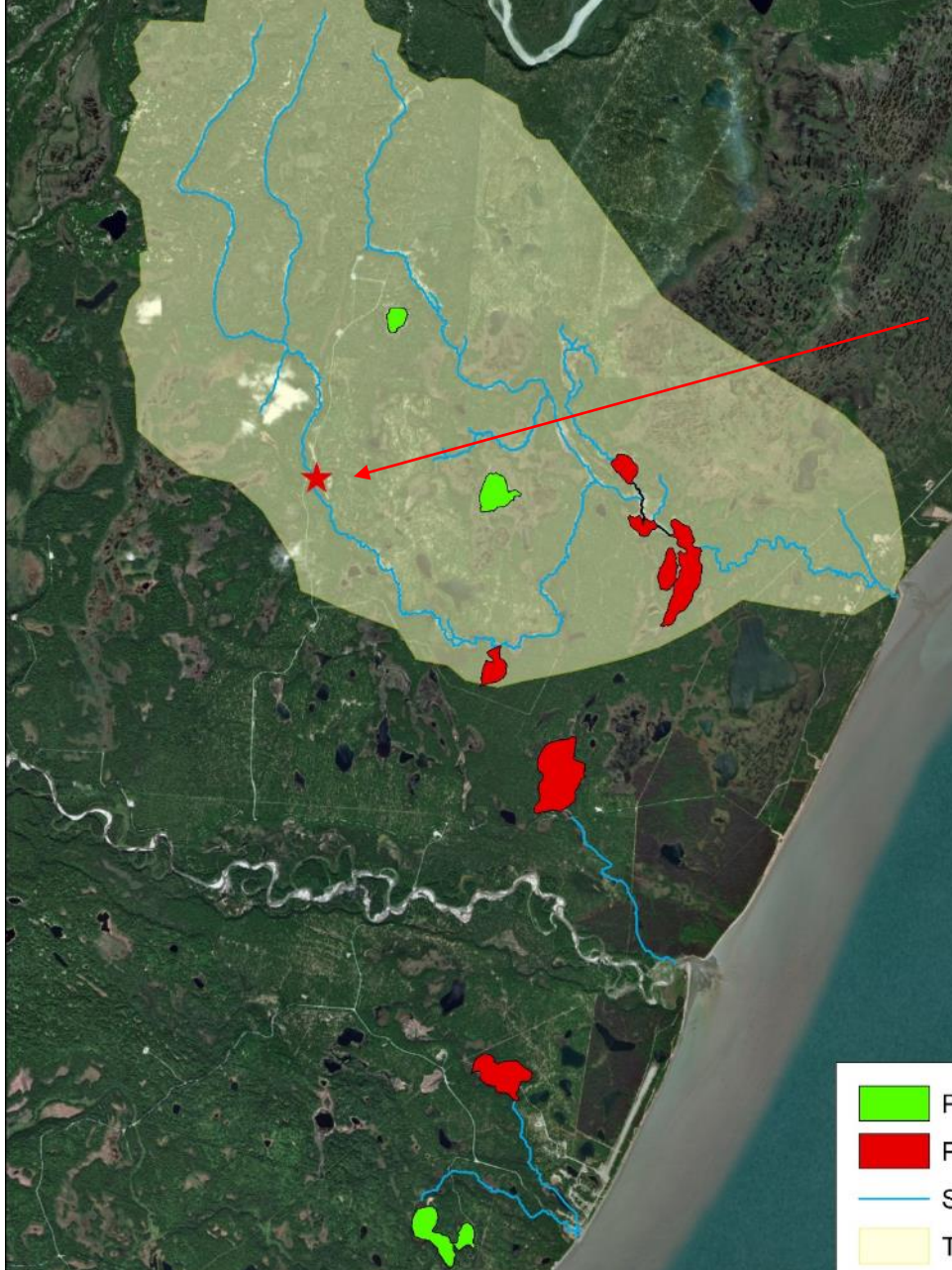


What's the problem with pike?

- Invasive species that prey on juvenile salmonids
- Reduced salmon populations- West Cook Inlet
- “Subsistence is our agriculture”
- Threemile: Vector for further invasion



Pike and the Threemile Creek Drainage





History of pike in Threemile

- Early 1990's: Approximate time of invasion
- 1997: Pike sport fishing regulations established for Threemile
- Since 2015, TTCD has been monitoring pike within its borders

Threemile Creek Peak Aerial Surveys, 1984-1997

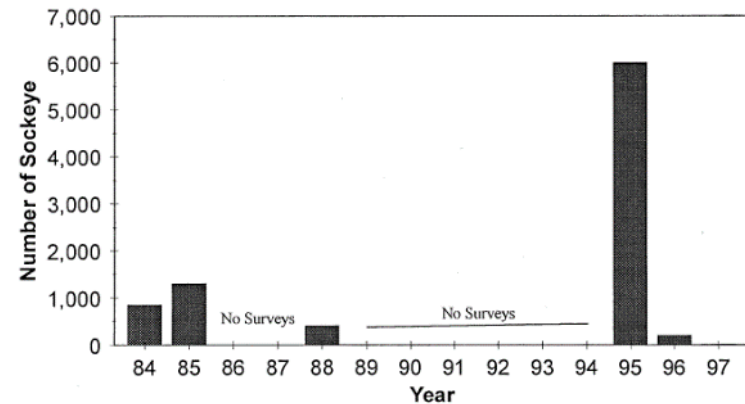


Figure 21. Three Mile Creek peak aerial surveys, 1984-1997.

Image from Fox 1998

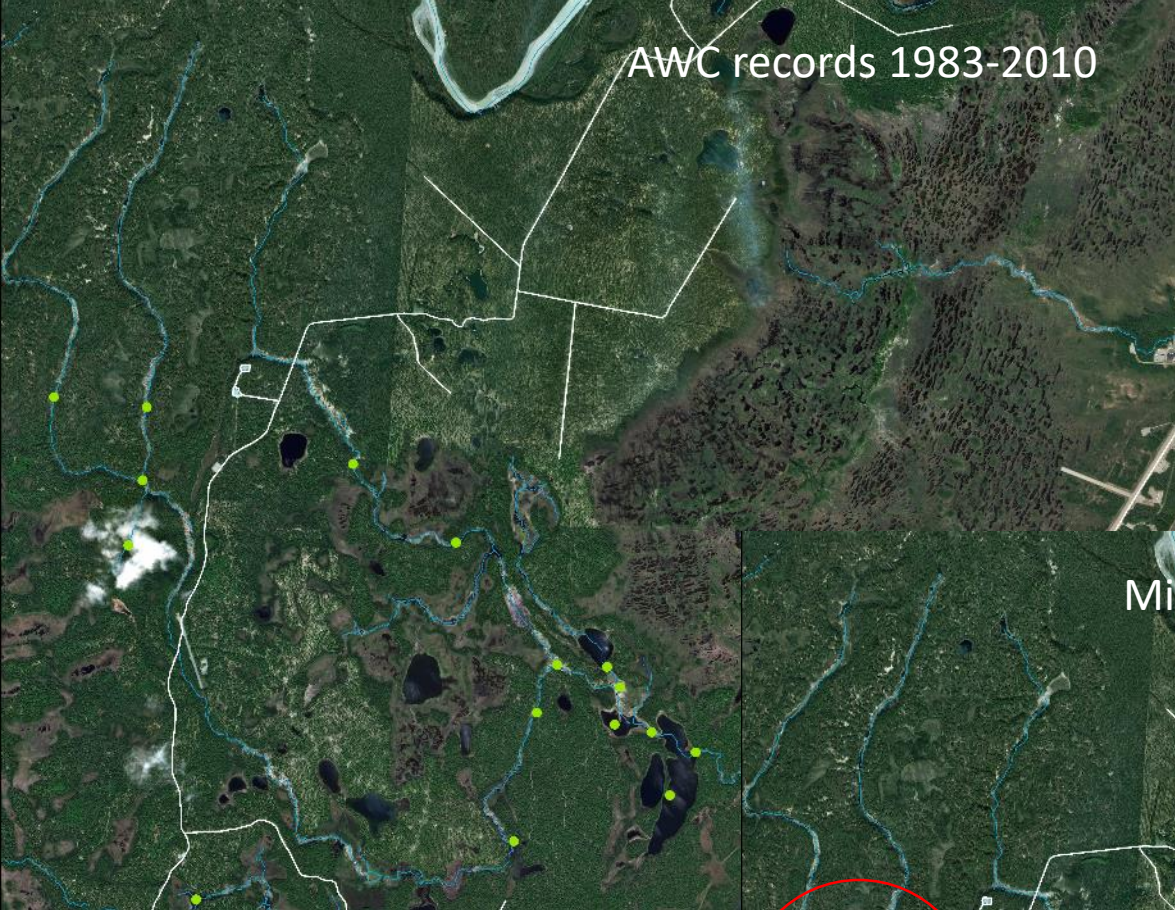


2015-2017

- Pike derbies (2015-2017)
 - 231 pike removed, mostly from Threemile Lake
- eDNA (2015)
- Threemile netting (2017)
 - 103 pike removed
 - No bycatch



AWC records 1983-2010



Minnow trapping & electrofishing 2017





2018: Population Estimate and Suppression

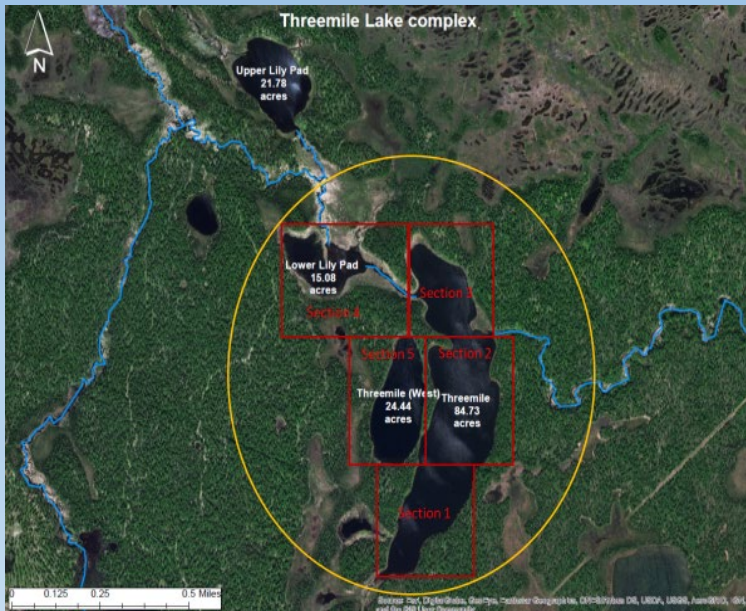
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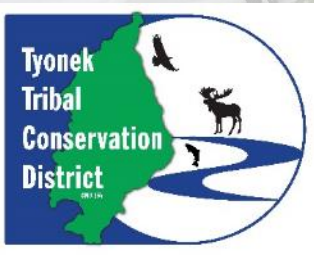




Methods

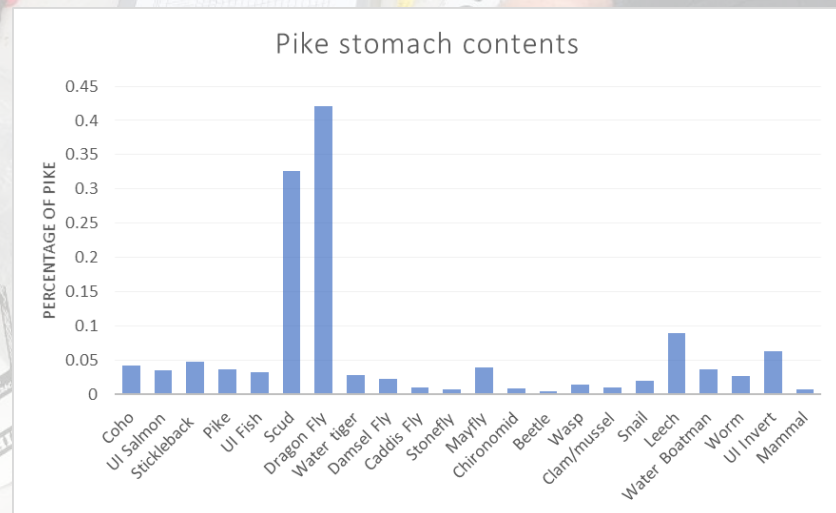
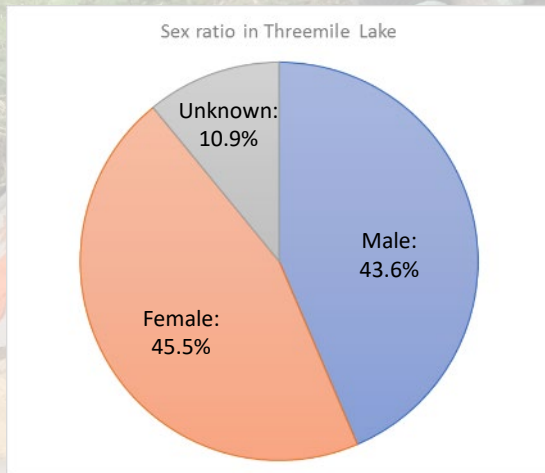
- Mark: June 1-10
- Mix: June 11-20
- Recap: June 21-30

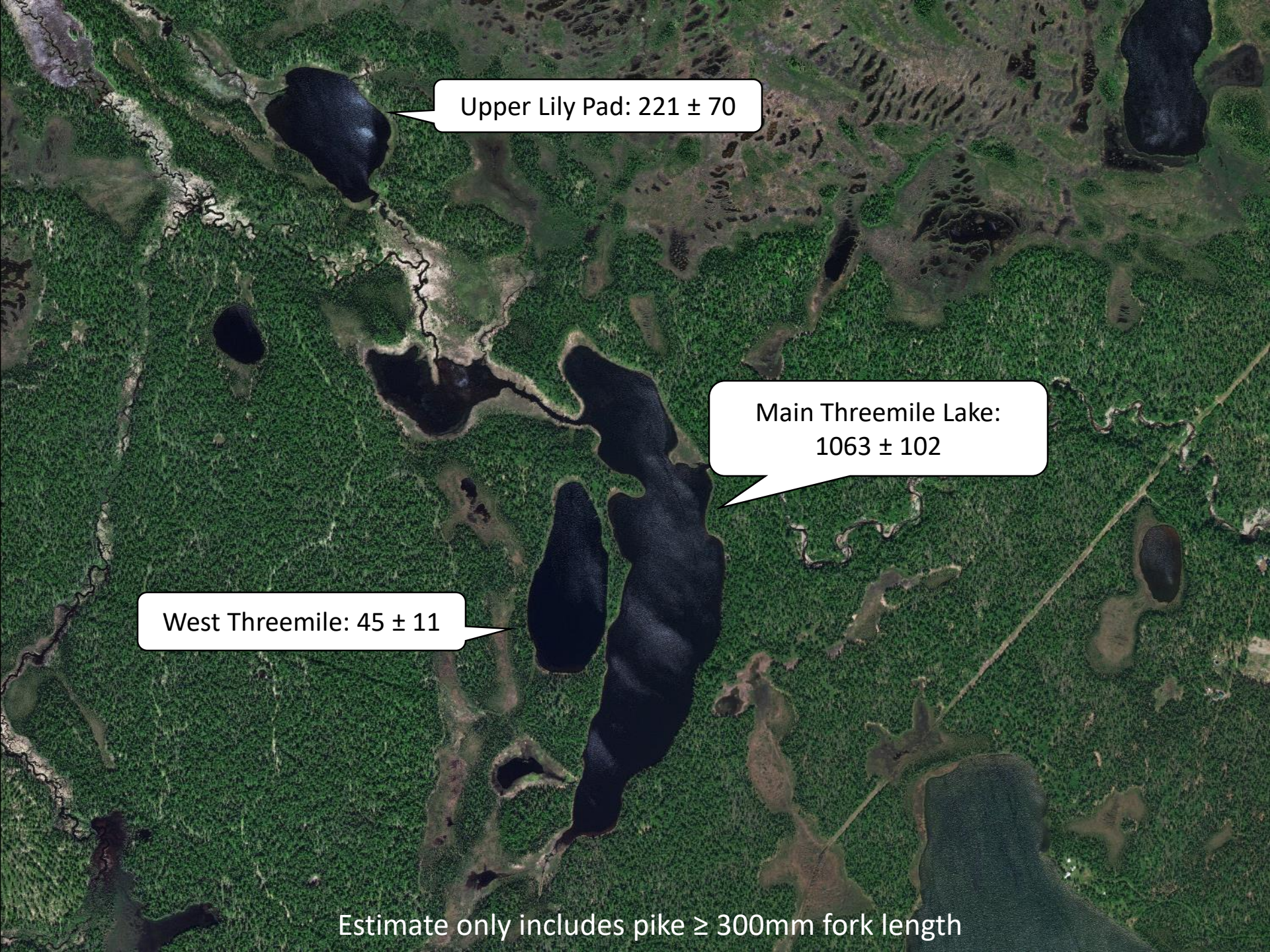




Results

- 1,246 pike dissected
- >1,300 total pike removed from the system
- Mean FL: 360.73mm (SE= 3.00) Range: 184-985mm



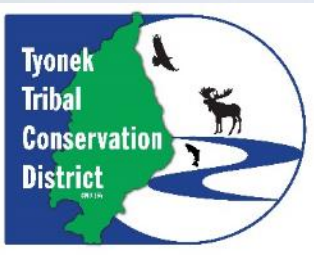


Upper Lily Pad: 221 ± 70

Main Threemile Lake:
 1063 ± 102

West Threemile: 45 ± 11

Estimate only includes pike $\geq 300\text{mm}$ fork length

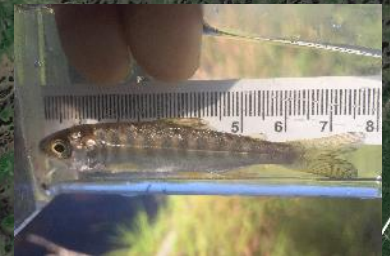


What will the future bring...?



Continued monitoring of juvenile salmonid populations

Lots and lots of stickleback



Coho, chinook

Primarily coho

Coho



TMC Spawning Ground Mapping 2018



- *Fish, no apparent redd*
- *Redd*



Thank You!



Questions?



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