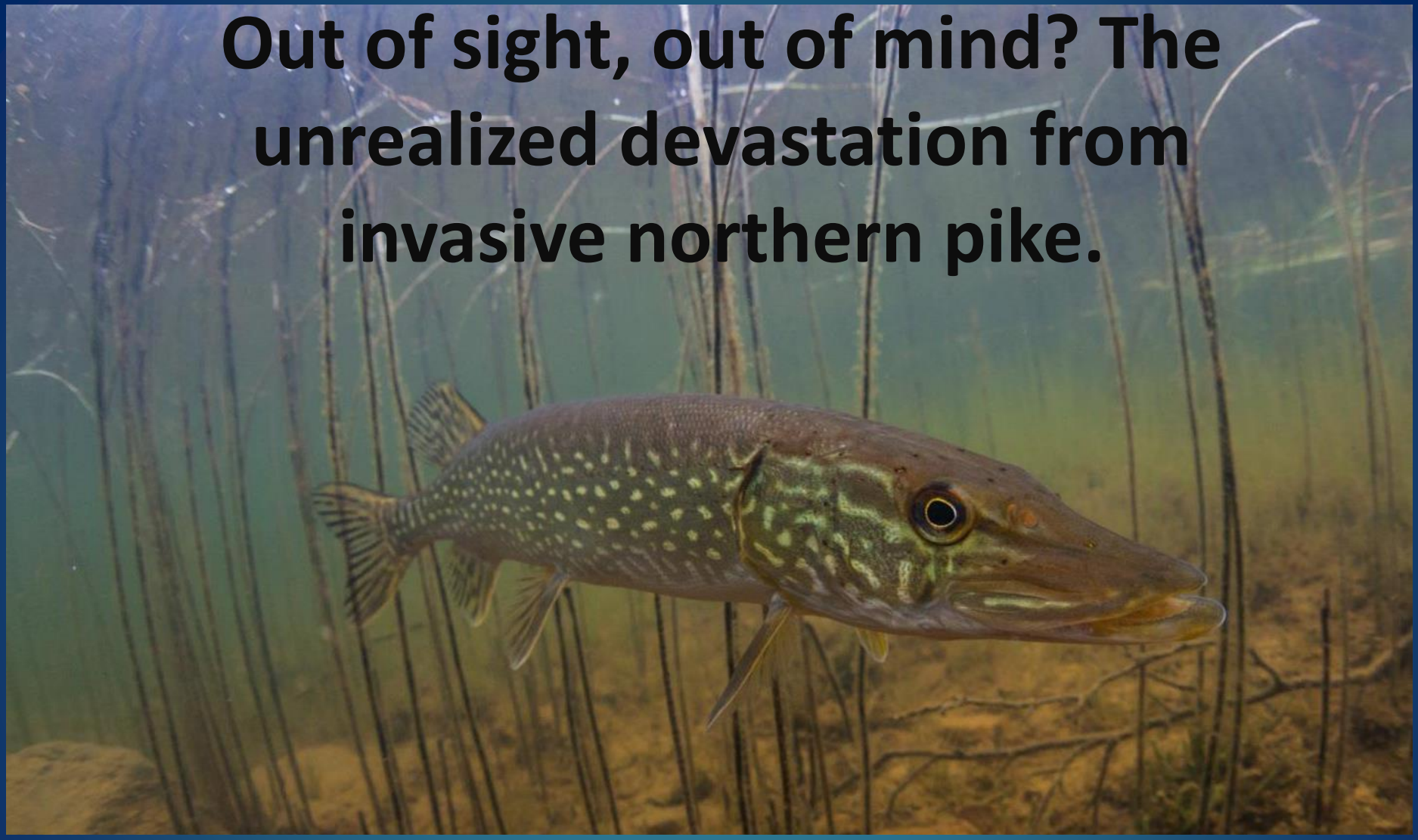
Out of sight, out of mind? The unrealized devastation from invasive northern pike.



Parker Bradley

Alaska Department of Fish and Game

Sport Fish Division

What's wrong with this picture?

What’s wrong with this picture?

What's wrong with this picture?

What's wrong with this picture?

What's wrong with this picture?

What’s wrong with these pictures?

Ecological Effects

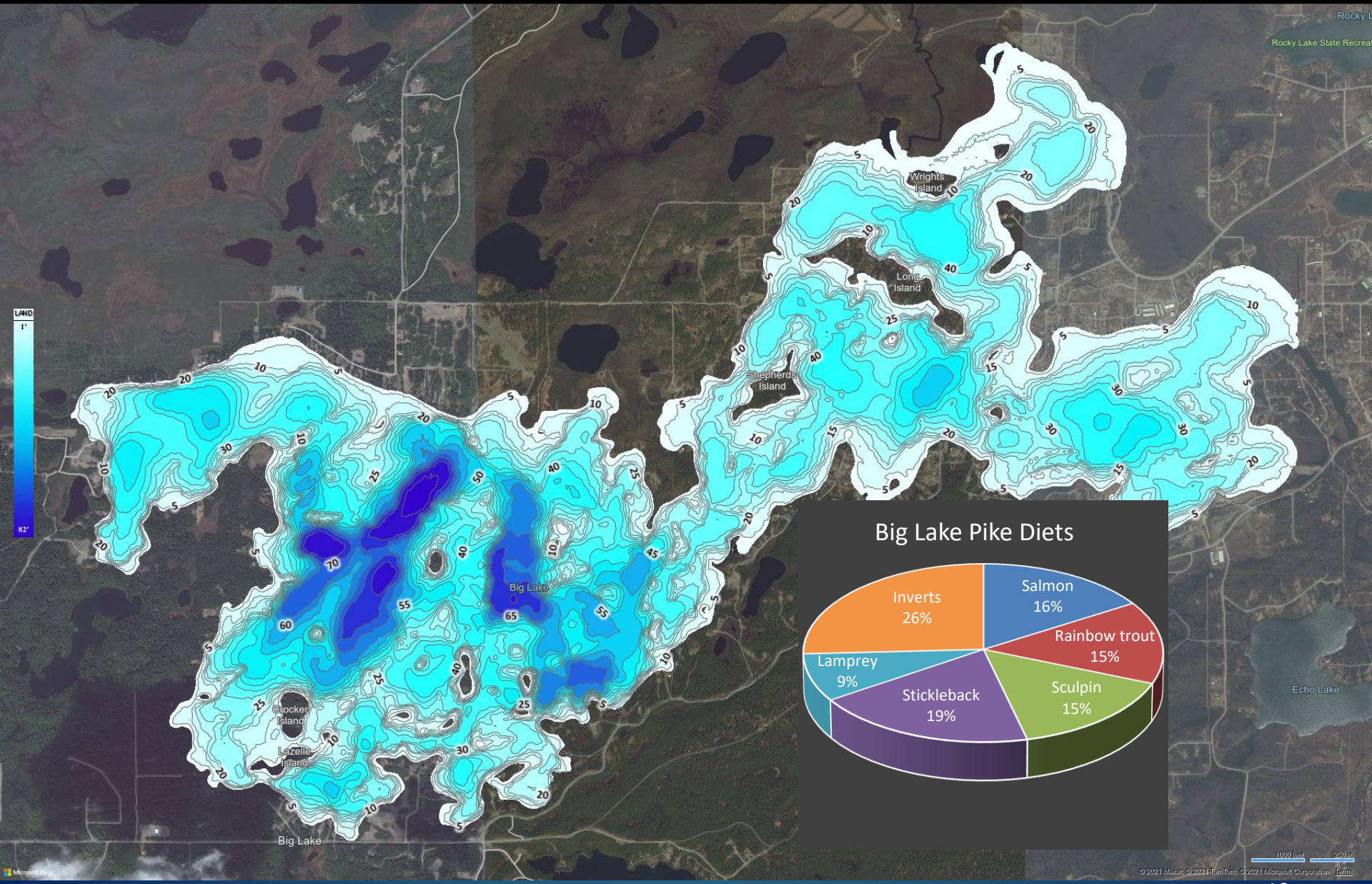
- Heavy predation on juvenile salmon and trout
  - Extirpated in some areas
- Evidence that pike target salmon

Pike→

~~Salmonids~~→ Sticklebacks/~~Sculpins~~, etc.→ Invertebrates →

Pike Population Stunts

Category 1


Big Lake Pike Diets
Inverts 26%
Salmon 16%
Rainbow trout 15%
Lamprey 9%
Stickleback 19%
Sculpin 15%
Wrights Island
Long Island
Shepherds Island
Big Lake
Crocker Island
Lezelle Island
Big Lake
Rocky Lake State Recreat
Echo Lake
LAND
1'
82'

Knik ANVSA

Sheep Creek

S Parks Hwy

W Parks Hwy

3

Little Willow Creek

Little Willow Creek

Little Willow Creek

Iron Creek

IronCreek

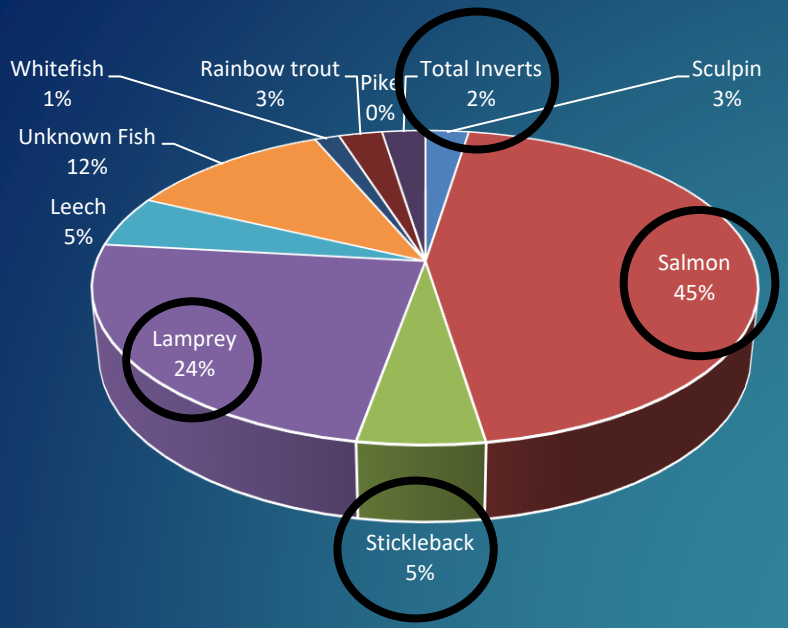
Peters Creek

Esri, USGS | Matanuska-Susitna Borough GIS, State of

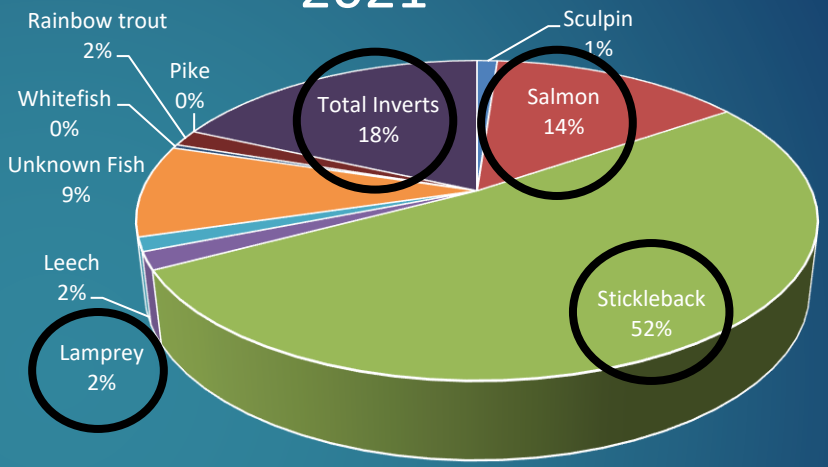
Category 2: Hot Mess Lakes

Nancy Lake Moderately impacted

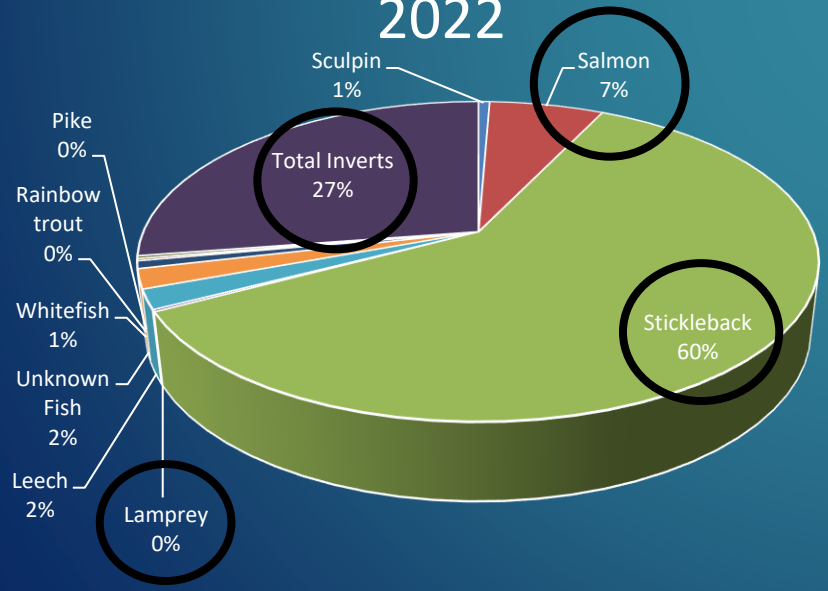
2020



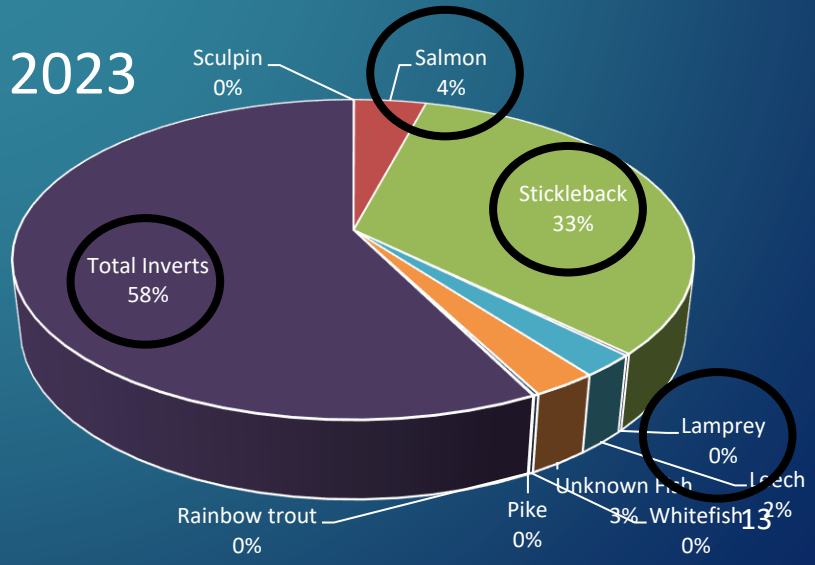
2021



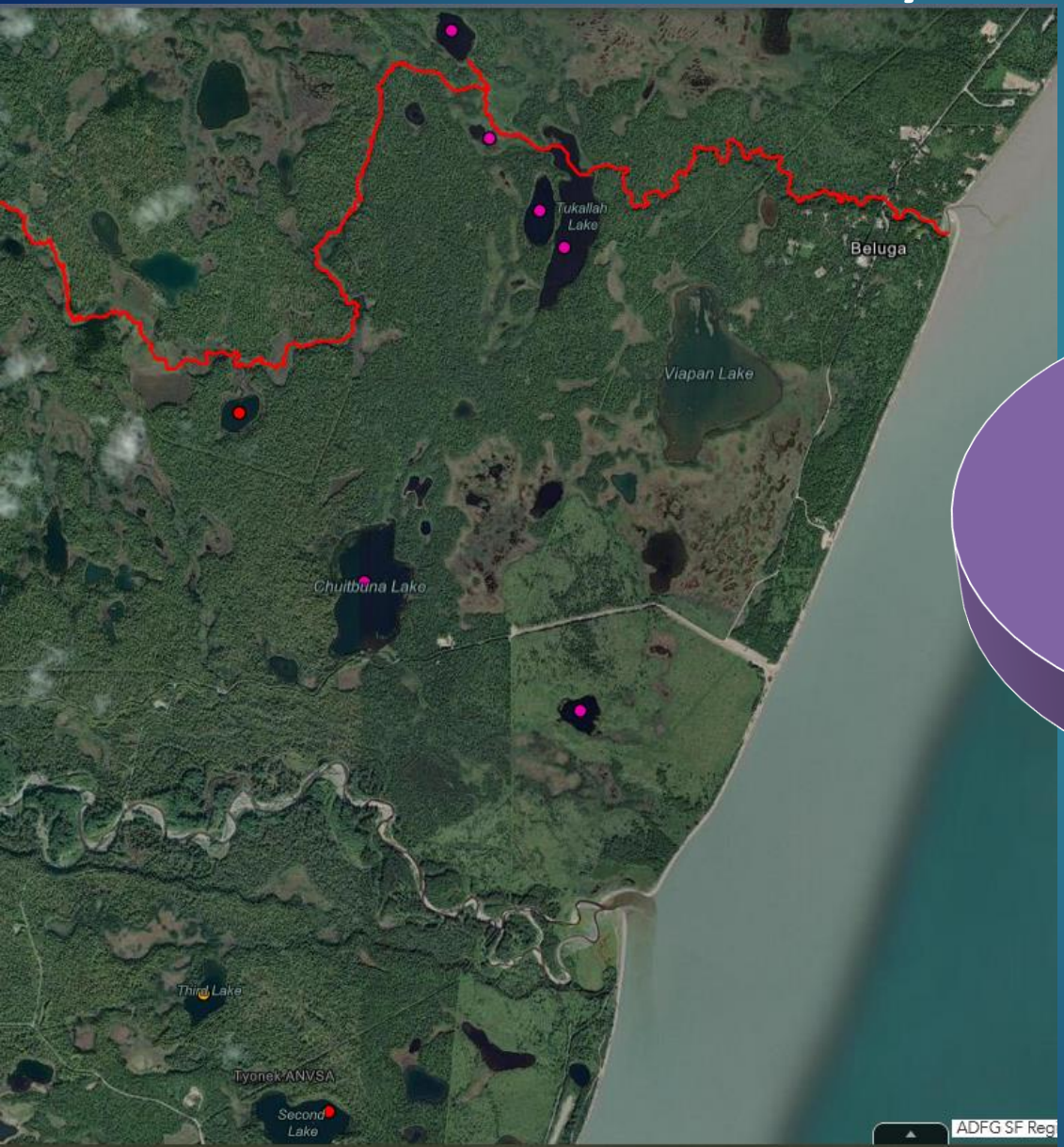
2022

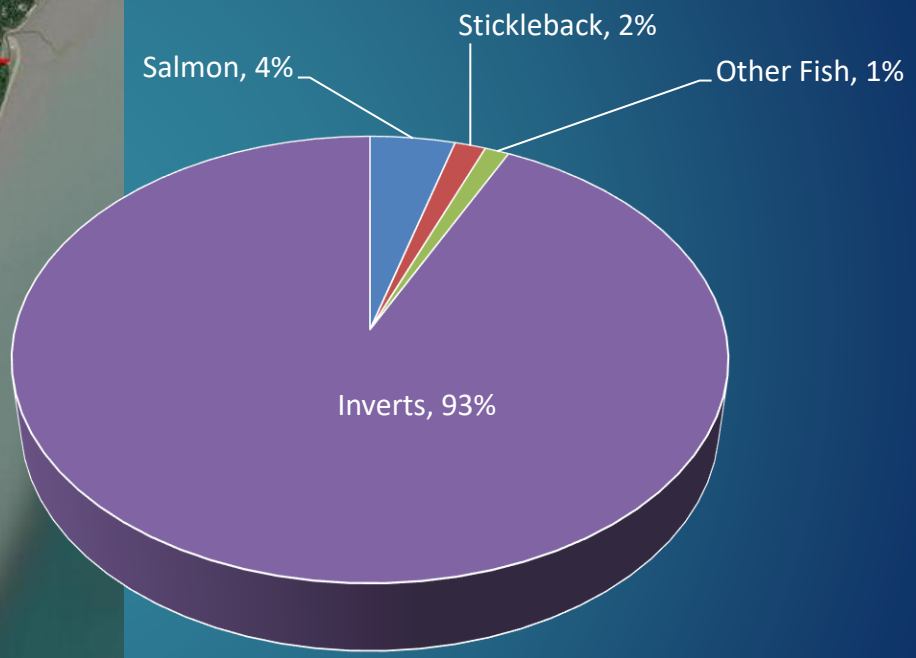


2023



Threemile
Severely Impacted

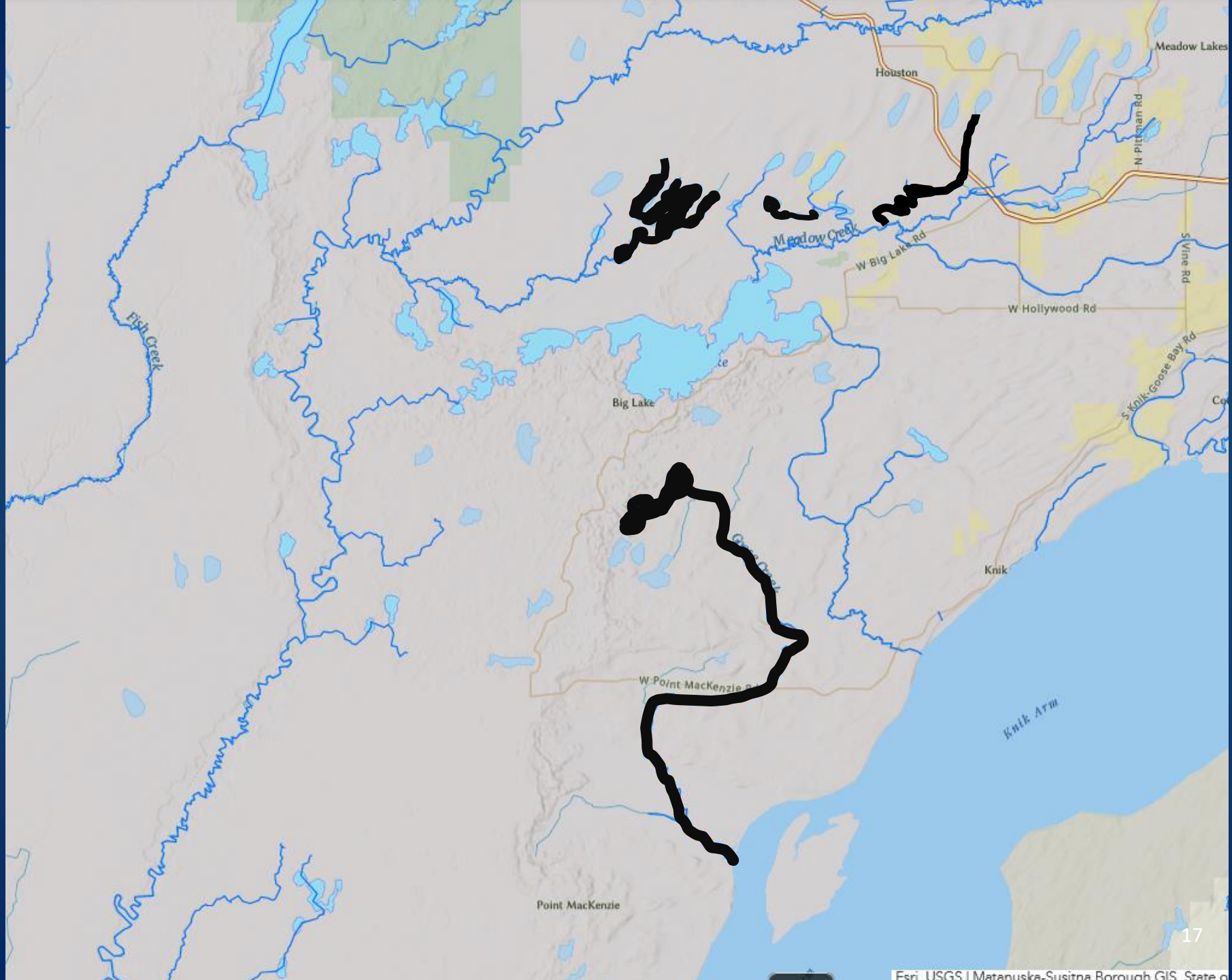


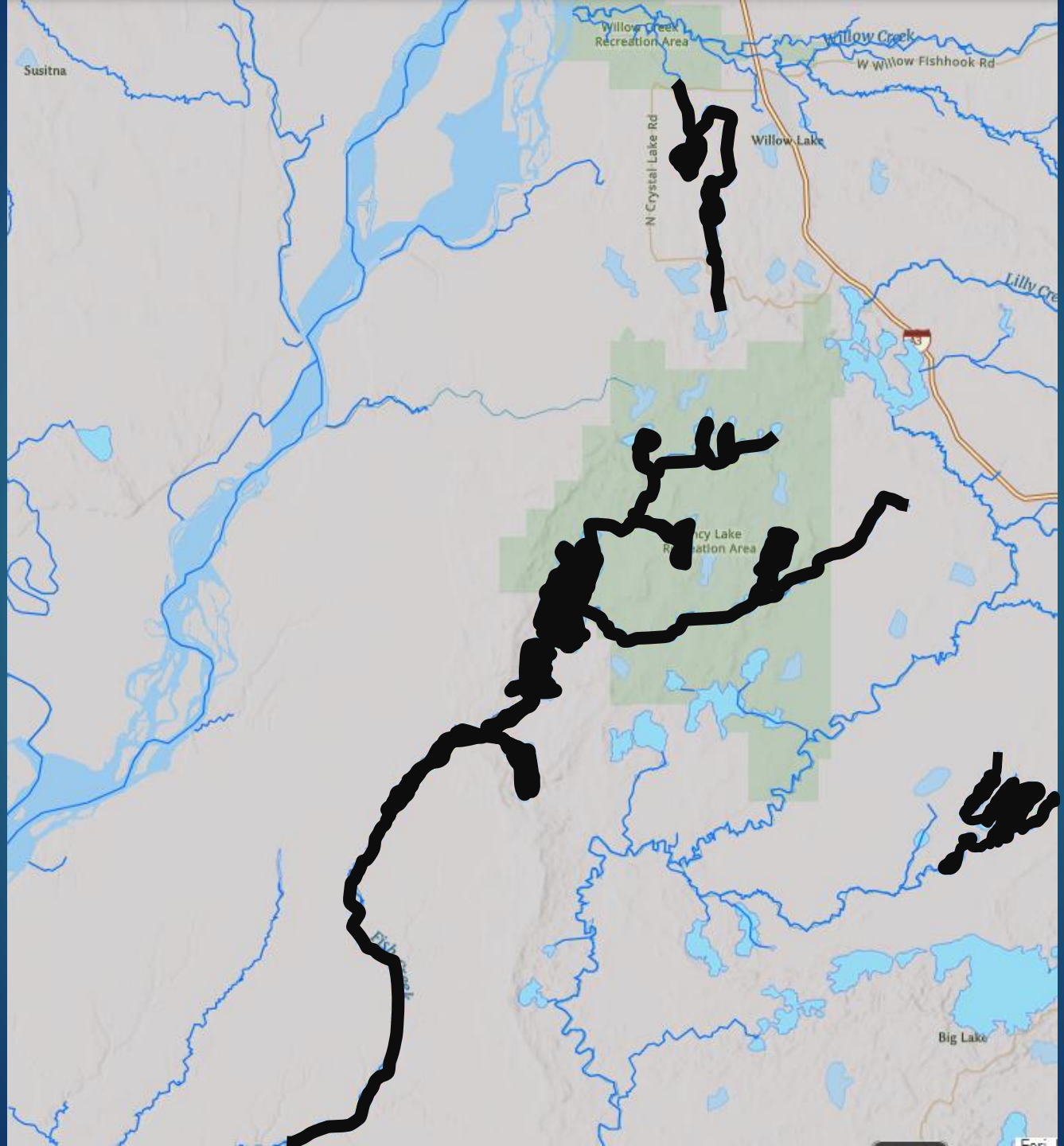


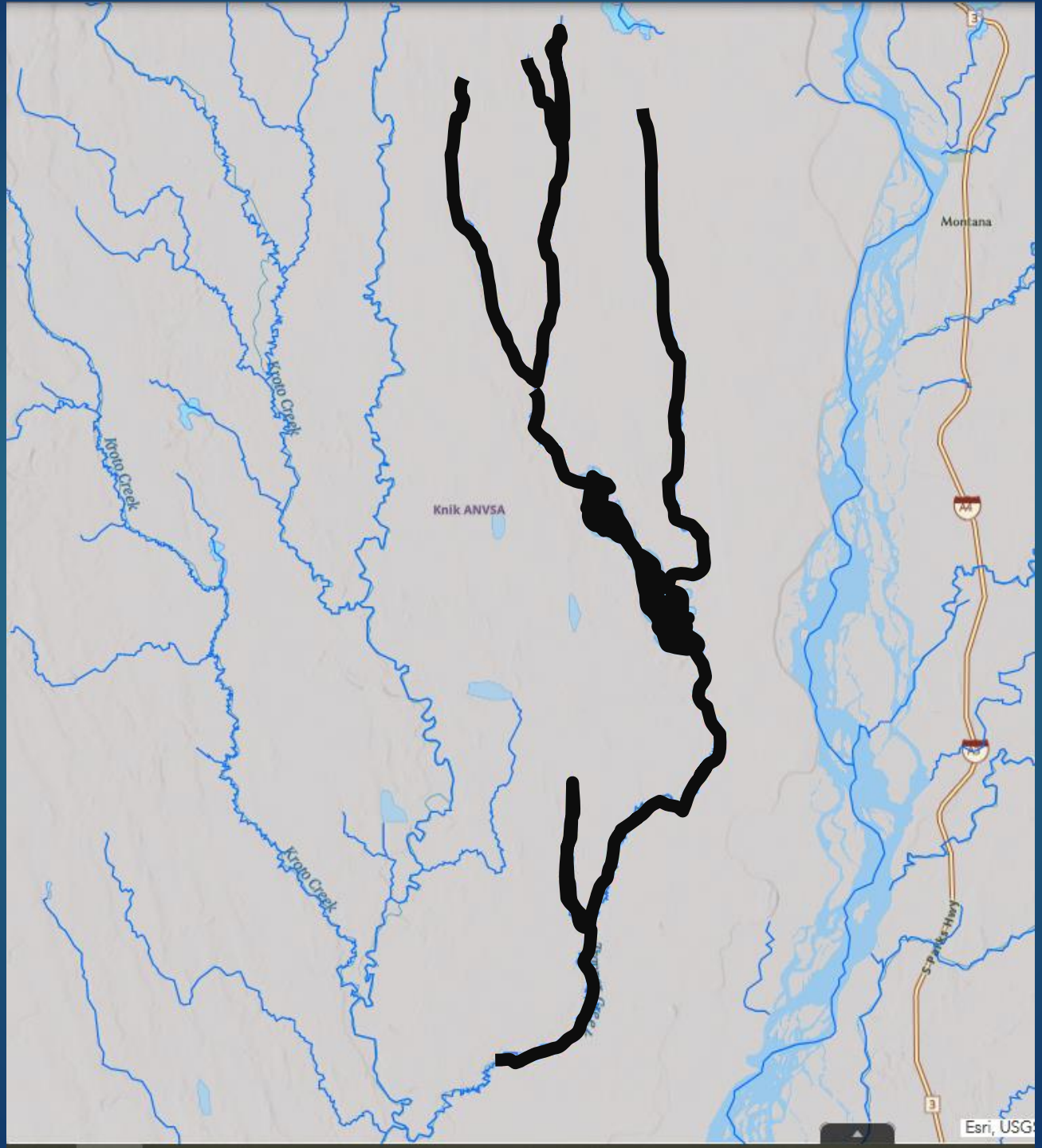
Category 3: Ecological Dumpster Fire Lakes

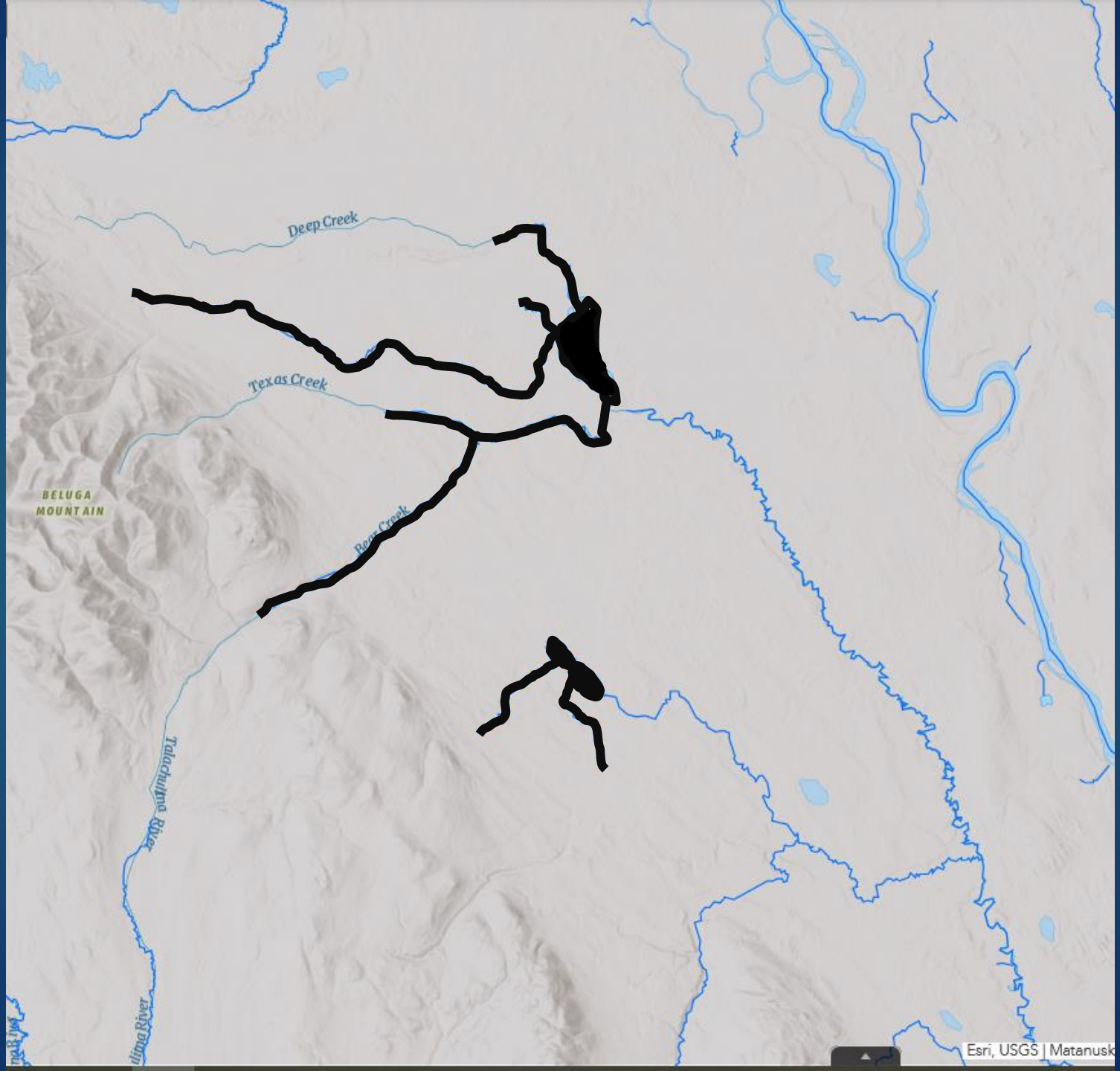
Stephan Lake

Friends of Goose Creek Facebook Group
Stephan Lake Coalition


Houston
Meadow Lakes
N Pittman Rd
Meadow Creek
W Big Lake Rd
S Vine Rd
W Hollywood Rd
Fish Creek
Big Lake
S Knik-Goose Bay Rd
Knik
W Point MacKenzie Rd
Knik Arm
Point MacKenzie
Esri, USGS | Matanuska-Susitna Borough GIS, State o

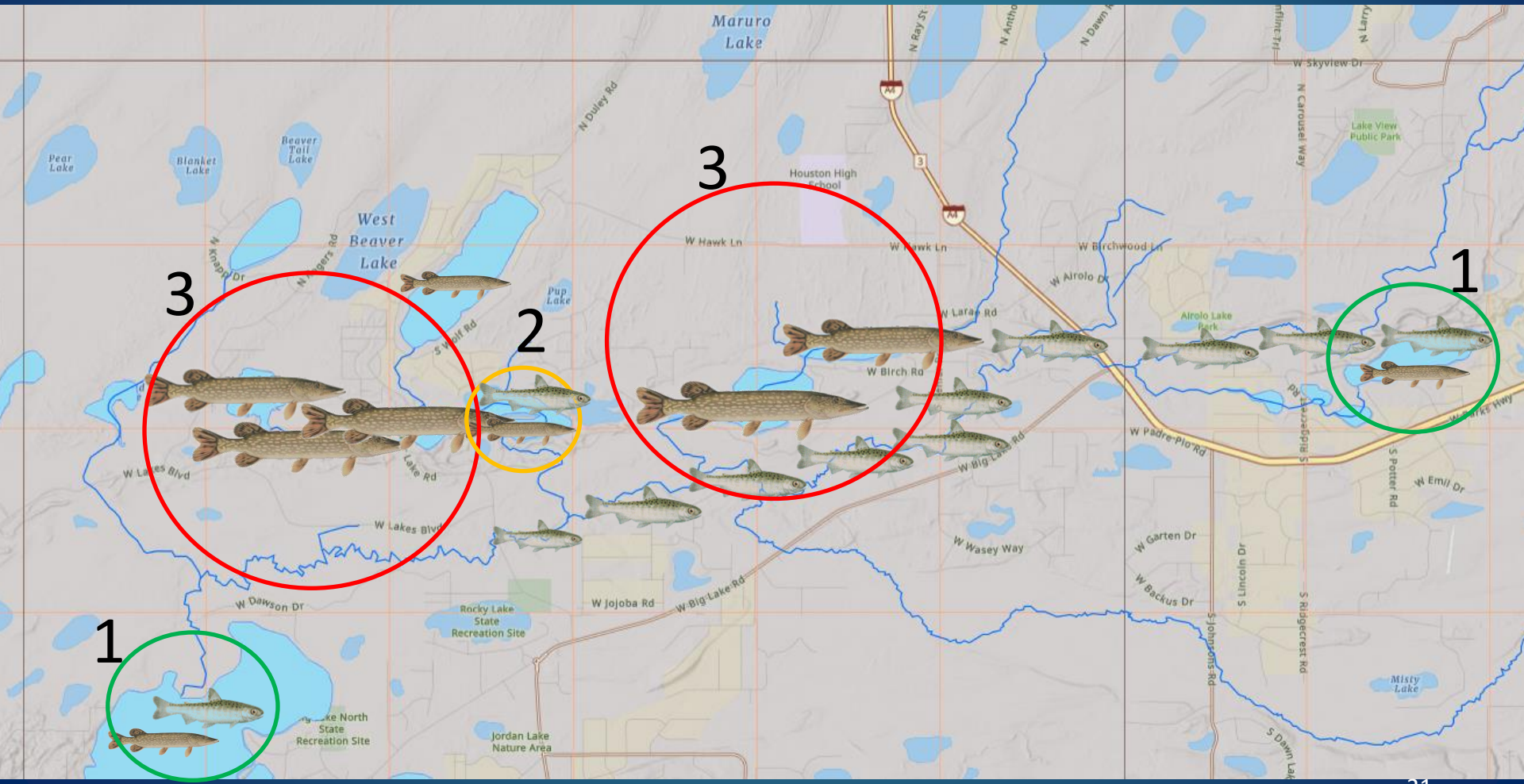

Susitna
Willow Creek Recreation Area
Willow Creek
W Willow Fishhook Rd
N Crystal Lake Rd
Willow Lake
Lilly Cre
Big Lake


Montana
Knik ANVSA
Kroto Creek
Kroto Creek
Kroto Creek
S Parks Hwy
Esri, USGS

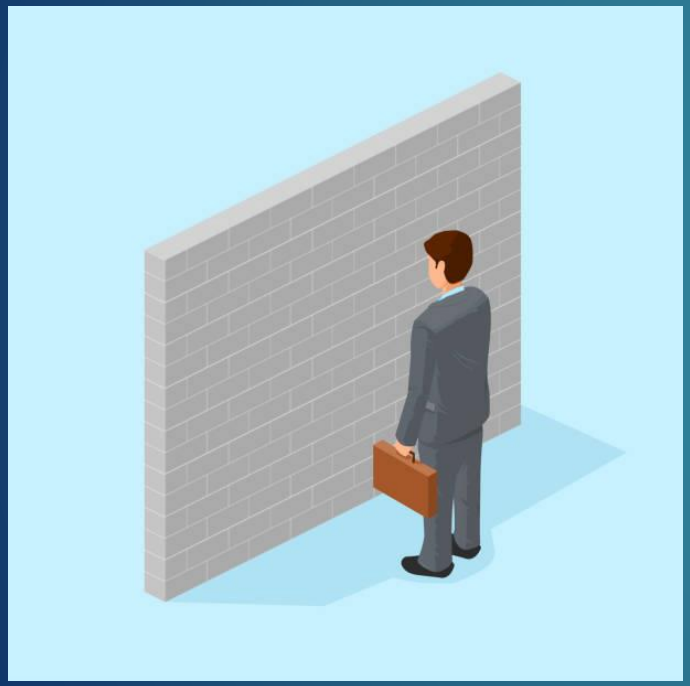

Deep Creek
Texas Creek
BELUGA
MOUNTAIN
Bear Creek
Talachulitna River
Esri, USGS | Matanusk

Meadow Creek

Summer Fall Winter



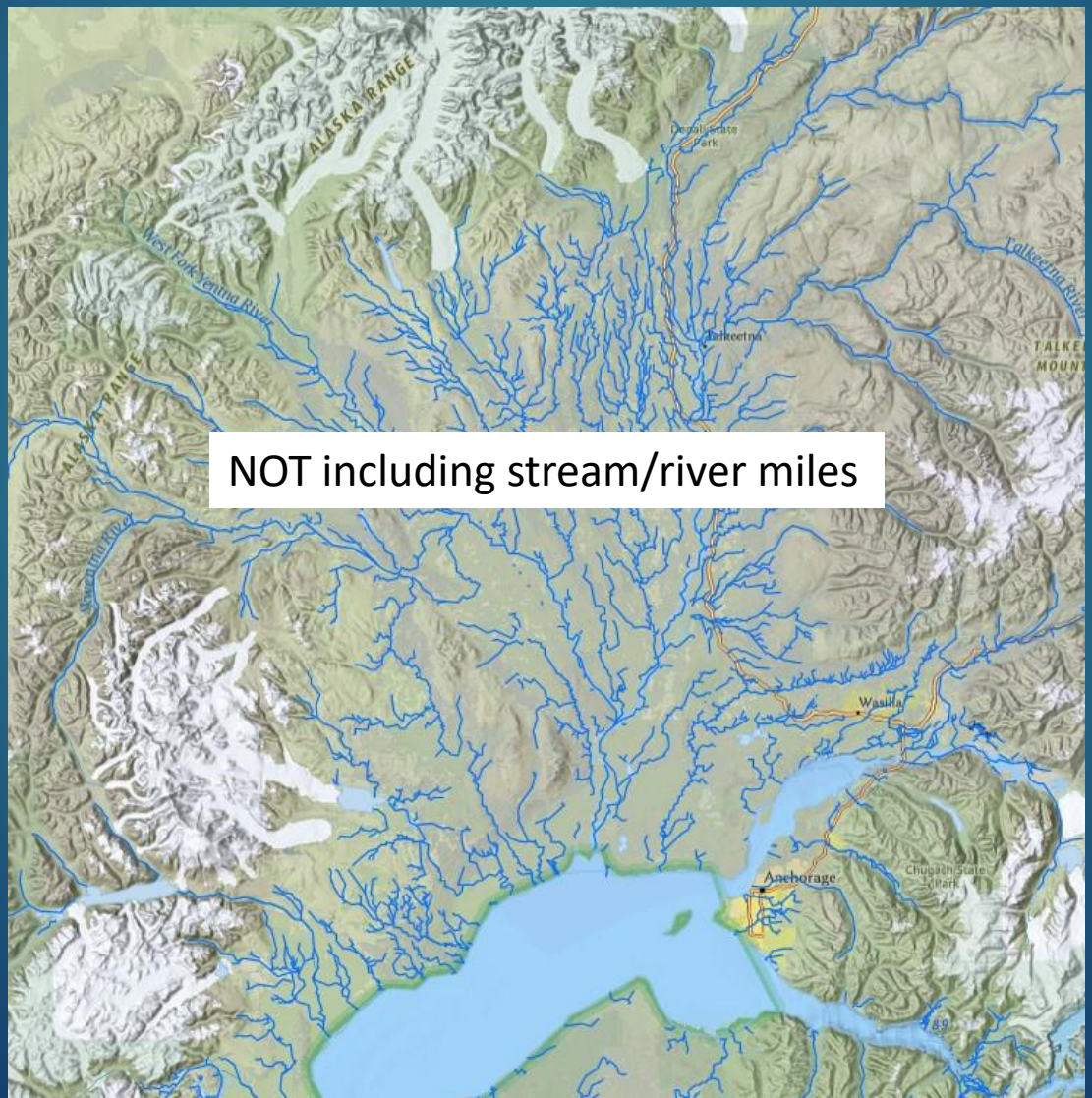
Barriers



Population Sinks

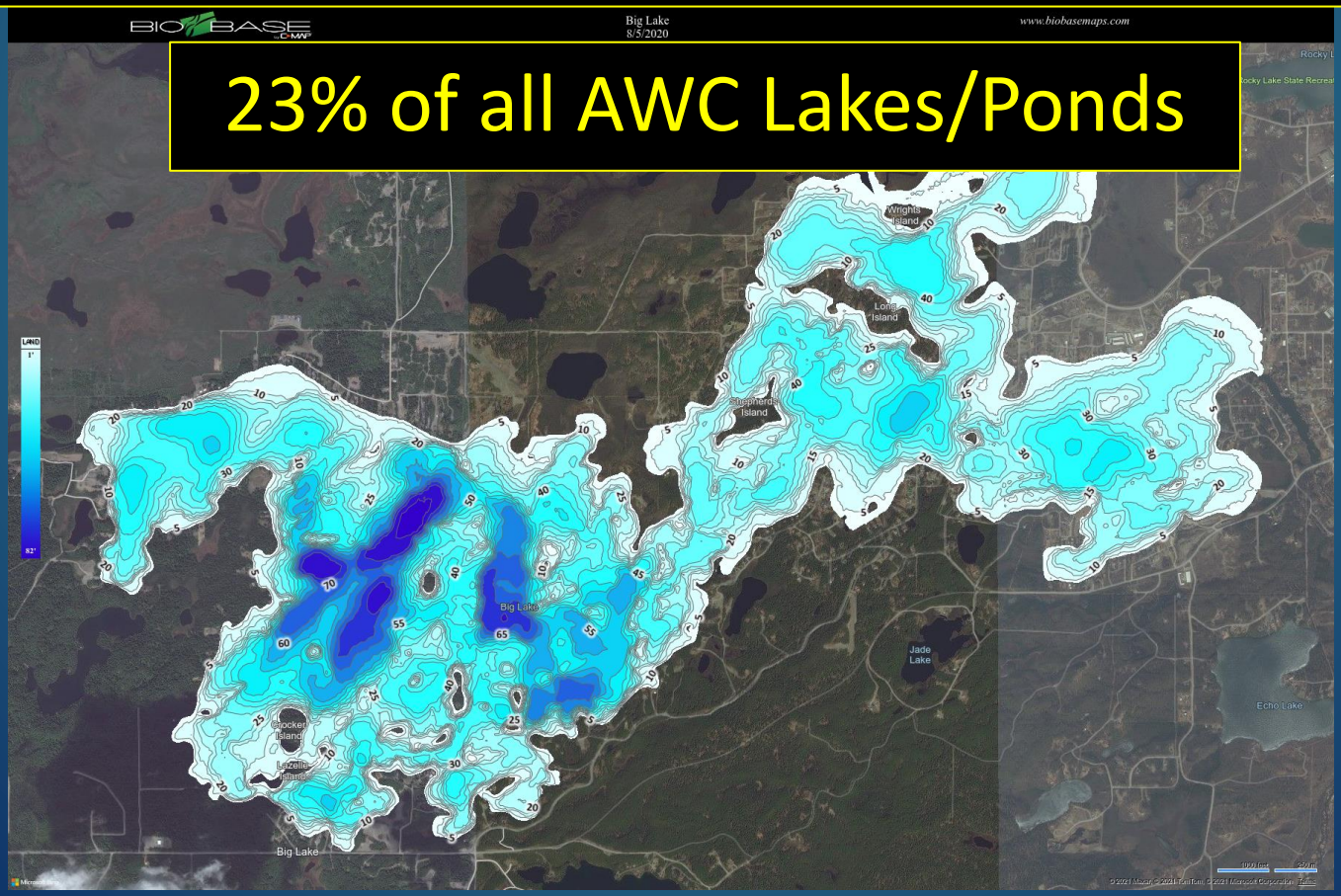
Time for some sobering numbers

Total: 216 Anadromous Lakes/Ponds in Mat-Su adding up to 31,820 surface acres



Category 1
Anadromous Lakes/Ponds Pike Occupy

8 waterbodies totaling 7,344 surface acres



Category 2
Anadromous Lakes/Ponds Pike Moderately/Severely Impact

15 waterbodies totaling 4,287 surface acres

13% of all AWC Lakes/Ponds

Category 3
Anadromous Lakes/Ponds Pike have Completely Destroyed

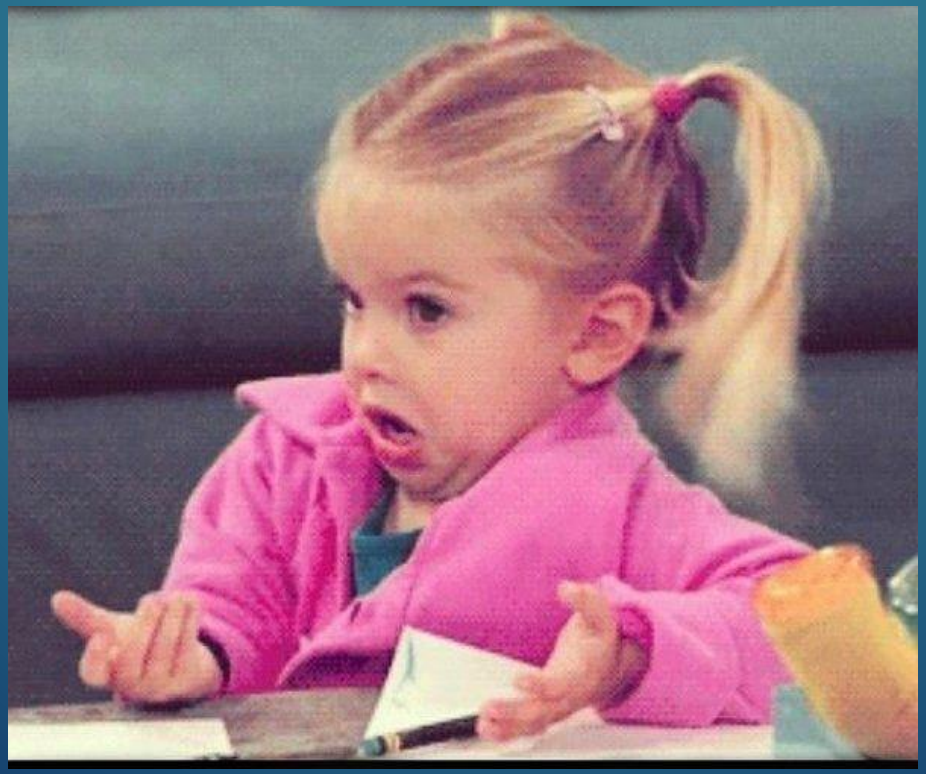
41 waterbodies totaling 8,133 surface acres

26% of all AWC Lakes/Ponds

Maybe/Probable Pike Waters

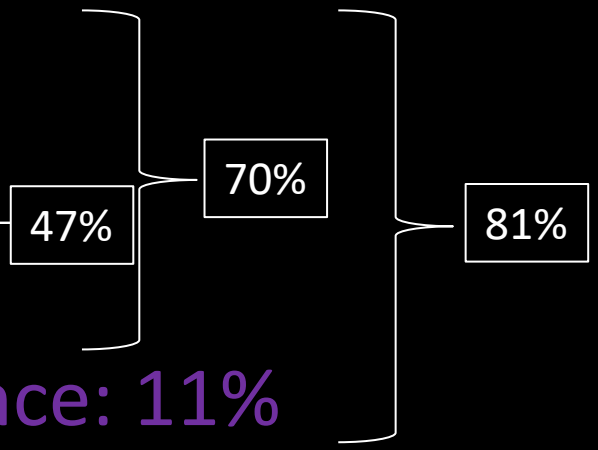
59 waterbodies totaling 3,586 surface acres

11% of AWC Lakes/Ponds



Summary

- Category 1: 23%
- Category 2: 16%
- Category 3: 31%
- Possible pike presence: 11%
- Pike free: 19%



This is a MINIMUM-Doesn't include stream/rivers

This number is GROWING every year. It can get MUCH worse

Waters only transition in one direction (1 to 2 to 3) without human intervention.

Does not include non-anadromous waters (resident species)

So what's your solution Debbie Downer??

- Unfortunately, have very limited tools/options
  - Suppression/netting has limited restoration value
  - Most spawning is done once the ice is out
  - Eradication (chemical treatment)
    - In connected systems, pike would just return

What do we need?

- Money for rotenone
  - Estimated $1.9 million would buy enough rotenone to treat all Category 3 lakes/ponds in the Valley.
- Research focused on pike specific exclusion structures
- General NEPA categorical exclusion for rotenone
- Prevention strategies
- Let's take the gloves off!

- While lots of resources coming in for salmon recovery, benefits won't be realized until the sub-surface issues are addressed.

Thank you