

Tyonek Tribal Conservation District

Habitat Restoration and Monitoring Program



November 9, 2017

Mat-Su Salmon Science Symposium

Presenter: John Hagan

Program Director: Nicole Swenson

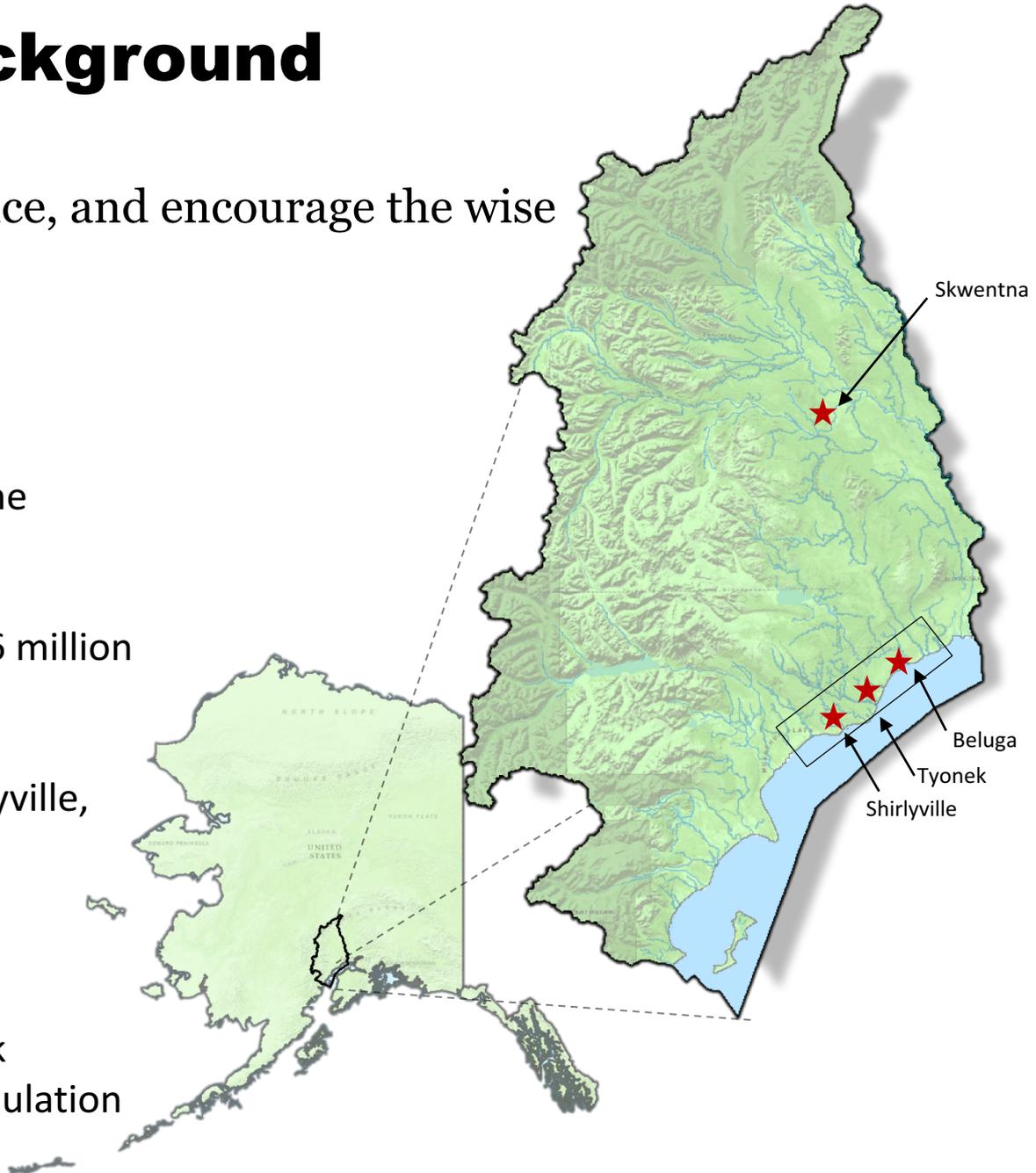




TTCD Background

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, one barge dock and supports a permanent population of ~200 people.





Programs

- Habitat Restoration and Monitoring Program
- Tyonek Grown
- Technical Assistance
- Tyonek Youth Conservation Science (TYCS)



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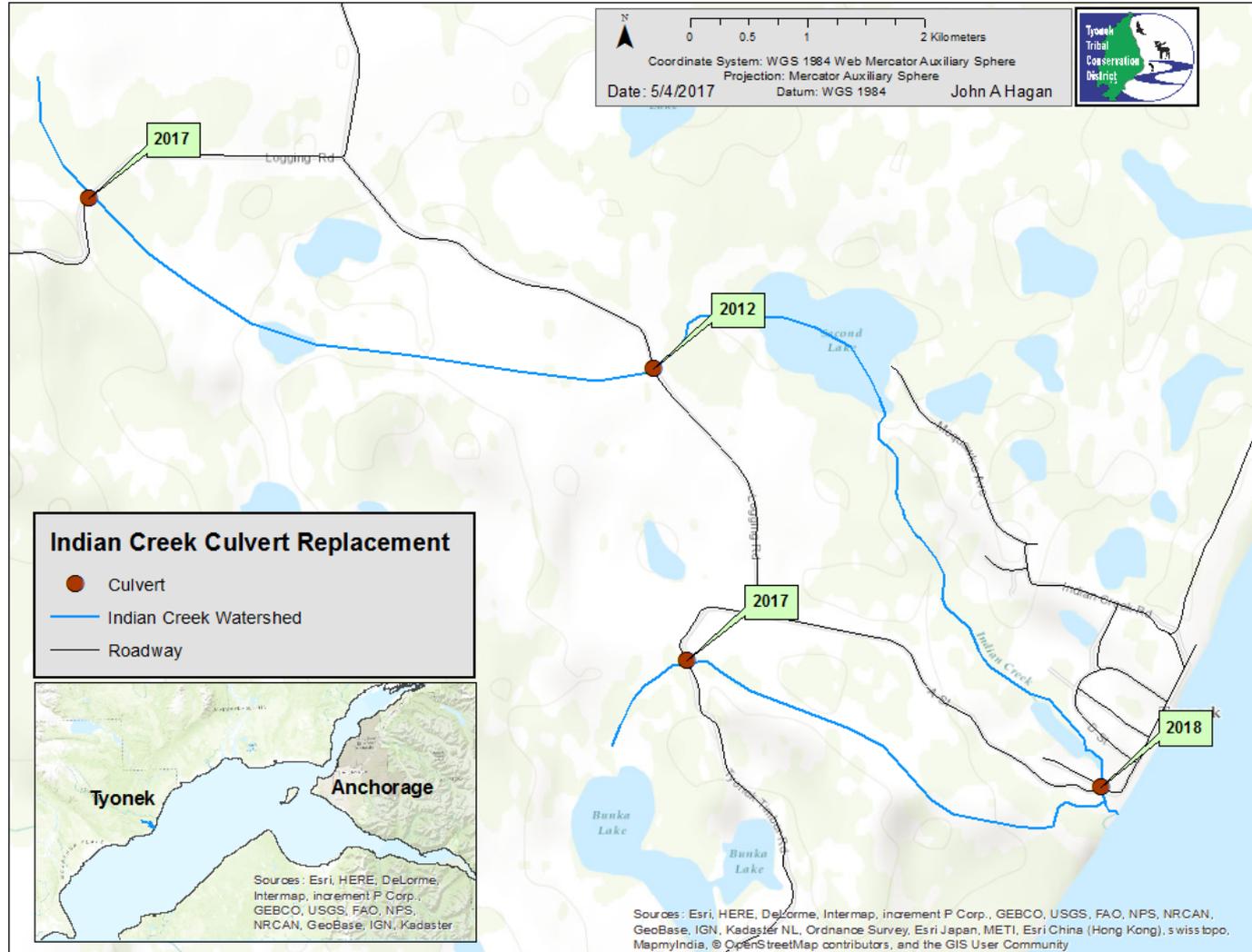




Habitat Restoration and Monitoring Program

Fish Passage

- 2 culverts were replaced on Indian Creek in 2017.
- 2018 will include the final culvert replacement on Indian creek.
- By 2018, all of Indian Creek will be barrier-free (~20 miles of fish habitat).





Habitat Restoration and Monitoring Program

Fish Passage





Habitat Restoration and Monitoring Program

Juvenile Salmon Monitoring

- In 2017, TTCD continued efforts to collect baseline juvenile salmonid data from 2 watersheds: Threemile and Roberts (Old Tyonek) Creeks.
- This data builds on 3 seasons of fish capture efforts and will provide valuable insight into the spatial distribution and life stage of salmonids in stream systems with fish passage issues.

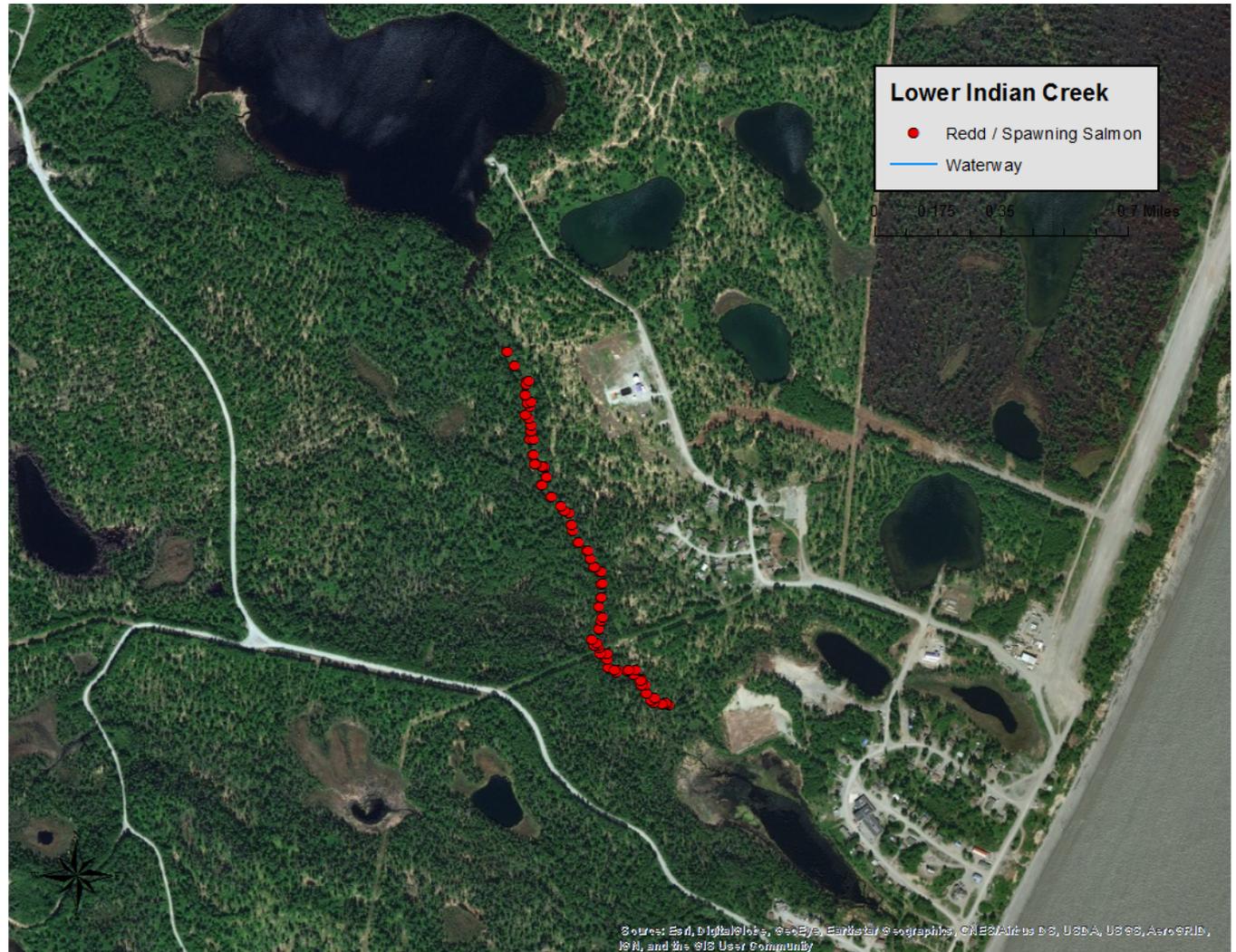




Habitat Restoration and Monitoring Program

Spawning Ground Surveys

- In 2017, 2km of Indian creek were surveyed.
- This repeated the 2016 survey.
- 42 active redds were documented.
- 65 spawning-stage Coho were overserved.

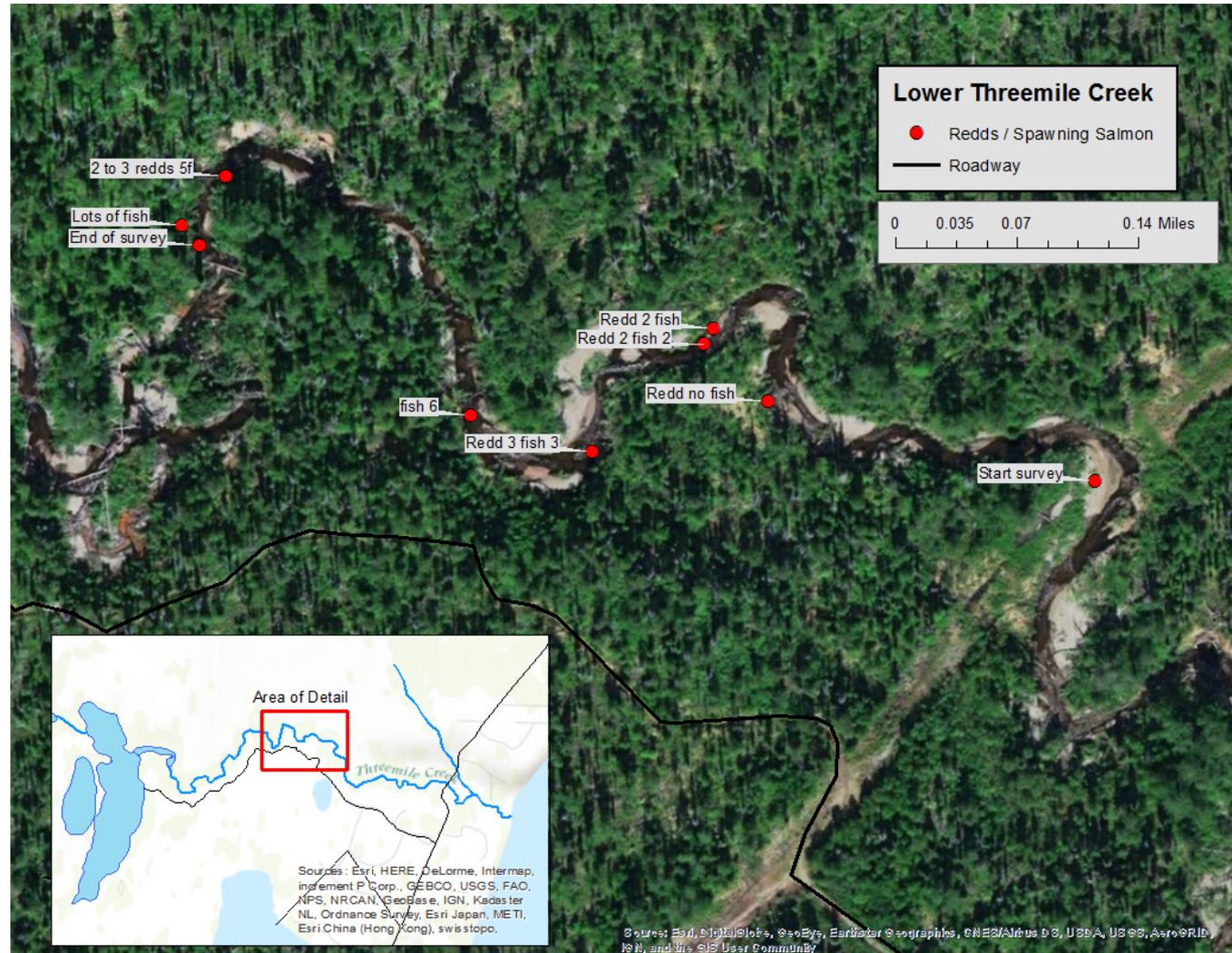




Habitat Restoration and Monitoring Program

Spawning Ground Surveys

- In 2017, 800m of Threemile Creek was surveyed.
- Below Threemile Lake, which hosts an invasive Pike infestation.
- 10 active redds were documented.
- 14 spawning-stage Coho were observed.

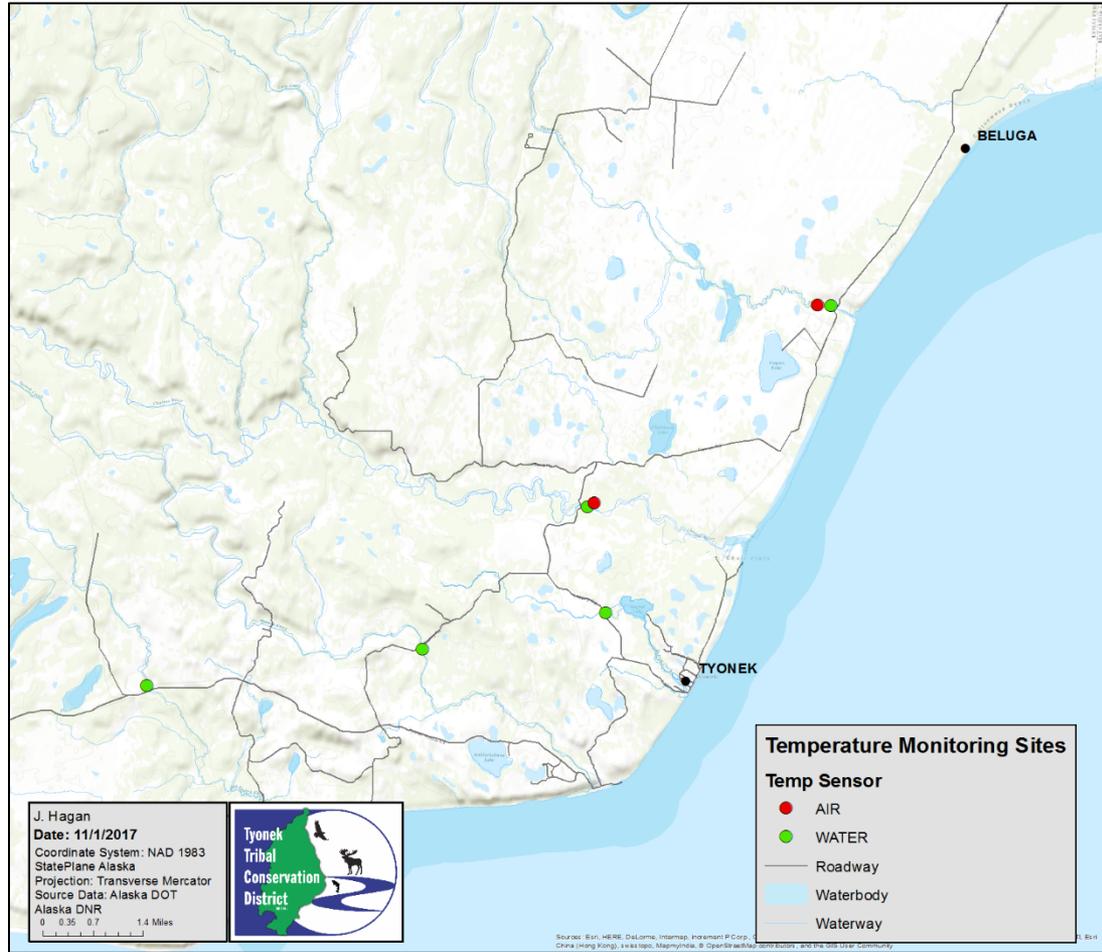




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Water Quality Monitoring

- Since 2015, we have collected water temperature data from 5 sites across the Tyonek-Beluga corridor.
- Air temperature was collected at 2 sites.
- All sensors are checked monthly.





Habitat Restoration and Monitoring Program

Invasive Species Monitoring and Control- Pike

2017 Pike Derby

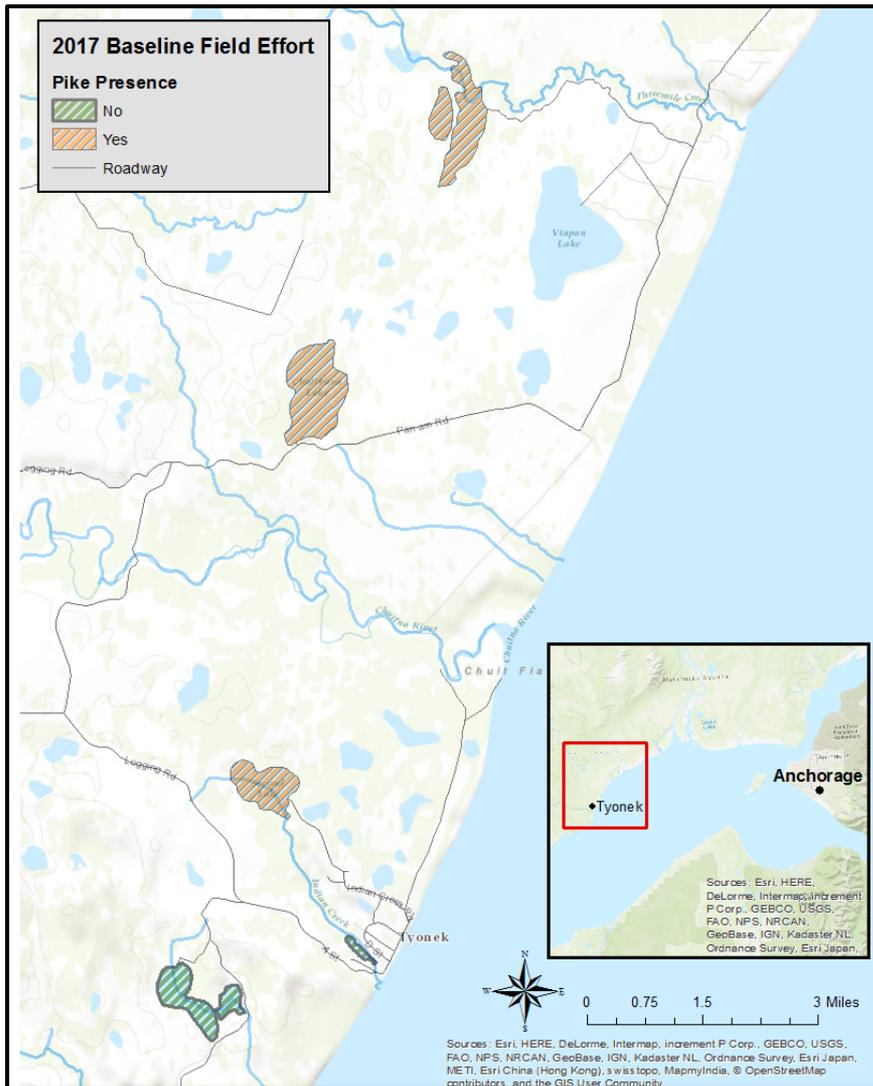
- The month of May.
- 91 Pike caught!
- From 2015-17
 - 231 Pike removed from 3 waterbodies.





Habitat Restoration and Monitoring Program

Invasive Species Monitoring and Control- Pike

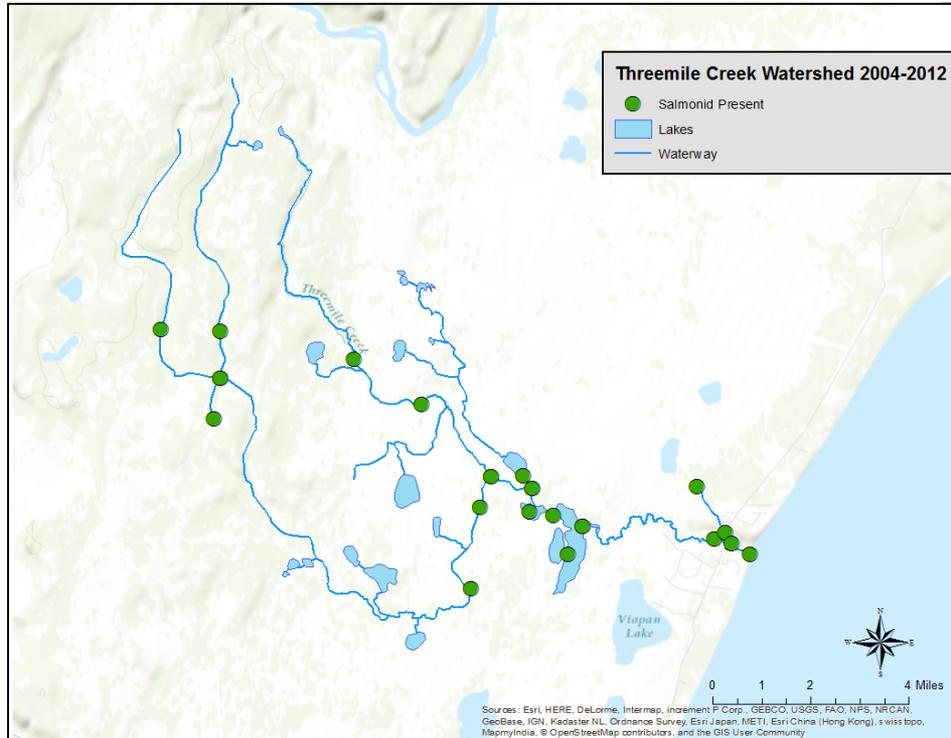


- During the 2017 field season, TTCD conducted lake netting surveys in 5 lakes along the Tyonek-Beluga road system.
- The project was a partnership with Cook Inlet Aquaculture Association, the University of Alaska at Fairbanks and the United States Geological Survey.
- The study design intended to **confirm locations of Northern Pike infestations, collect genetic samples** to determine stock of origin, and **sample stomachs** to better understand food-web dynamics in infested waters.

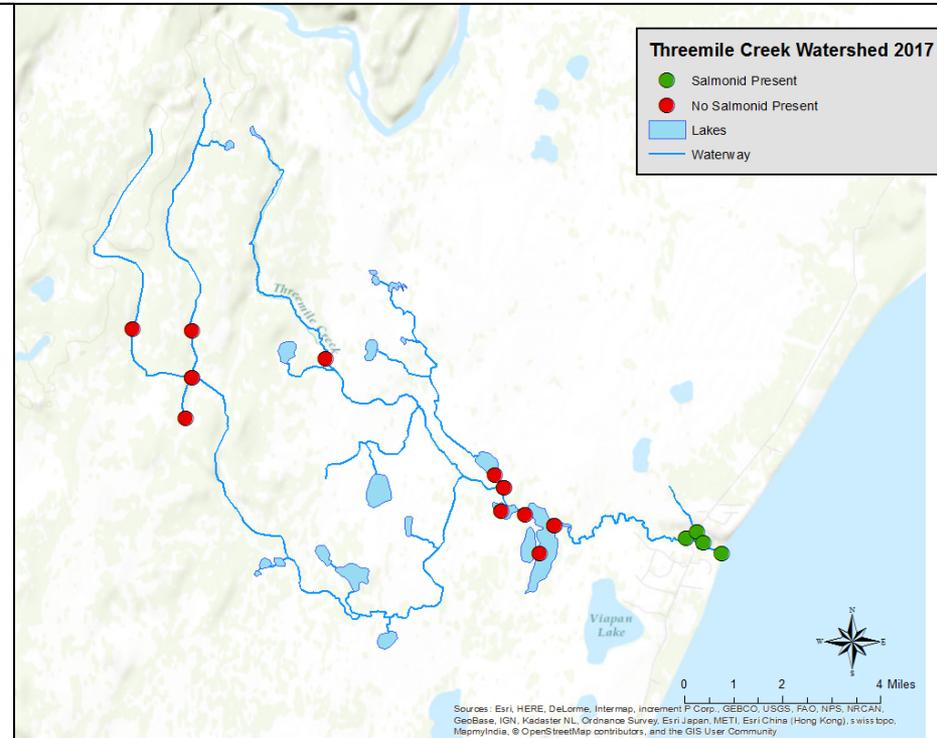


Habitat Restoration and Monitoring Program

Invasive Species Monitoring and Control- Pike



Anadromous Waters Catalogue nominations from 2004-2012.



TTCD / ADFG juvenile fish trapping efforts 2017.



Habitat Restoration and Monitoring Program

Invasive Species Monitoring and Control- Pike





Habitat Restoration and Monitoring Program

Invasive Species Monitoring and Control- Invasive Weeds

- Approximately 10 acres sprayed with Milestone, 90% percent success on orange hawkweed (primary target).
- Efforts will continue for oxeye daisy eradication and further orange hawkweed control.
- In 2018 White Sweet Clover control and eradication will continue.



Tyonek Tribal Conservation District

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Questions?



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TTCD on the Web

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Thanks to our supporters / collaborators: Cook Inlet Region Inc., Tyonek Native Cooperation, Native Village of Tyonek, US Fish and Wildlife Service, Natural Resource Conservation Service, Alaska Department of Fish and Game, US Geological Survey, University of Alaska- Fairbanks, Cook Inlet Aquaculture Association, Cook Inletkeeper, Spernak Airways, Hillcorp Inc., Chugach Electric, Threemile Creek Services, Alien Species Control, Alaska Department of Natural Resources, The Great Land Trust, and our numerous individual supporters across Alaska.