A narrow stream flows through a wooded area. The water is dark and turbulent, with many fallen branches and leaves scattered throughout. The surrounding trees are mostly bare, suggesting an autumn or winter setting. The stream is flanked by dense vegetation and fallen leaves, creating a natural, somewhat cluttered environment.

**CATALOGING ANADROMOUS  
AND RESIDENT FISH IN  
PREVIOUSLY UNMAPPED  
STREAMS IN THE MAT-SU  
BOROUGH.**



## **A LITTLE BACKGROUND**

- **2009-2011 Fish Passage Assessment of Culverts within the MSB.**
  - **395 sites were assessed.**
- **Currently there are 572 Assessed Culverts in the Mat-Su**
  - **272 Red**
  - **102 Gray**
  - **185 Green**
  - **13 Black**

A photograph of a concrete bridge over a river. The bridge has a single large arch. To the left of the bridge, there is a grassy bank with orange safety fencing. In the background, there are trees and a utility pole. The sky is blue with some clouds.

## A LITTLE BACKGROUND

- *Initial Prioritization*
  - *Replaced 10 Culverts*
  - *>30 miles of upstream habitat made available*
- *New Optimization Model*
  - *Replacement Cost*
  - *Fisheries Data*
  - *Available Upstream Habitat*
  - *Other Barriers*

# PROBLEMS

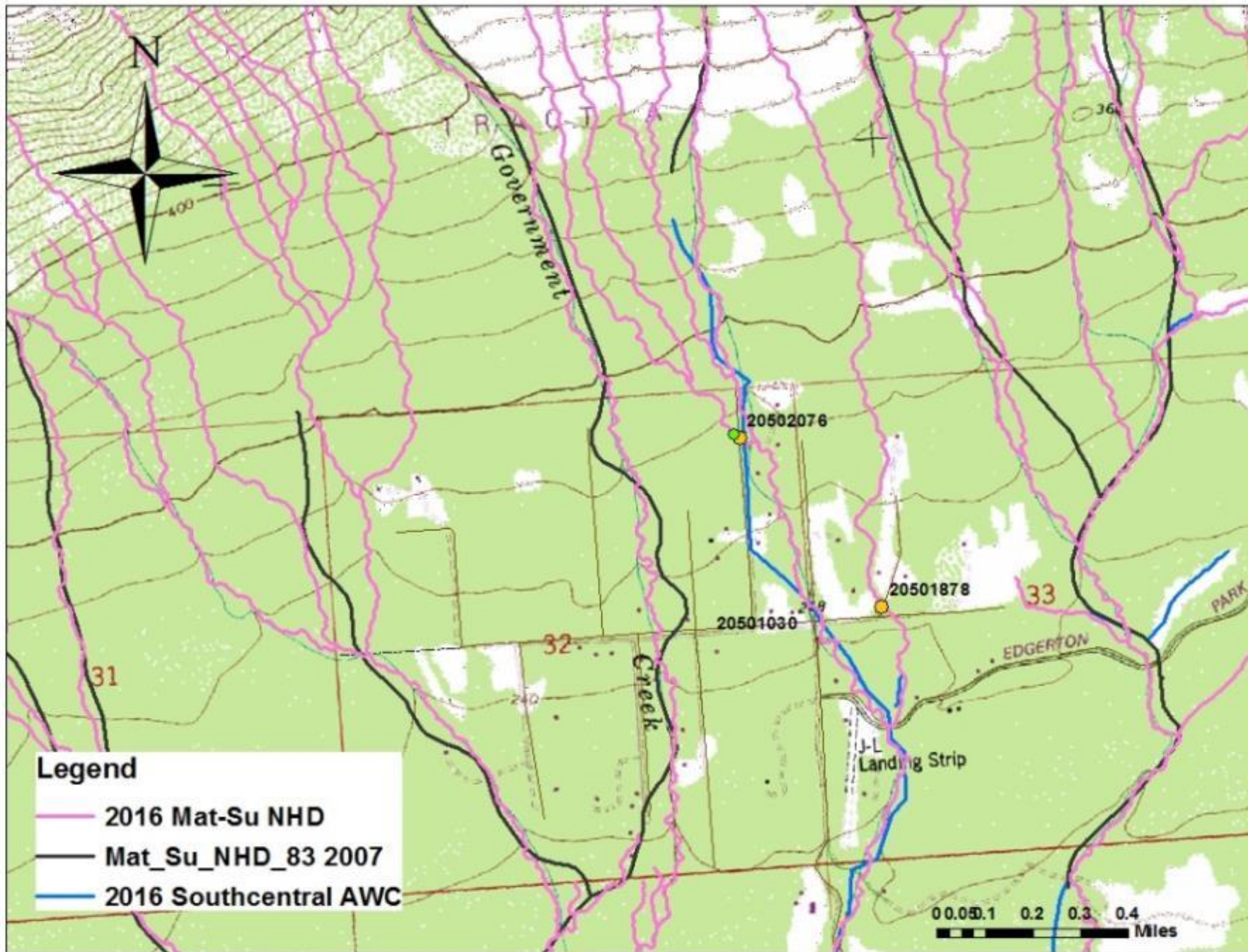


- *Unknown upstream habitat*
  - *124 sites in the Mat-Su on unmapped streams*
- *No Fisheries Data*
  - *197 Sites with little to no fisheries data*

# **SOLUTIONS**

- *Upstream habitat*
  - *Use the new NHD flowlines created from the 2011 Mat-Su LiDAR imagery.*





# SOLUTIONS

- *Fisheries Data Gaps*
  - *Sample unmapped sites and sites with no fisheries data using a backpack electrofisher and/or baited minnow traps.*



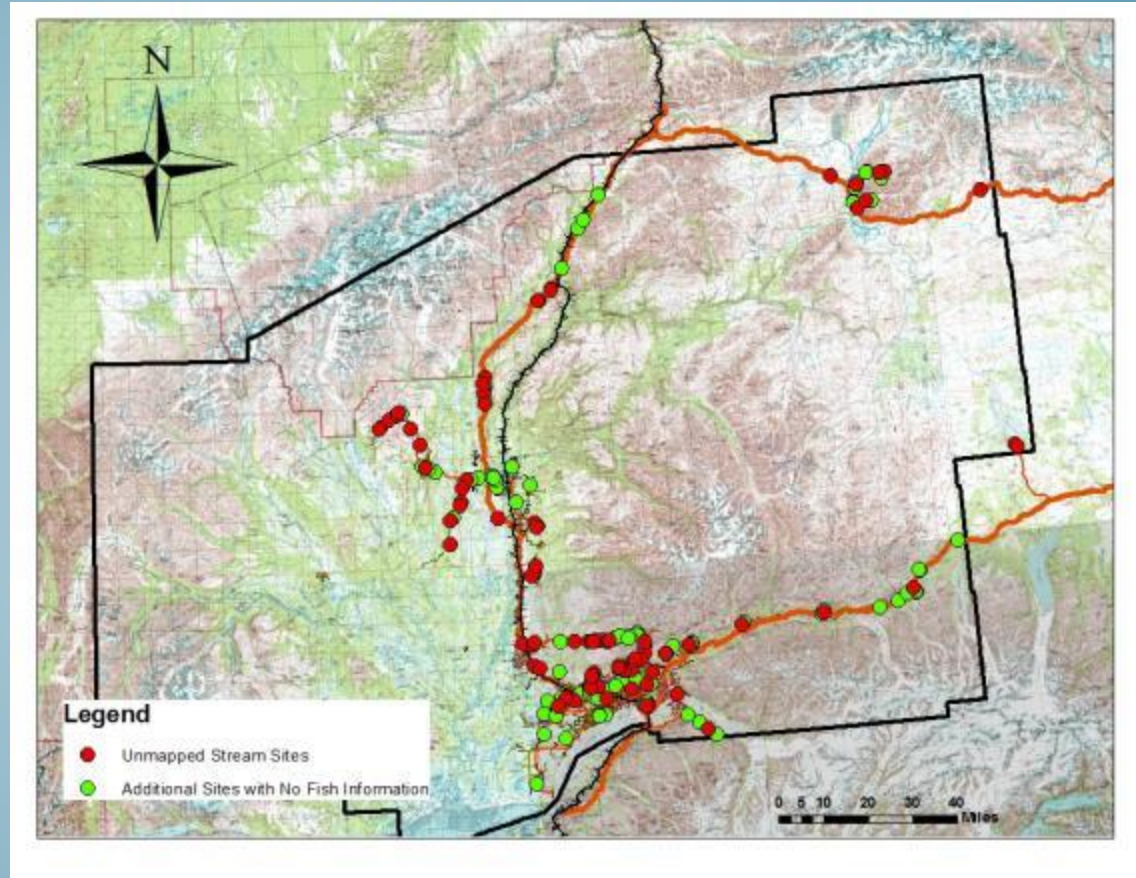
# THE GOAL

- *Strategic Action Plan of the Mat-Su Basin Salmon Habitat Partnership*
- *Objective 1.1 – The Anadromous Waters Catalog*
  - *Strategic Action 1.1.1 – Complete the AWC*
  - *Objective 2.1 - Identification of Priority Riparian Areas for Salmon*
  - *Objective 2.2 – Protection of Priority Salmon Riparian Habitat*
- *Objective 1.2 - Habitat Quality : Establishing which waters are important habitat for salmon rearing, spawning, and overwintering*
- *Objective 4.2 – Fish Passage Restoration*



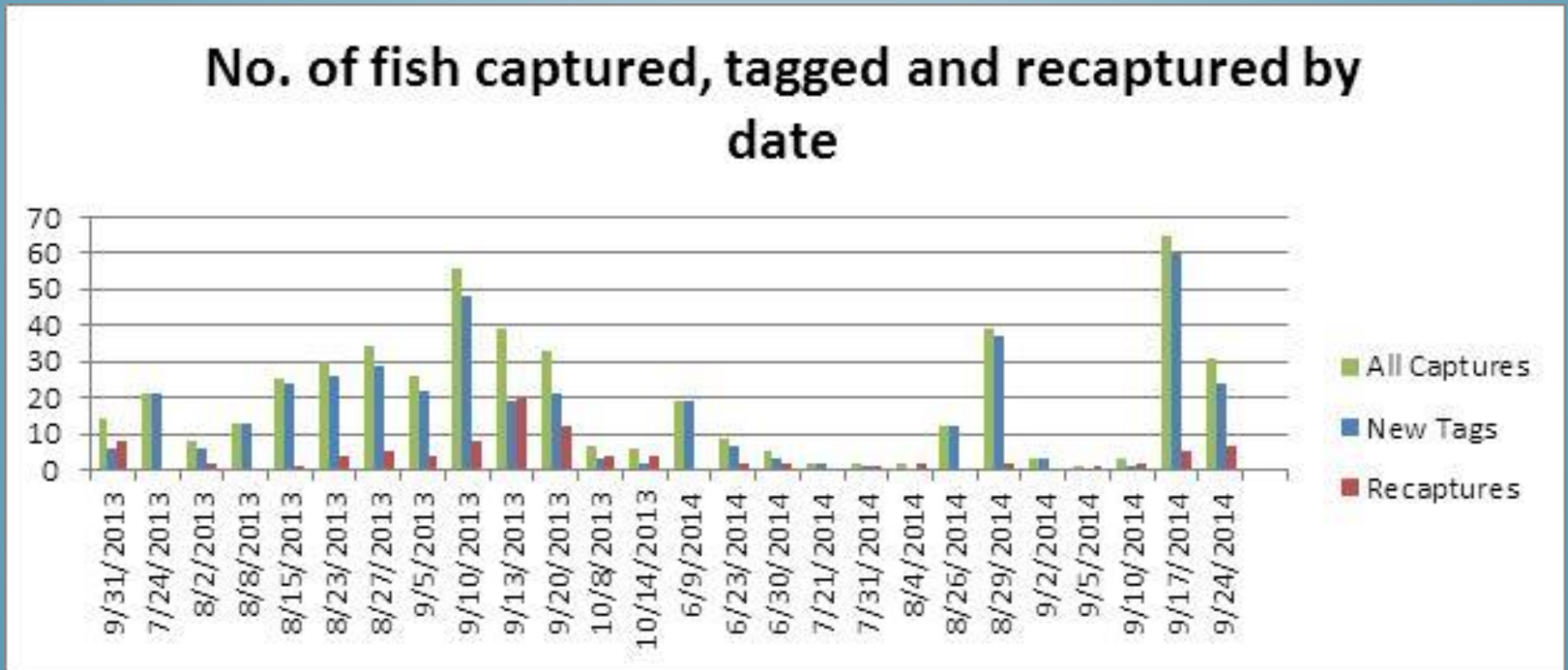
# THE GOAL

- *Sample 50-60 Unmapped streams and as many bonus sites without fish information as possible.*
- *Submit all sampling results to the Alaska Freshwater Fish Inventory.*
- *Nominate all streams and lakes where anadromous fish were found to the Anadromous Waters Catalog.*
- *Update the Optimization Model with new fisheries data.*



# SAMPLING

- Occurred Mid-August through September



2 years of fish trapping at the Buddy Creek PIT Tagging Project

# RESULTS



104 Sites Sampled

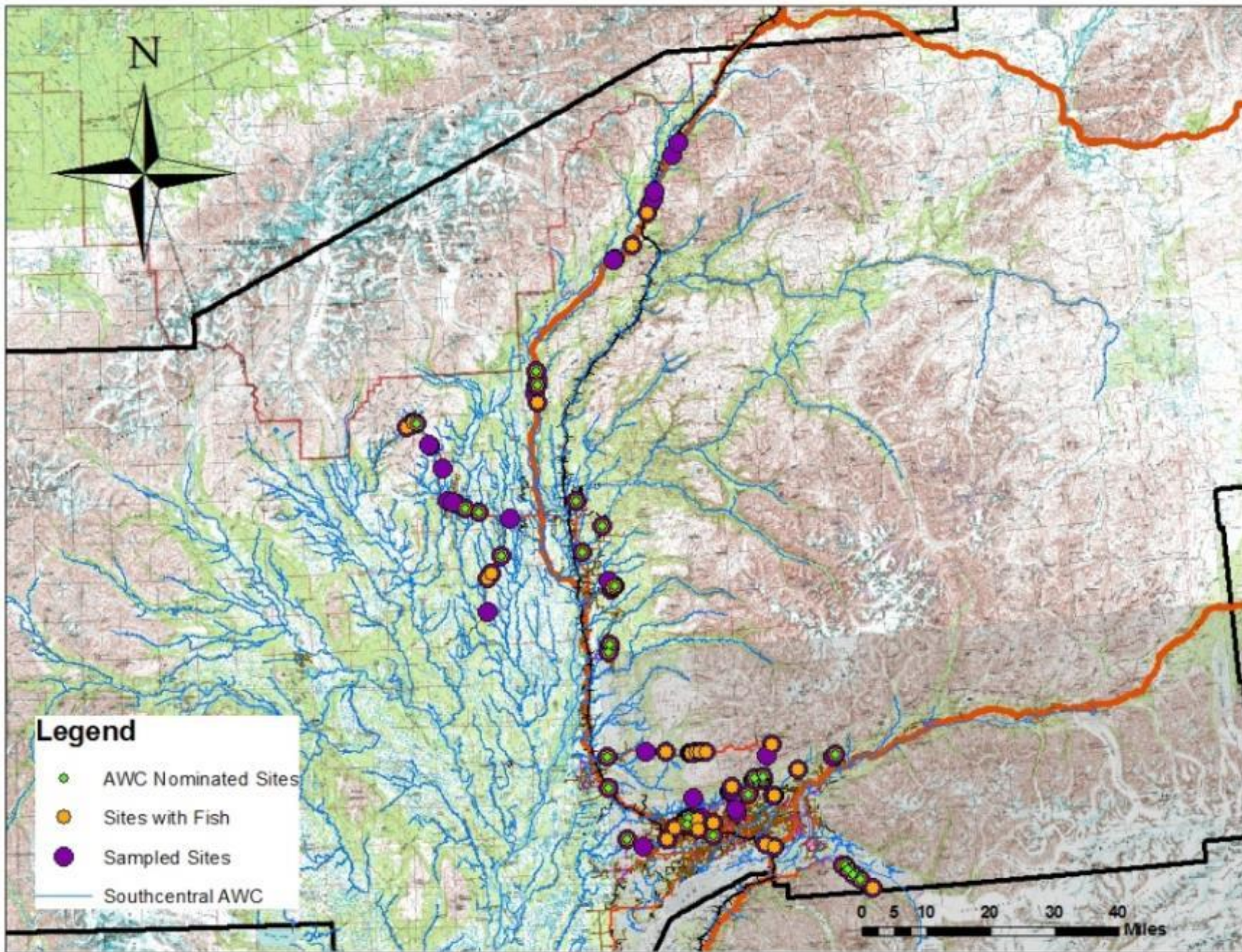
- 45 Unmapped

64 Sites had fish captured

- 25 Unmapped

31 Sites had salmon captured

- 14 Unmapped



# RESULTS

Fish Captured	Number of Sites	% of Sites Sampled
Coho Salmon	30	28.85%
Dolly Varden	24	23.08%
Three Spine Stickleback	15	14.42%
Sculpin (unid)	11	10.58%
Rainbow Trout	7	6.73%
Chinook Salmon	3	2.88%
Nine Spine Stickleback	3	2.88%
Blackfish	3	2.88%
Sockeye Salmon	1	0.96%
Lamprey	1	0.96%
Pike	1	0.96%
Burbot	1	0.96%
Grayling	1	0.96%
Total number of sites sampled n=104		

# RESULTS



21.39 Miles of Streams  
Nominated to the Anadromous  
Waters Catalog

- 11.34 Miles from Unmapped Streams

171.25 Acres of Lakes  
Nominated to the Anadromous  
Waters Catalog

- 134.16 Acres from Unmapped Streams

# ANADROMOUS WATERS CATALOG NOMINATIONS



State of Alaska  
Department of Fish and Game  
Division of Sport Fish

Fish Survey  
Nomination Form  
Anadromous Waters Catalog

Region: South Central USGS Quad: Anchorage C-2

Anadromous Waters Catalog Number of Waterway: \_\_\_\_\_

Name of Waterway: Unnamed Stream

Addition  Deletion  Correction  USGS Name  Local Name

For Office Use  Backup Information

Nomination # _____	Fiberline Scientist _____	Date _____
Revision Year: _____	Habitat Operations Manager _____	Date _____
Revisions to: Atlas _____ Catalog _____	AWC Project Biologist _____	Date _____
Both _____	GIS Analyst _____	Date _____
Revision Code: _____		

Site Information Station: MSH162350297 Date Observed: 10/22/2016 Legal Desc.: S24 (1) VOG (1) Latitude Longitude Datum: 61.69921 -149.90199 WGS84  
Elev. Source: 61.69907 -149.90163 WGS84

Station Comments: Survey 2002076. This site was accessed by North Wable Reef Dr.

Life History: Anadromous  
Species/LifeStage: coho salmon juvenile Sampling Method (No. of fish): S24 (1) VOG (1)

Life History: Unknown  
Species/LifeStage: Holly Varden juvenile/adult Sampling Method (No. of fish): S24 (1)

**Key to Sample Method**

(S24) Smith-Reed LR-24 (VOG) Visual Observation, through

Additional Comments: Adding new AWC stream with COC.

Name of Observer: Mark Hansen, Habitat Biologist Phone: (907) 267-2591 Date Printed: 11/6/2016

Signature: \_\_\_\_\_

Address: Alaska Department of Fish and Game, Sport Fish - Anchorage  
333 Raspberry Rd  
Anchorage, AK 99518

This certifies that to my best professional judgment and belief the above information is evidence that this waterbody should be included in or deleted from the Anadromous Waters Catalog

Signature of Area Biologist: \_\_\_\_\_ Date: \_\_\_\_\_



# USING THE NEW NHD FOR AWC NOMINATIONS

New AWC nomination site

20502076

New Corrected NHD Flowline

Existing Incorrect AWC flowline

Text

20501878

20501030

32...

Creek

2.8

33

EDGER

J-L  
Landing Strip

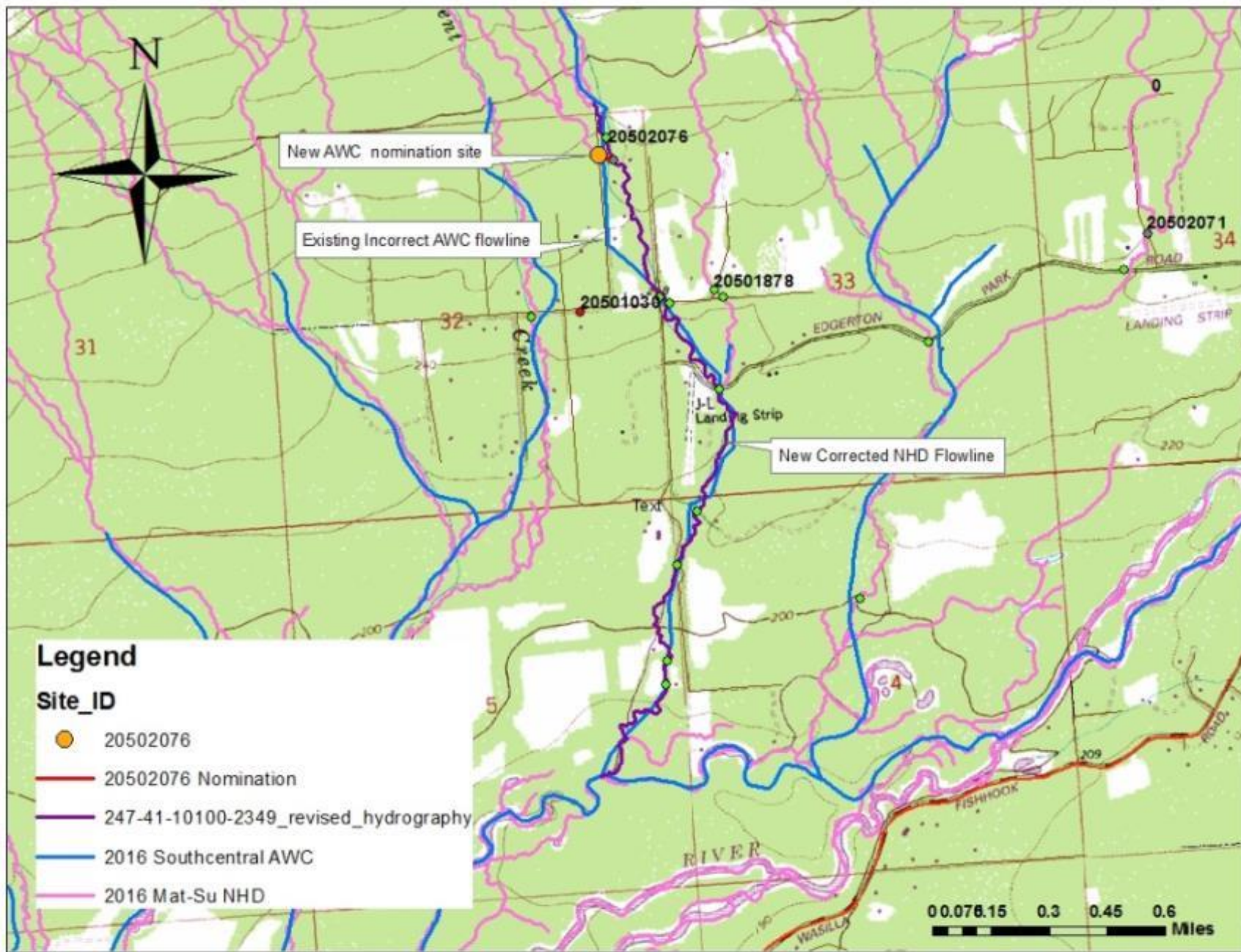
## Legend

- 2016 Mat-Su NHD
- AWC Nominated Sites
- 2016 Southcentral AWC

0 0.03 0.06 0.12 0.18 0.24 Miles



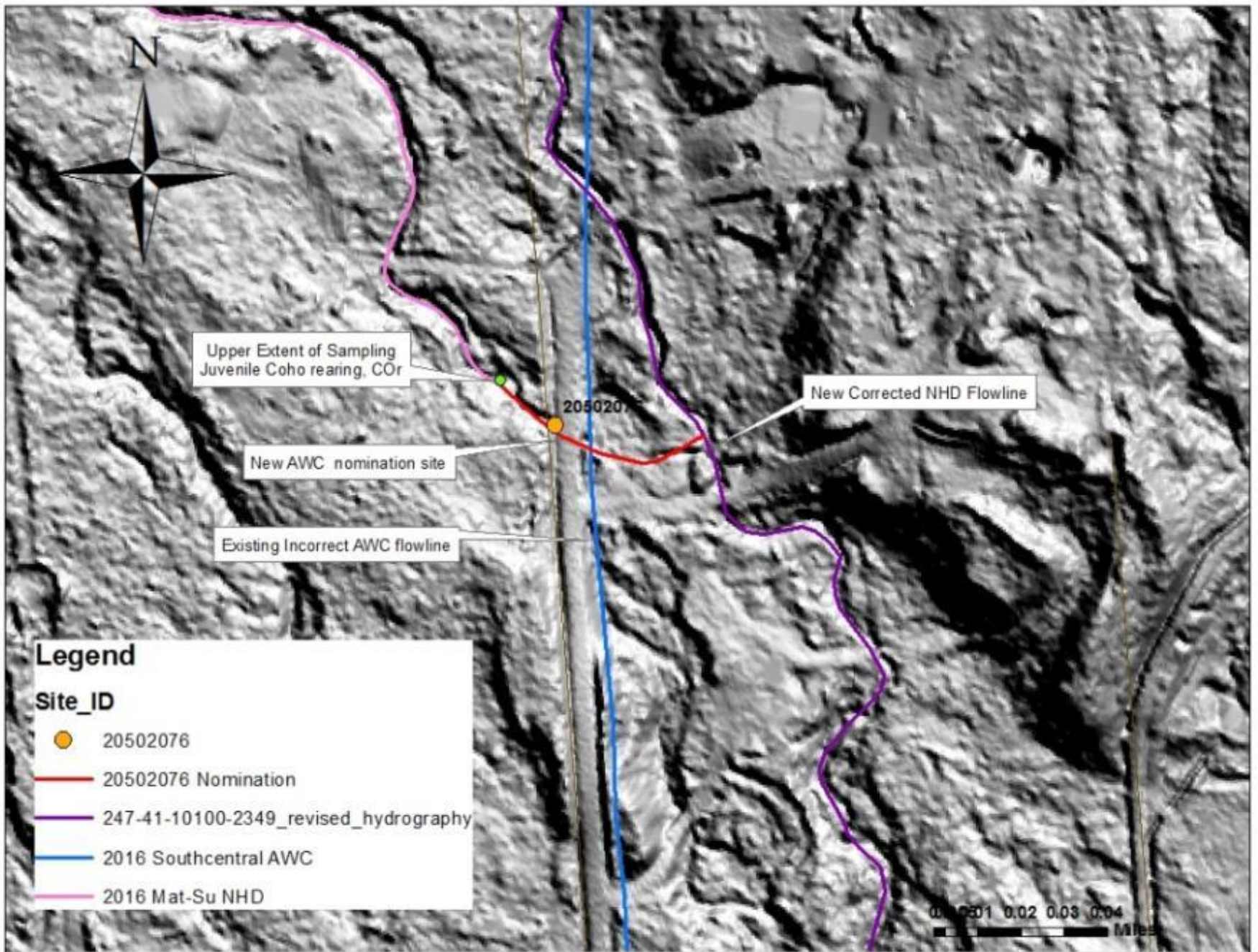


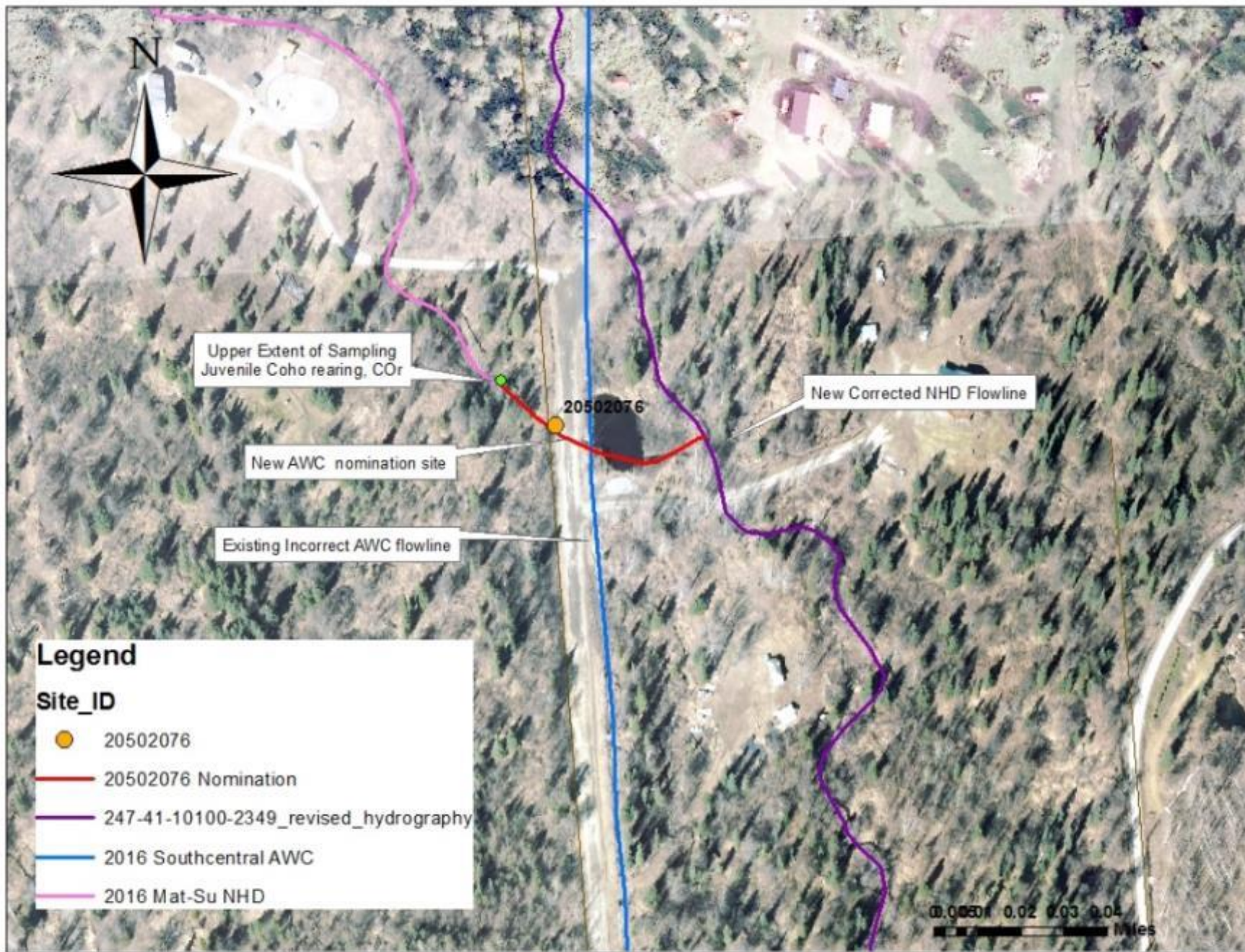












# ACKNOWLEDGMENTS

- *We would like to thank the US Fish and Wildlife Service, National Fish Habitat Partnership, Mat-Su Salmon Partnership for funding this project.*
- *We would also like to thank everyone who contributed to this project: Raye Anne Neustel, Tom Cappiello, Gillian O'Doherty, and Holly Zafian.*



**QUESTIONS?**