

Susitna-Watana Hydroelectric Project Document ARLIS Uniform Cover Page

Title: Characterization and mapping of aquatic habitats, Study plan Section 9.9 : Initial study report -- Part A, Appendix A: Remote line mapping, 2012		SuWa 223
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Notes: This appendix was replaced in full by Attachment K to: Filing of Initial Study Plan meetings transcripts and additional information in response to October 2014 Initial Study Plan meetings. That attachment is titled "Characterization and mapping of aquatic habitats (9.9), errata to Initial Study Report Part A - Appendix A, Remote line mapping, 2012" and was issued November 2014. It is numbered SuWa 265.		

All reports in the Susitna-Watana Hydroelectric Project Document series include an ARLIS-produced cover page and an ARLIS-assigned number for uniformity and citability. All reports are posted online at <http://www.arlis.org/resources/susitna-watana/>



PART A - APPENDIX A: REMOTE LINE MAPPING, 2012

**Susitna-Watana Hydroelectric Project
(FERC No. 14241)**

**Characterization and Mapping of Aquatic
Habitats (9.9)**

**Part A - Appendix A
Remote Line Mapping, 2012**

Initial Study Report

Prepared for

Alaska Energy Authority



SUSITNA-WATANA HYDRO

Clean, reliable energy for the next 100 years.

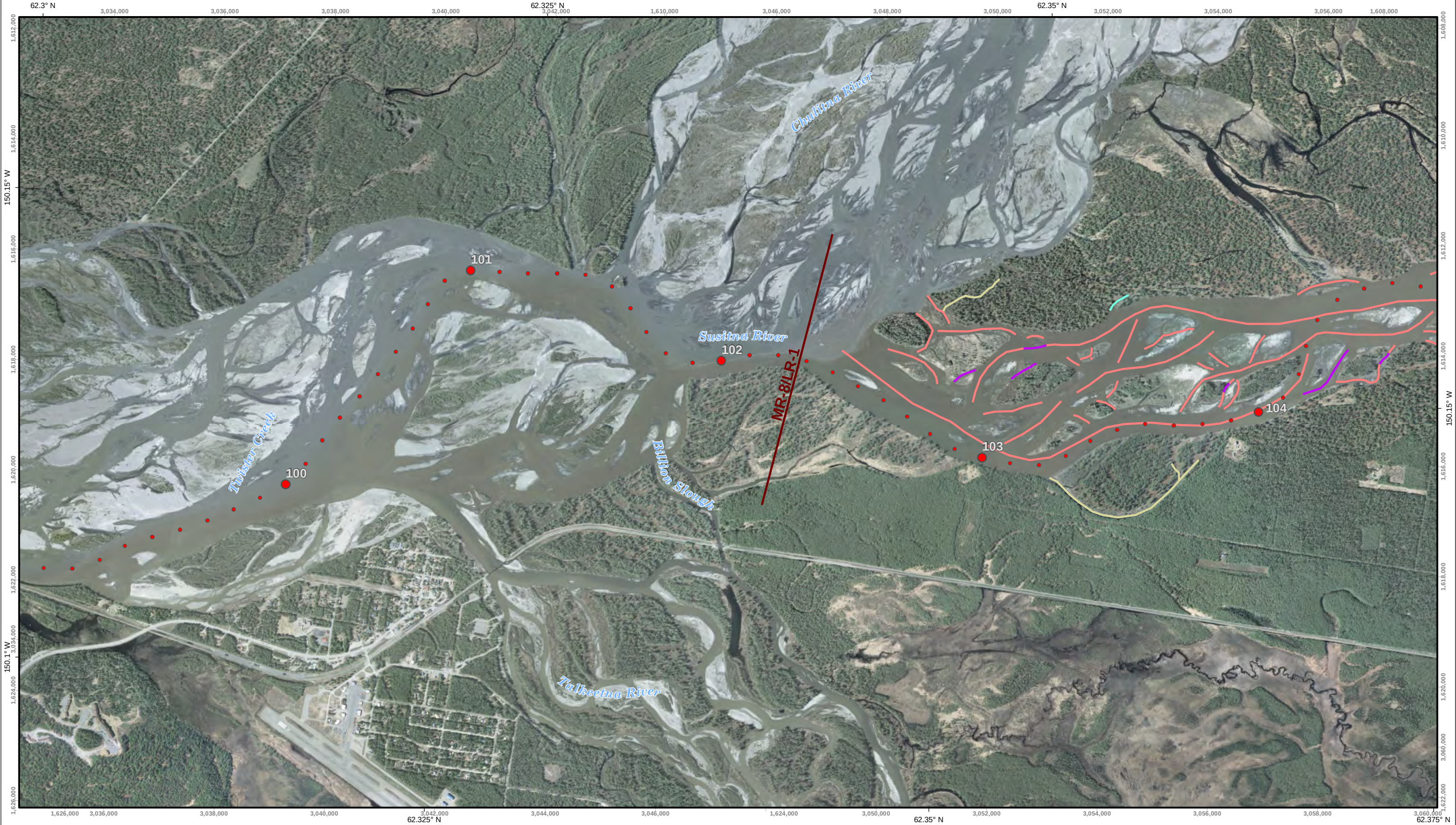
Prepared by

R2 Resource Consultants, Inc.

June 2014

INTRODUCTION

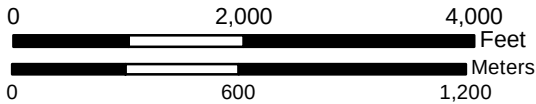
The maps contained in this map book were created using several sources of remote imagery in 2012. The habitat typing is consistent with the terminology that was current at that time, but has undergone refinement through 2013. In addition, an exercise to compare remote habitat typing with ground-based surveys conducted in 2013 is ongoing at the time of the publication of this ISR. Once this exercise is complete, final map books will be made that include both refinements of habitat definitions and typing.



Susitna - Watana Hydroelectric Project
Fish Barrier and Aquatic Habitat Field Survey Map Book



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Map Projection: NAD83 State Plane Zone 4 (Feet)
Grid Interval: 2000'

General Features

- Susitna Project River Miles
- Susitna Geomorphic Reach Breaks
- Focus Area

Mesohabitats

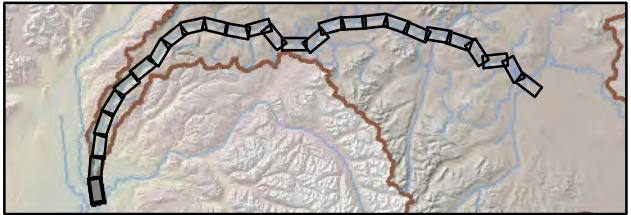
- Glide or Run
- Pool
- Rapid
- Riffle

Macrohabitats

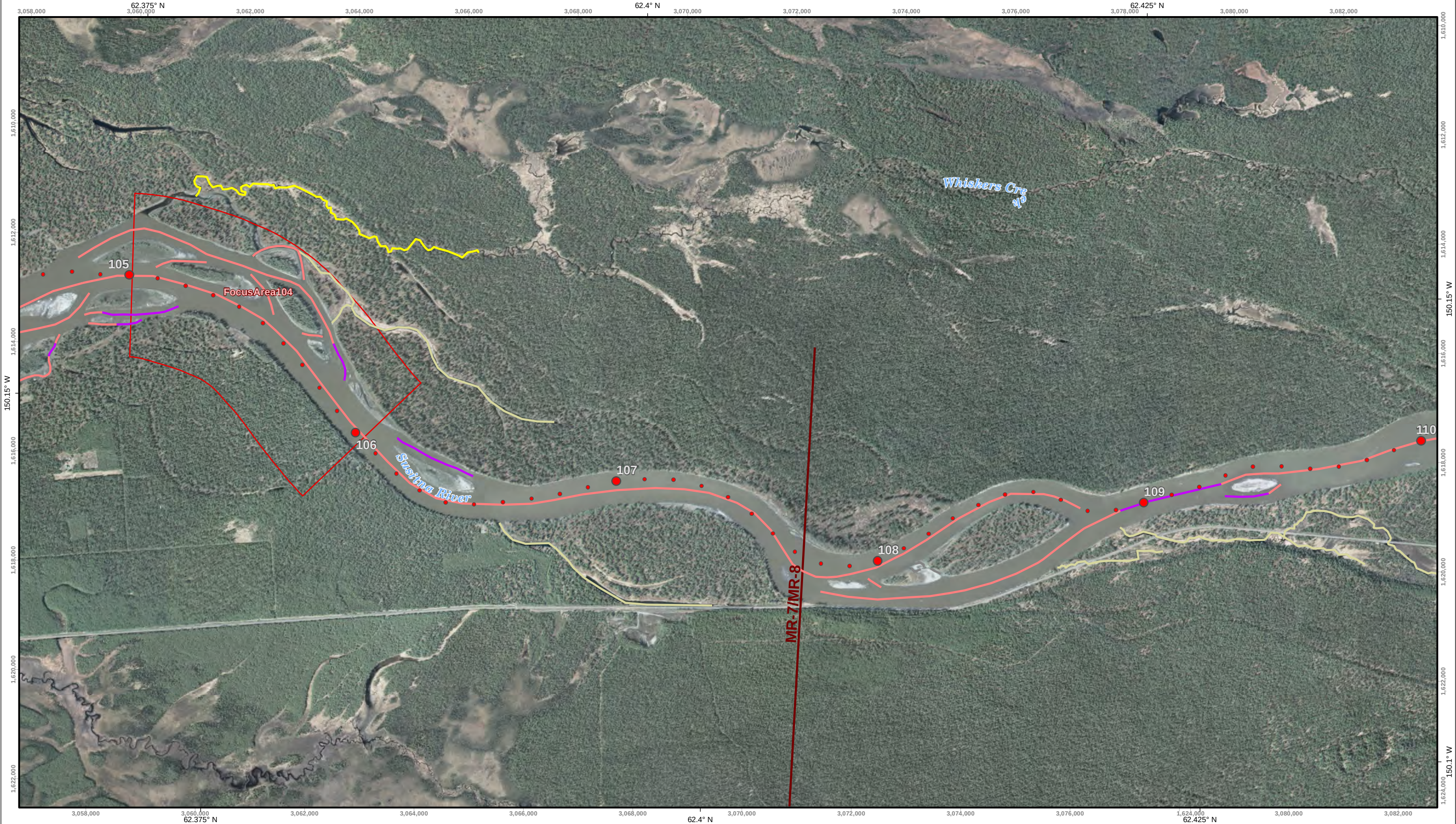
- Side Slough
- Tributary
- Unidentified
- Upland Slough

Special Habitat Features

- Backwater
- Beaver Complex



Date Created: 1/29/2014
Map Author: HDR Alaska - MAD
File: HDR_2012_LineMapping.mxd



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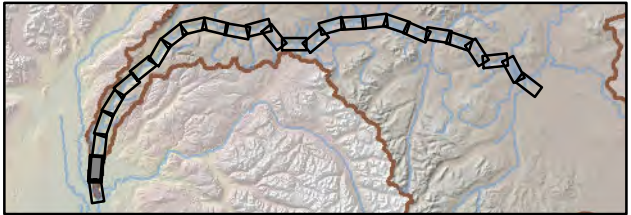
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- Pool
- Rapid
- Riffle

Macrohabitats

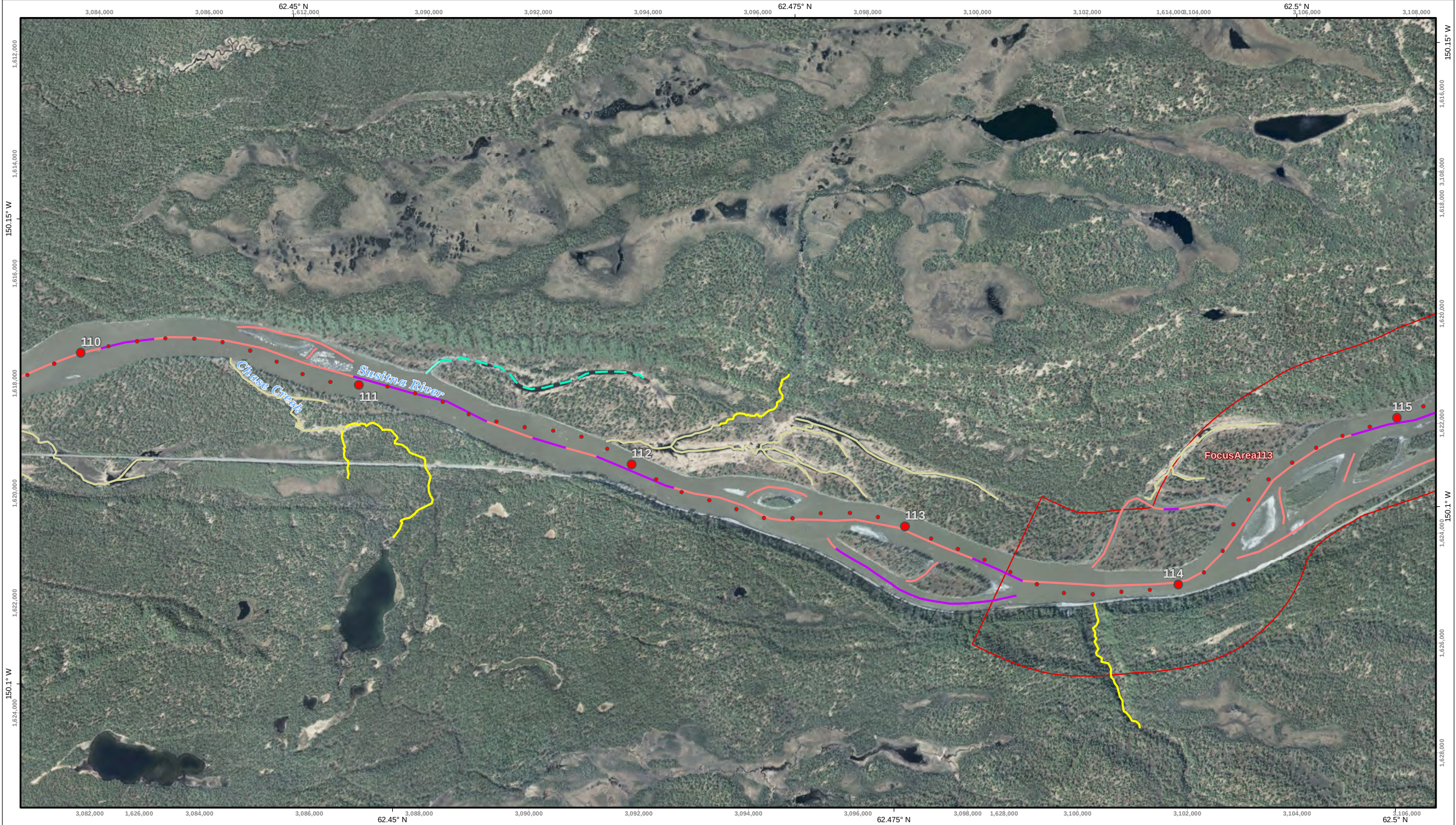
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- Tributary
- Unidentified
- Upland Slough

Special Habitat Features

- Backwater
- Beaver Complex



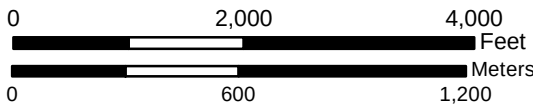
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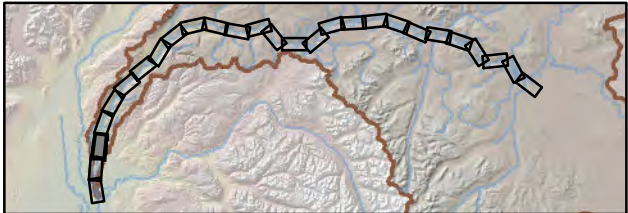
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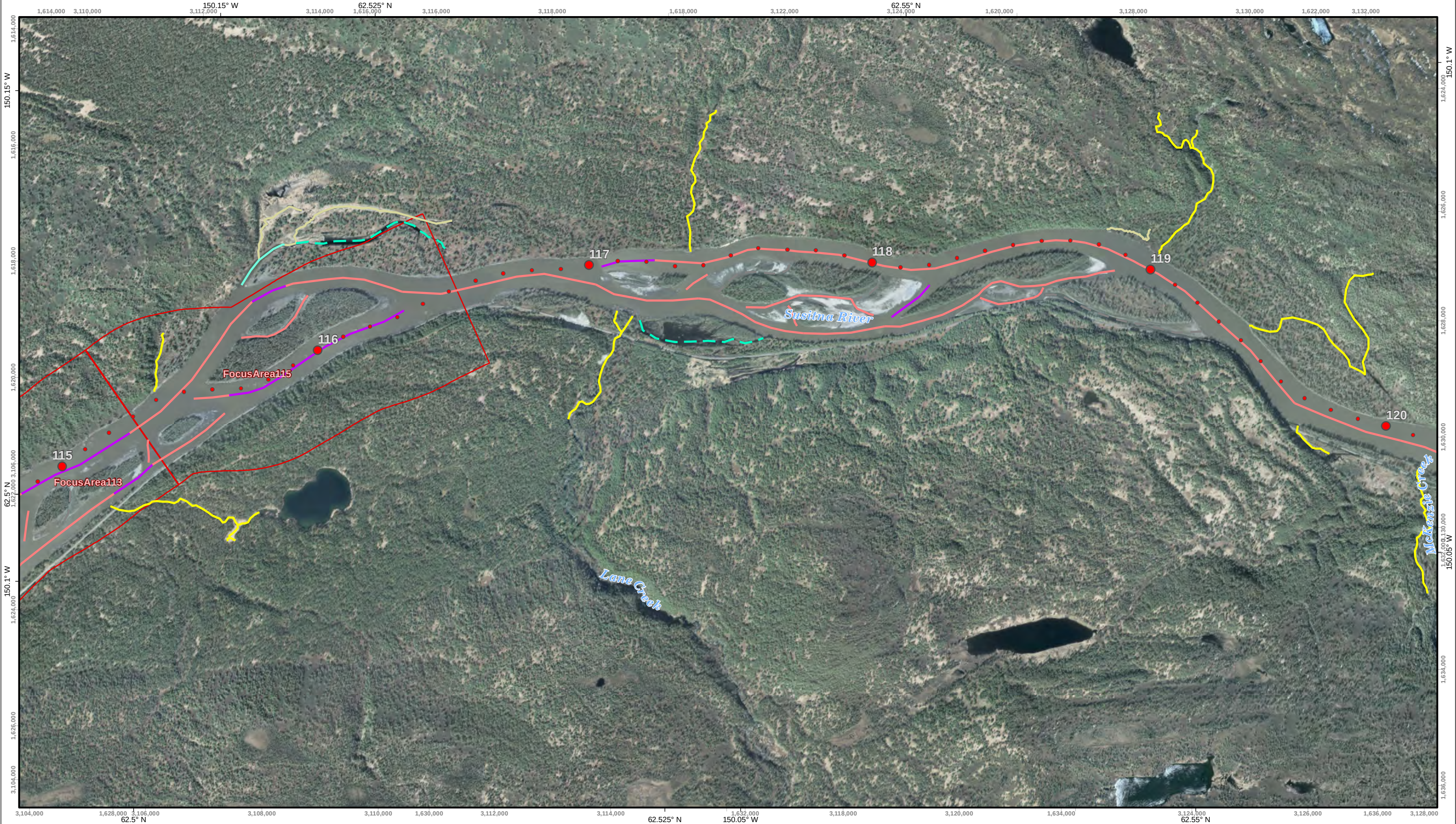
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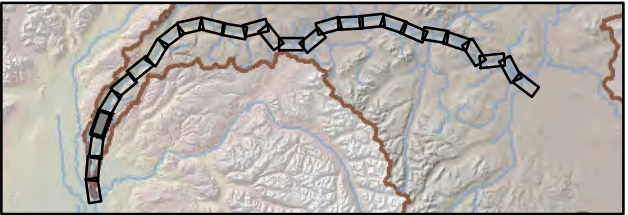
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FeetMeters

Map Projection: NAD83 State Plane Zone 4 (Feet)
Grid Interval: 2000'

General Features			
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	Susitna Geomorphic Reach Breaks		Pool
	Focus Area		Rapid
			Riffle
			Tributary
			Unidentified
			Upland Slough
			Side Slough
			Backwater
			Beaver Complex



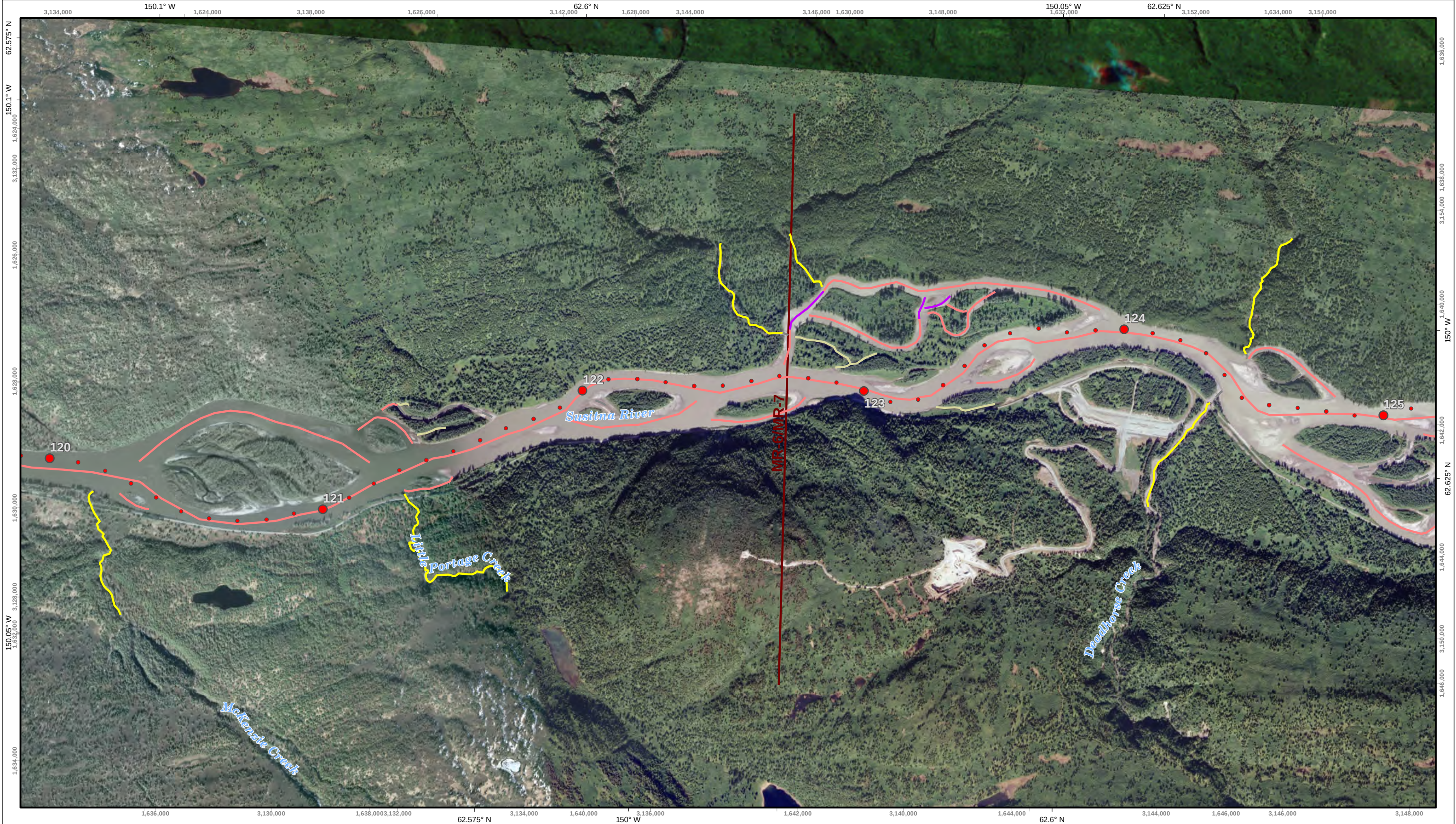
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FeetMeters

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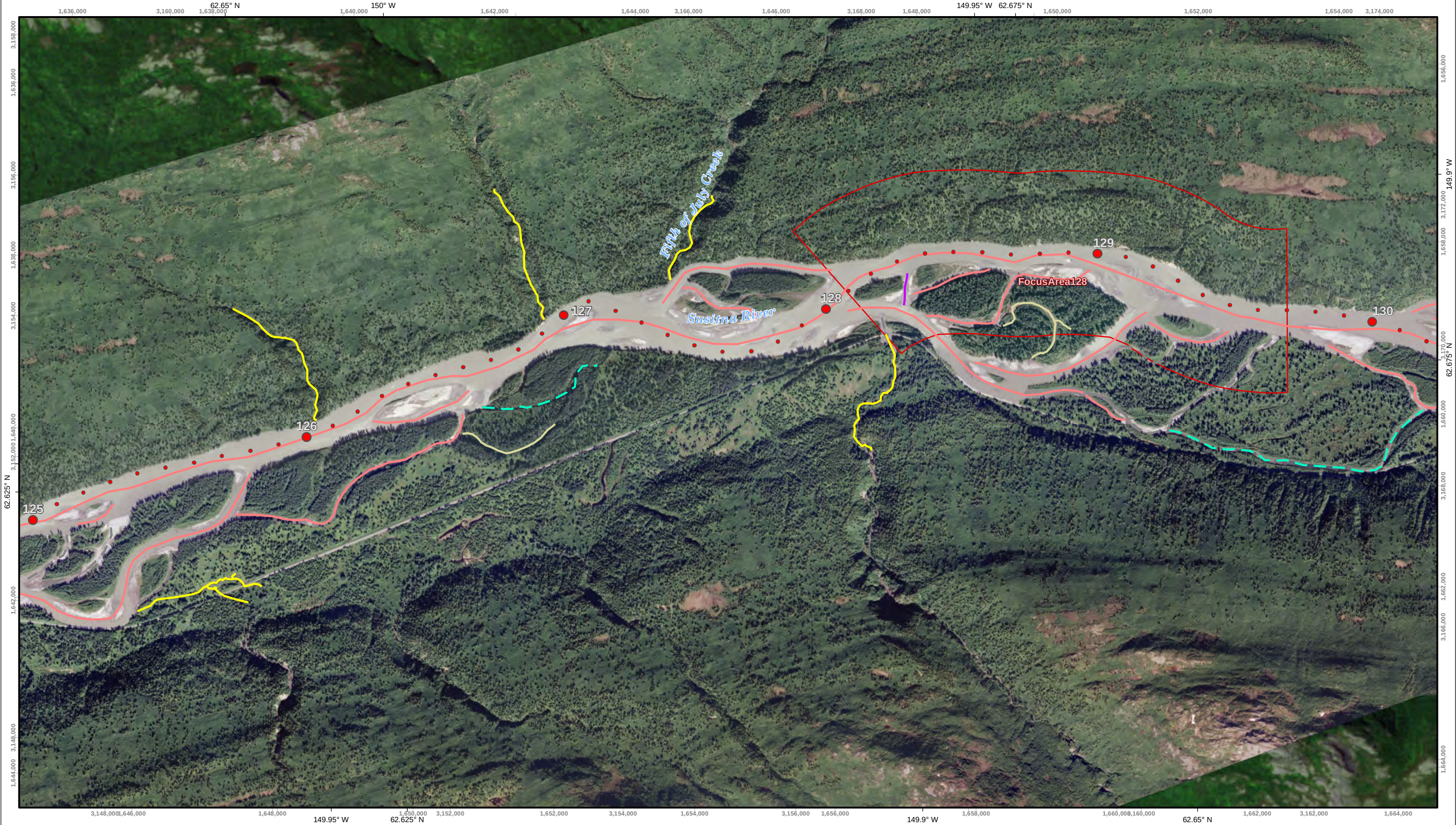
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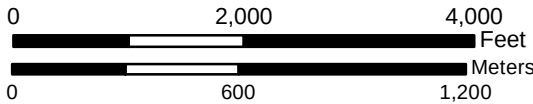
Page 5 of 27



Susitna - Watana Hydroelectric Project
Fish Barrier and Aquatic Habitat Field Survey Map Book



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Map Projection: NAD83 State Plane Zone 4 (Feet)
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General Features

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- Susitna Geomorphic Reach Breaks
- Focus Area

Mesohabitats

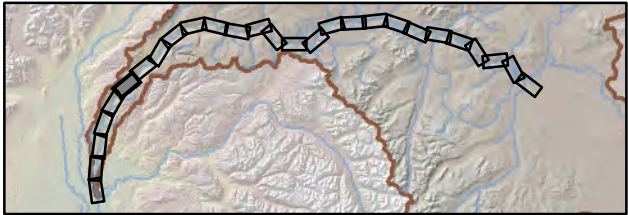
- Glide or Run
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Macrohabitats

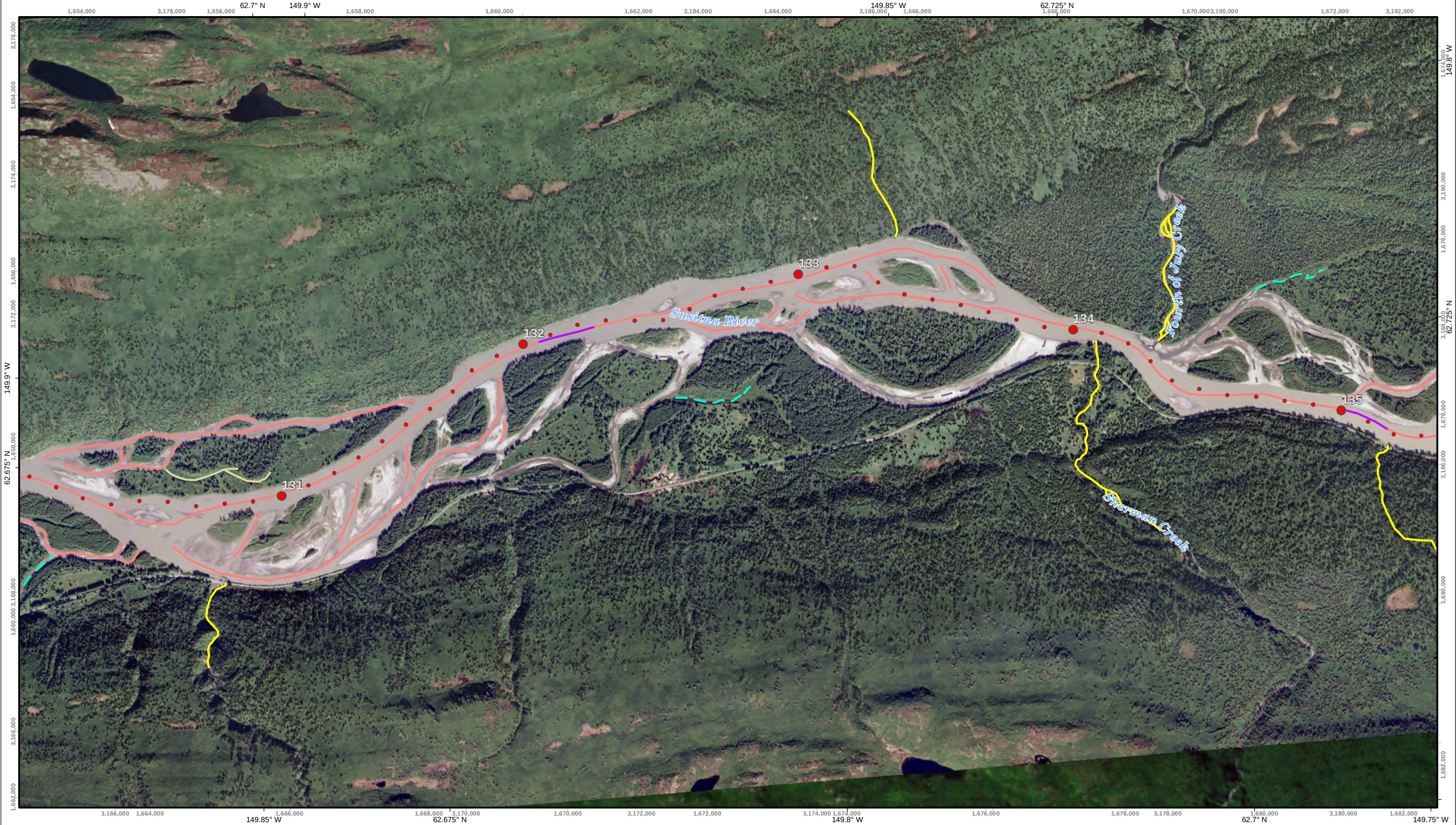
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Special Habitat Features

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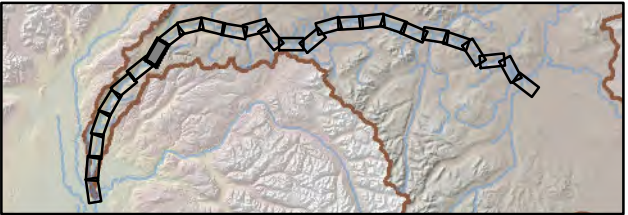
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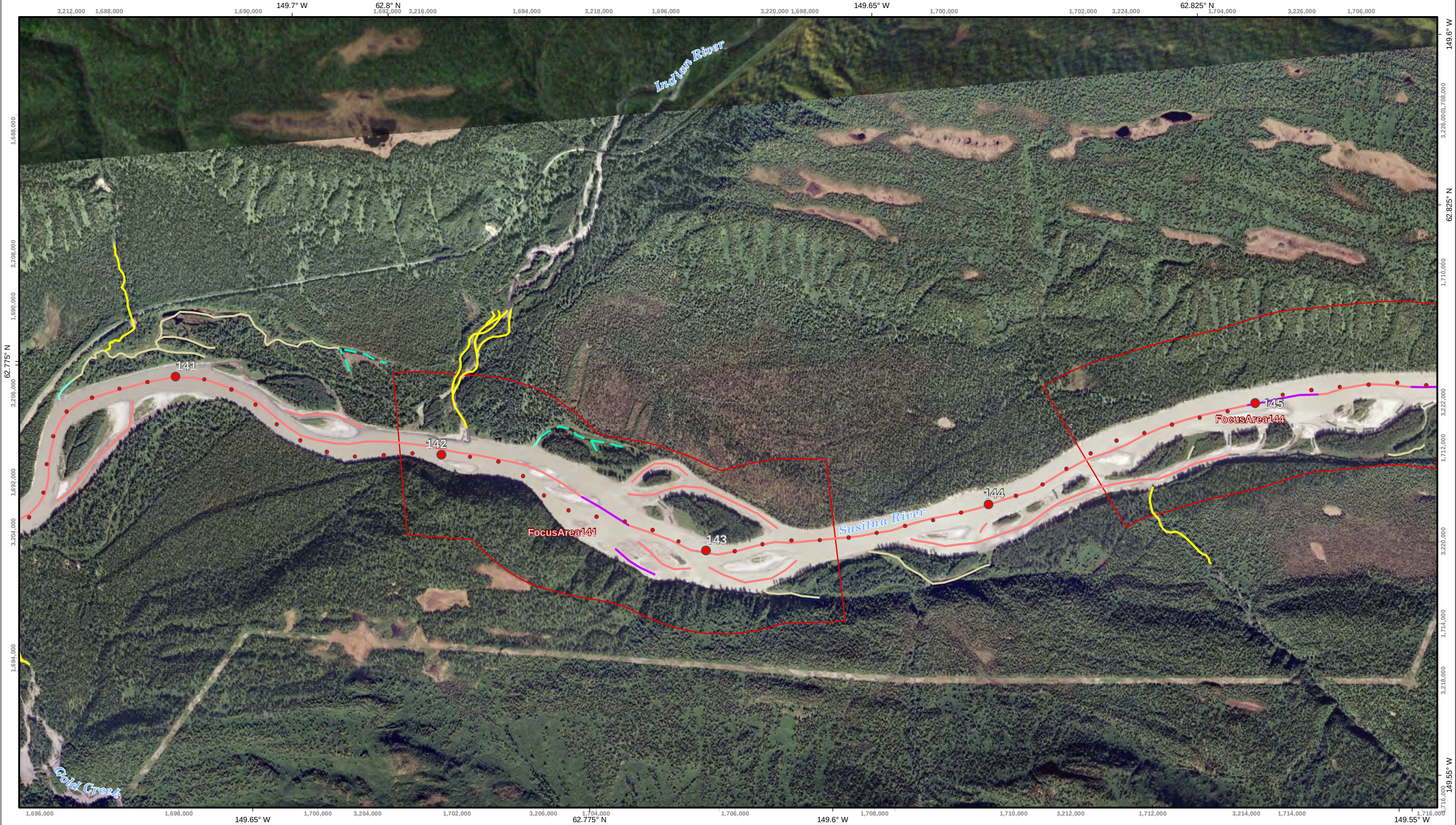
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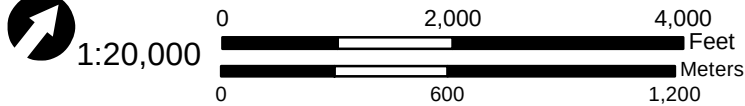
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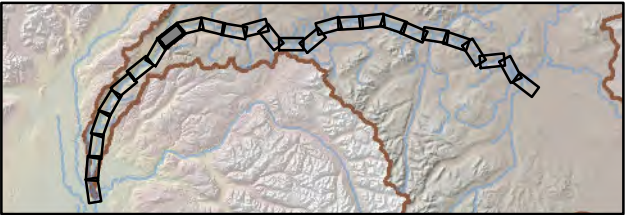


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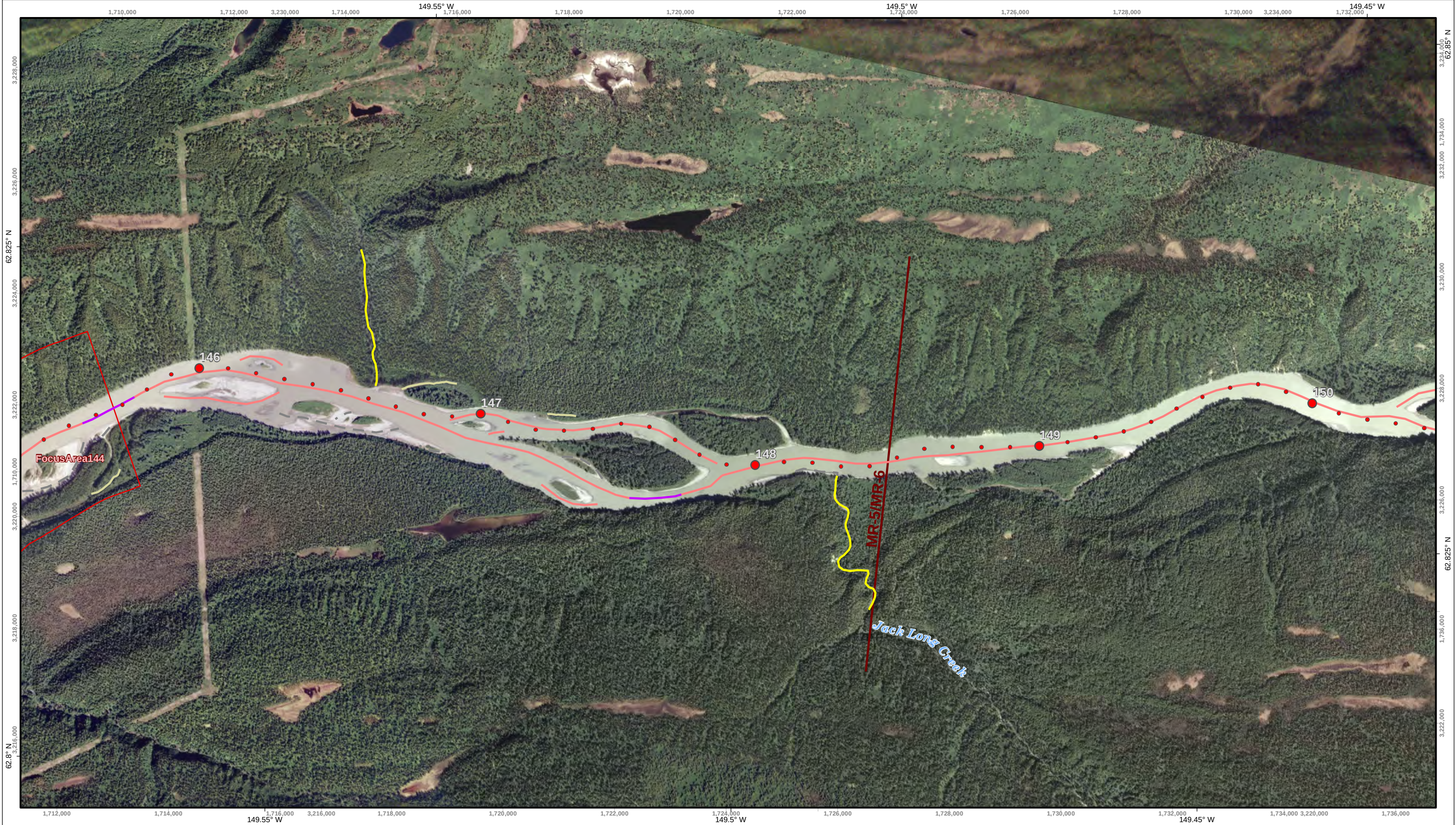


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Grid Interval: 2000'

General Features			
●	Susitna Project River Miles	—	Glide or Run
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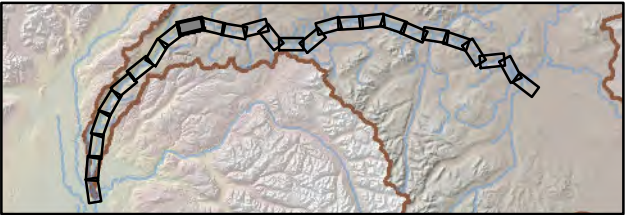
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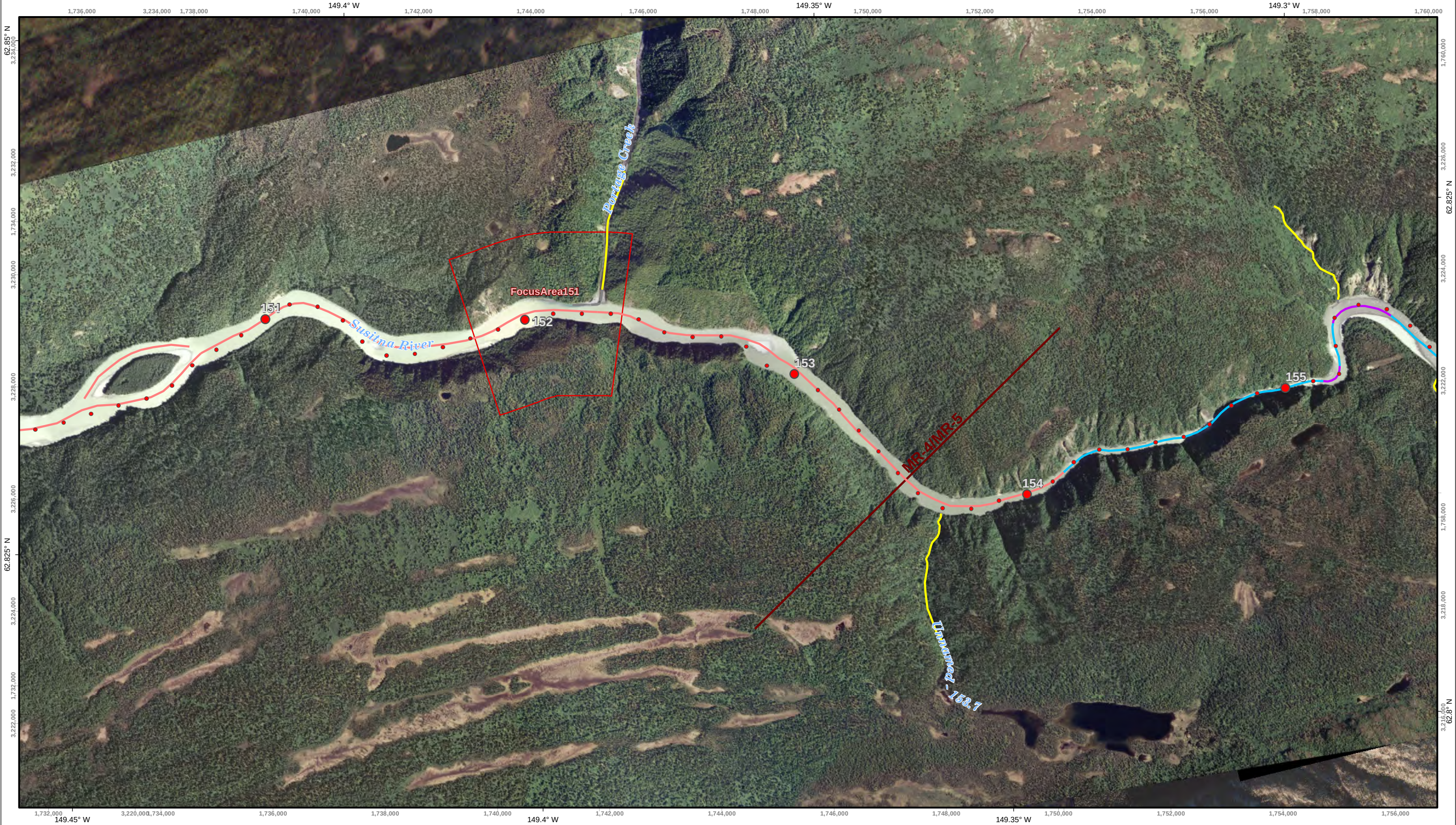
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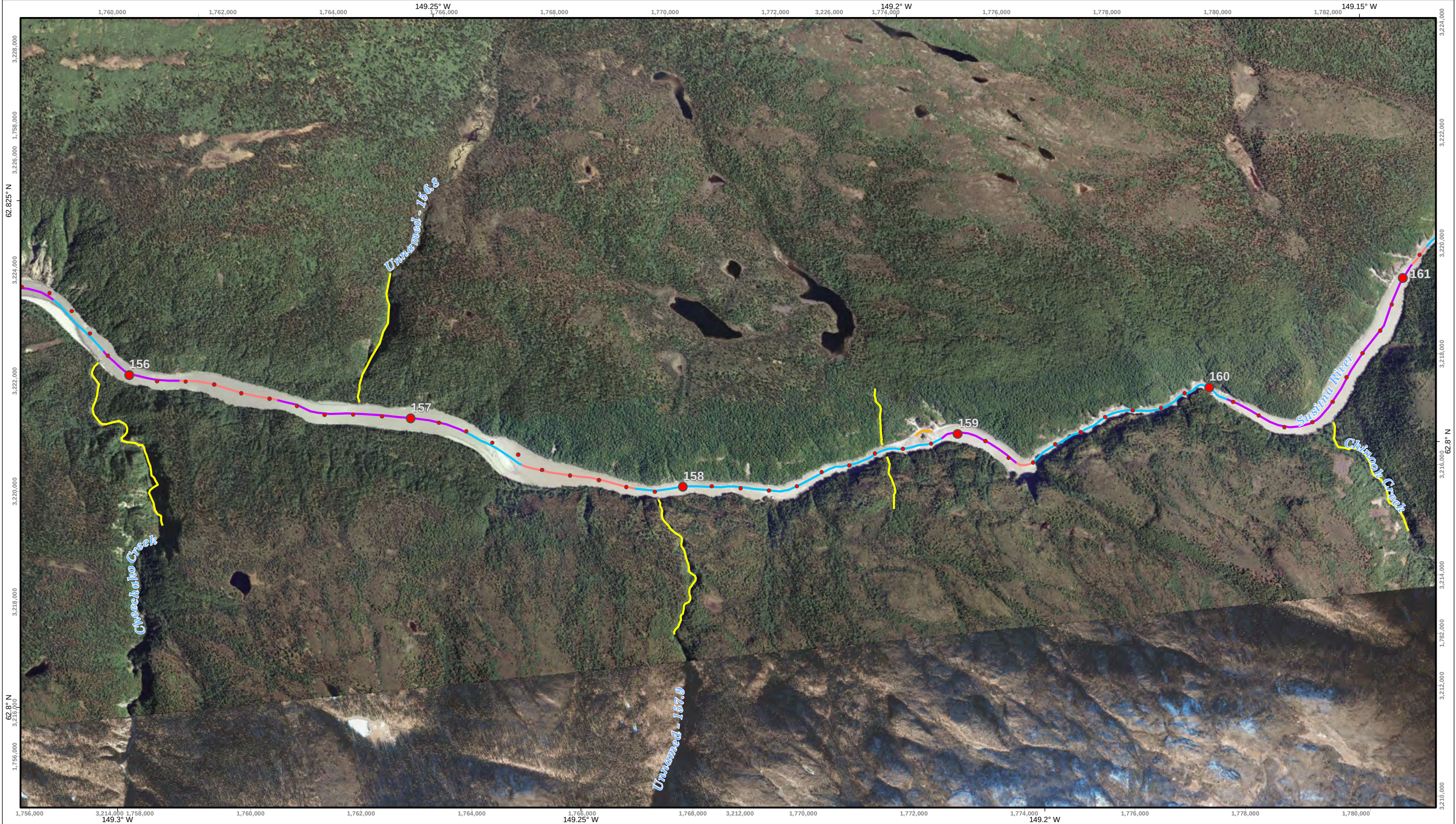
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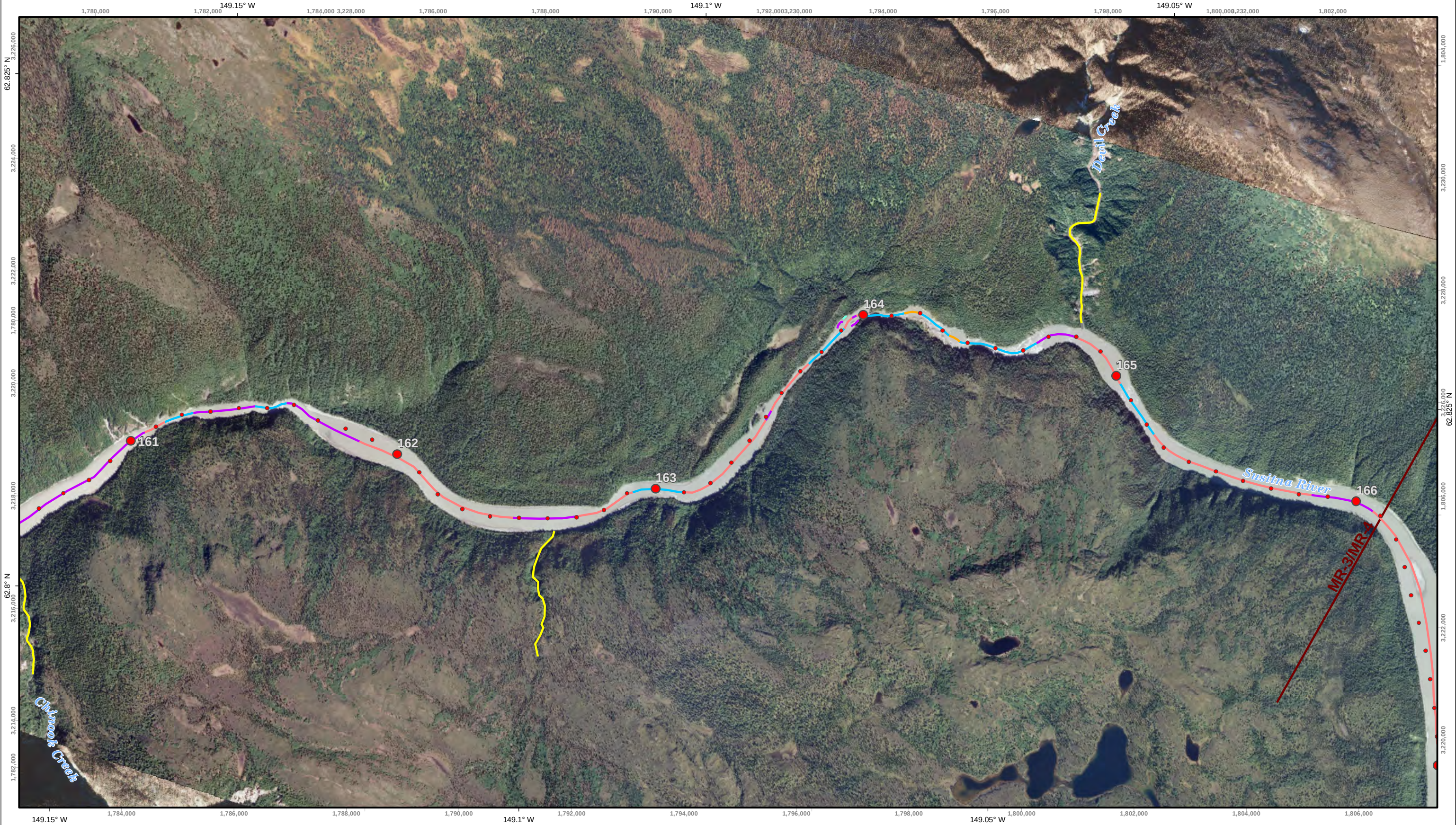
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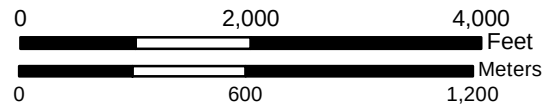
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Map Projection: NAD83 State Plane Zone 4 (Feet)
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General Features

- Susitna Project River Miles
- Susitna Geomorphologic Reach Breaks
- Focus Area

Mesohabitats

- Glide or Run
- Pool
- Rapid
- Riffle

Macrohabitats

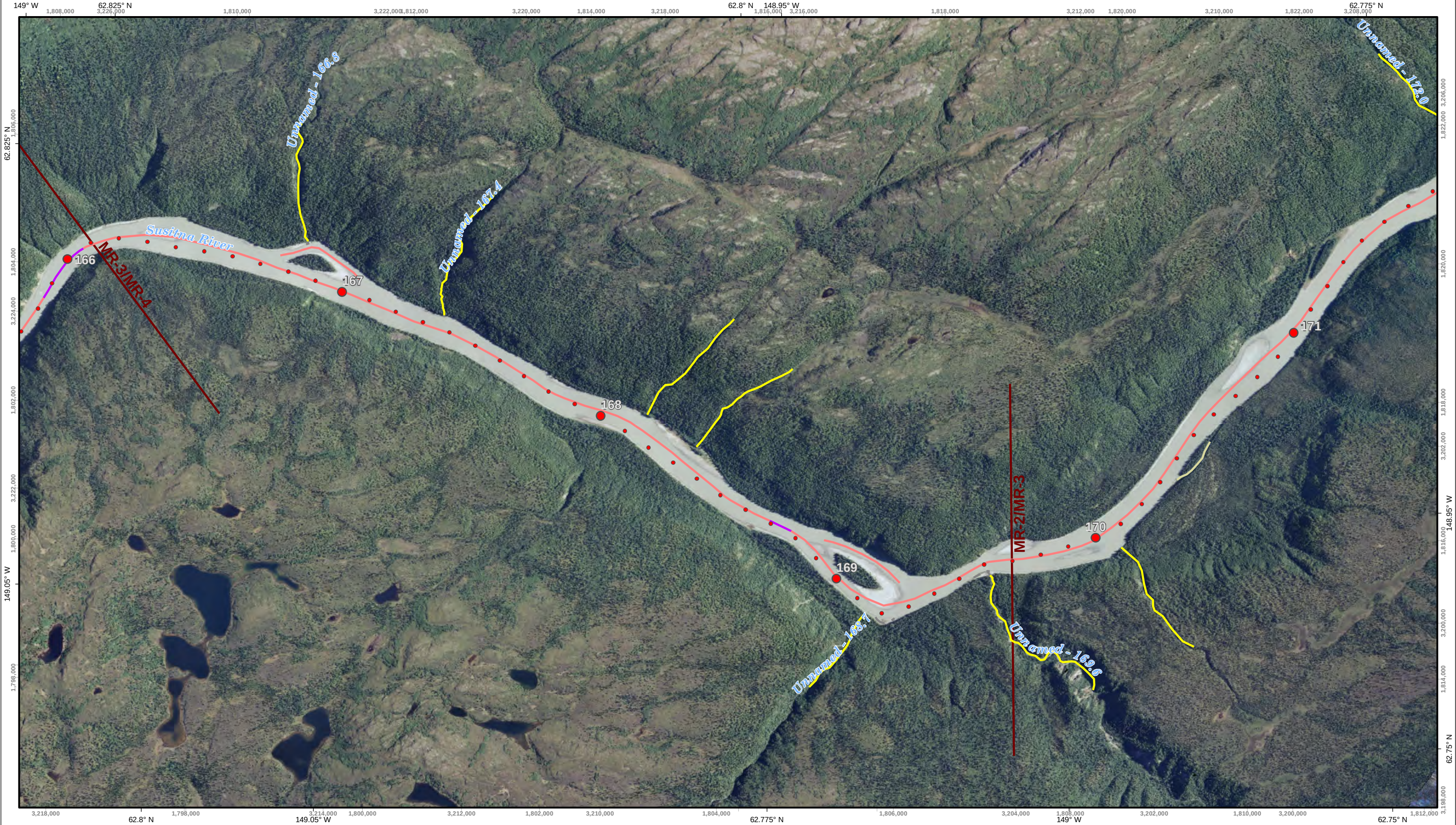
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- Tributary
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Special Habitat Features

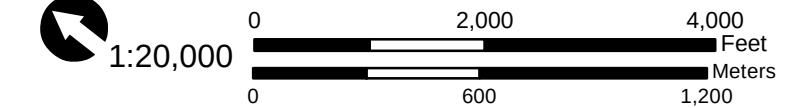
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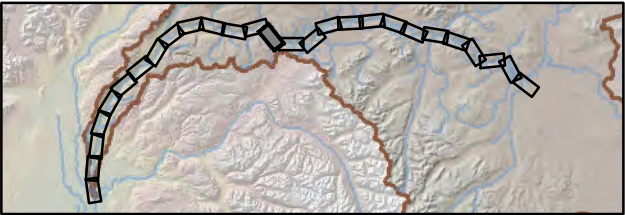


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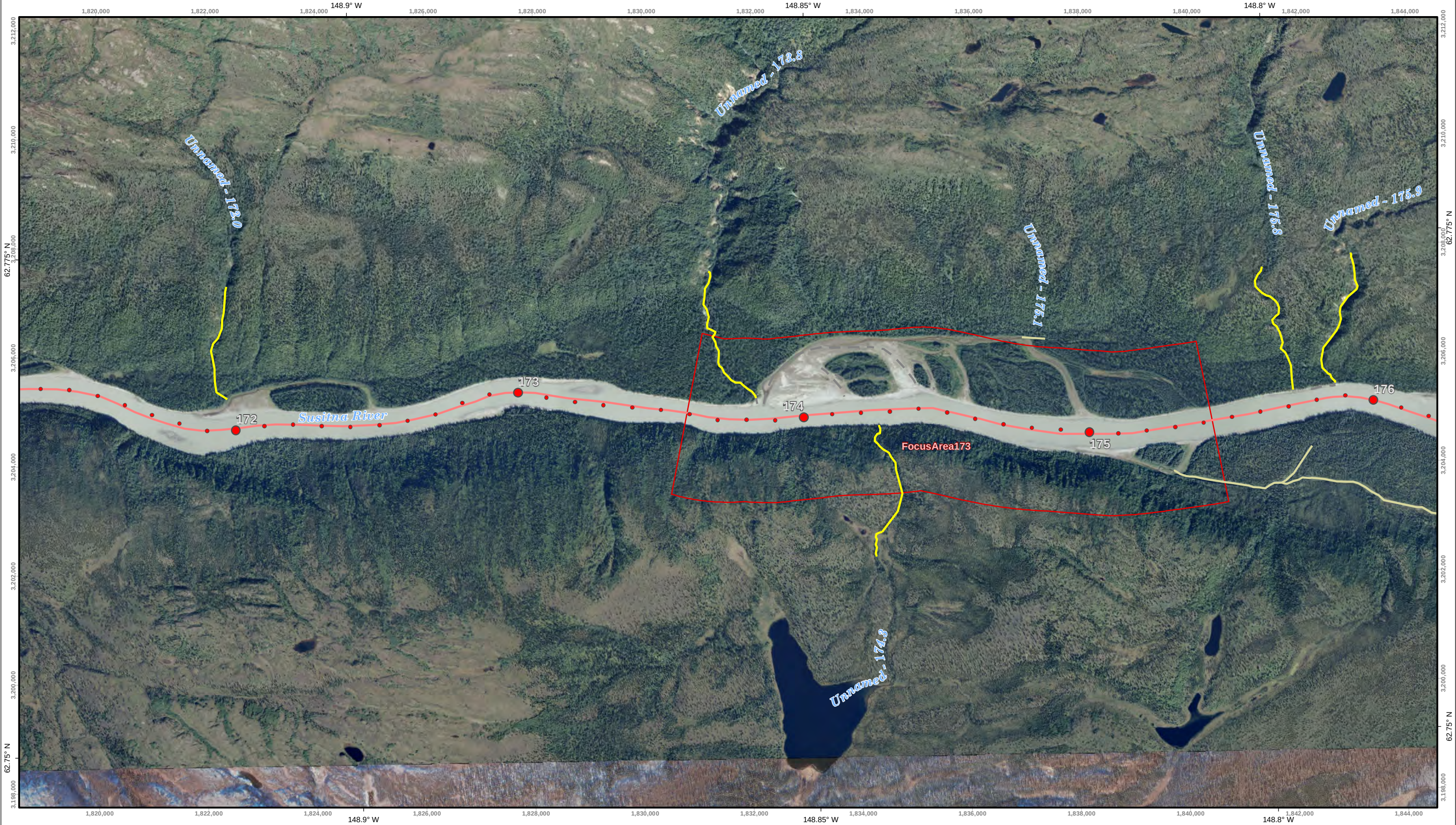


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General Features		Mesohabitats		Macrohabitats		Special Habitat Features	
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	Focus Area	—	Rapid	—	Unidentified		
		—	Riffle	—	Upland Slough		



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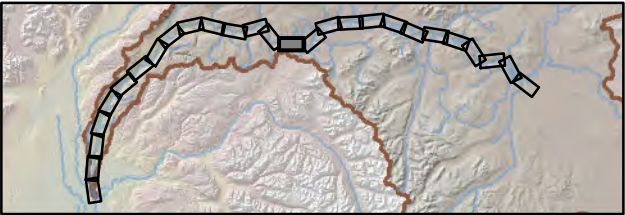
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Feet

Meters

Map Projection: NAD83 State Plane Zone 4 (Feet)
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General Features							
	Susitna Project River Miles		Mesohabitats		Macrohabitats		Special Habitat Features
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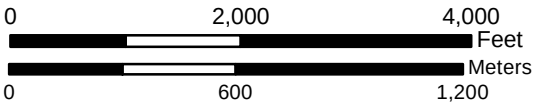
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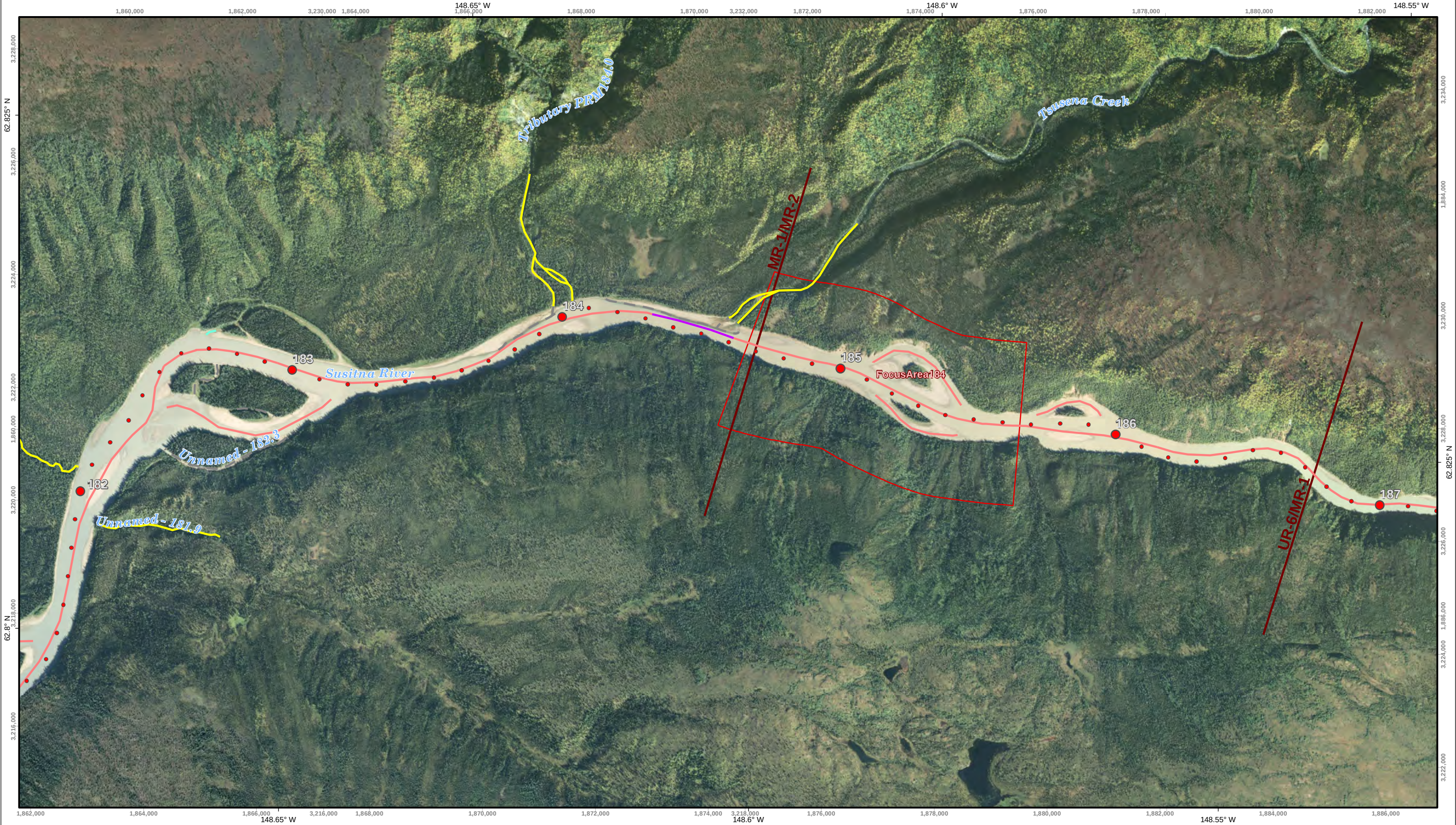
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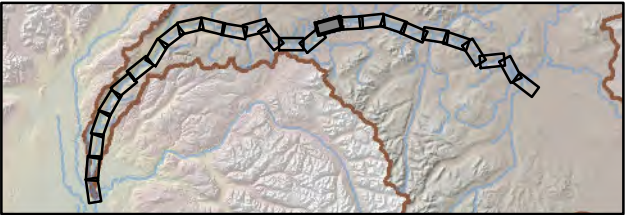
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FeetMeters

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General Features			
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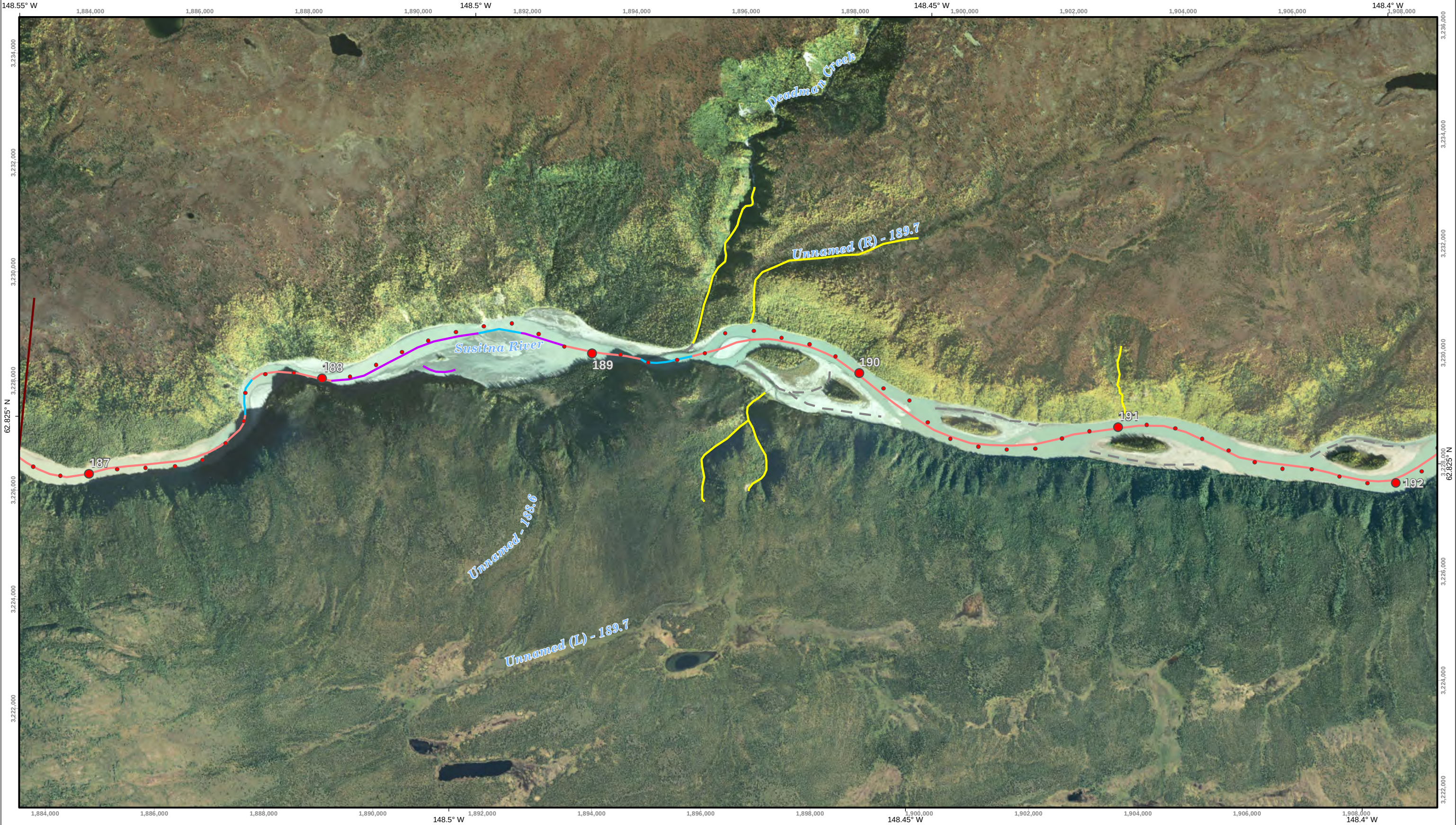
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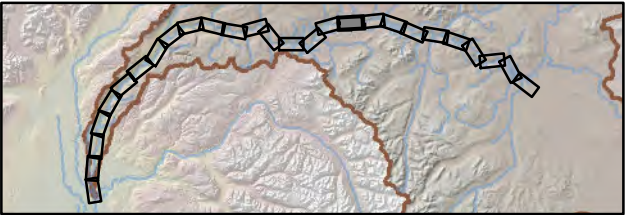
Feet

Meters

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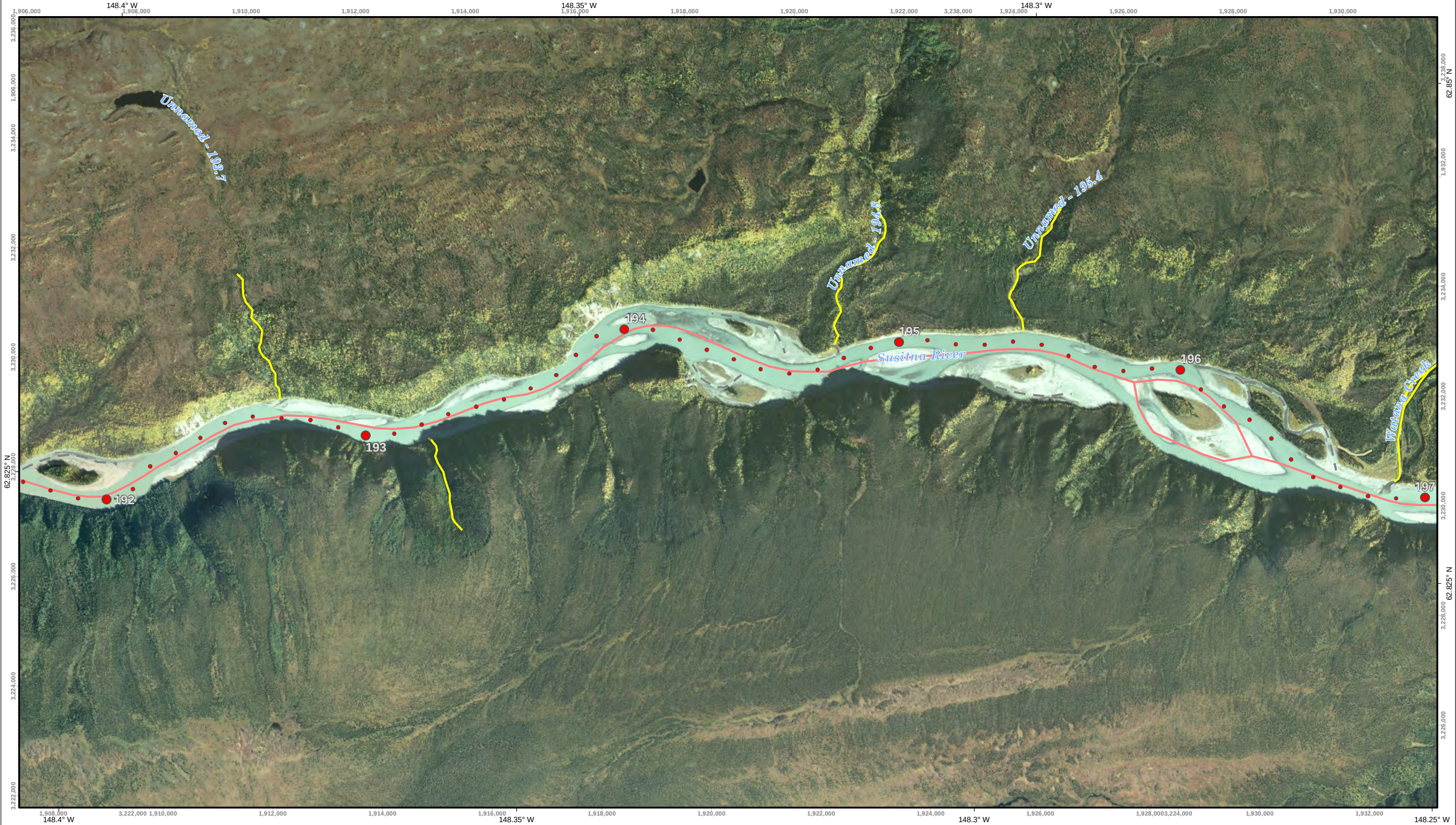
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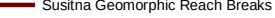
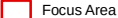
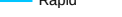
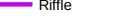


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0 2,000 4,000 Feet

0 600 1,200 Meters

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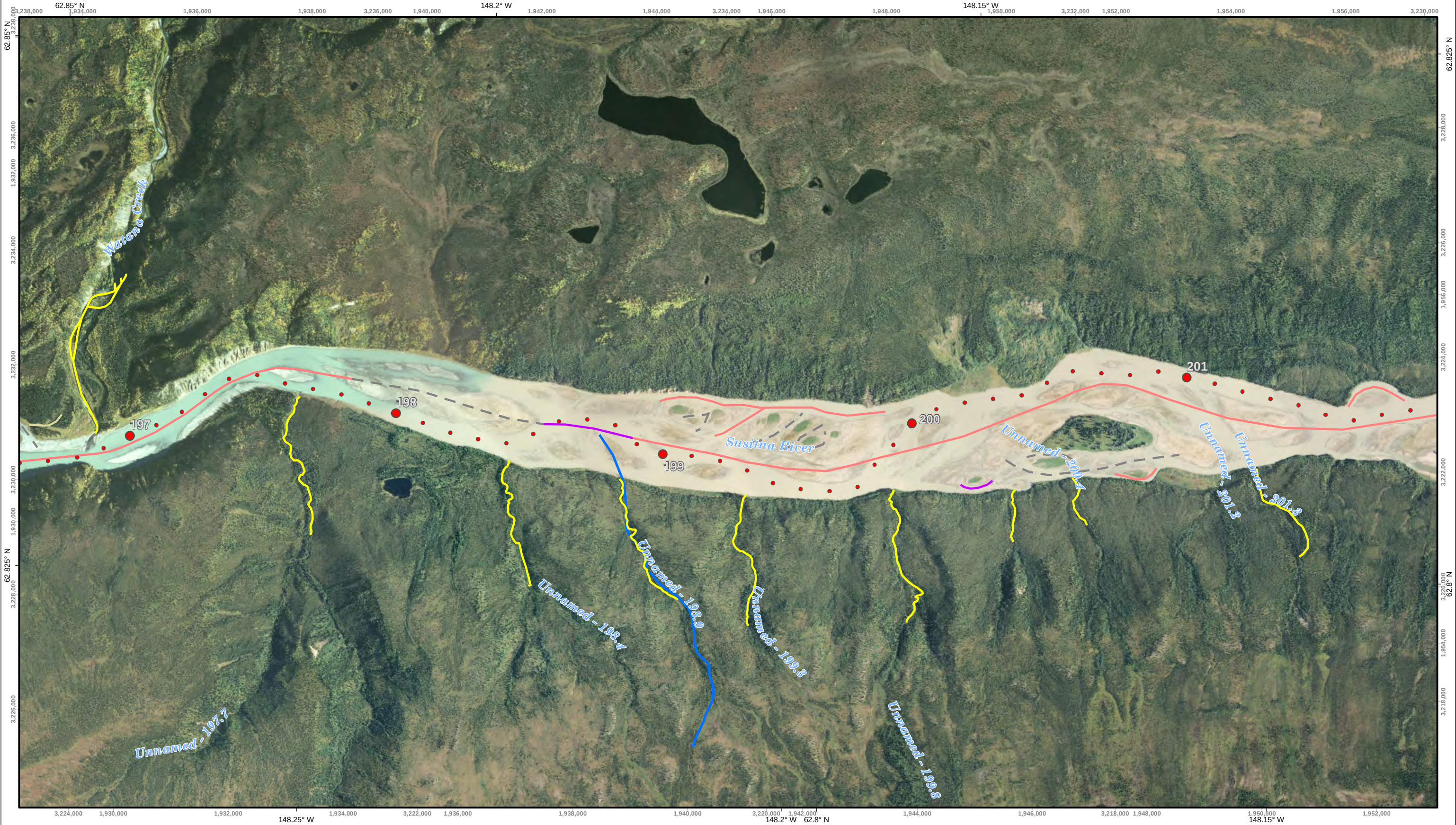
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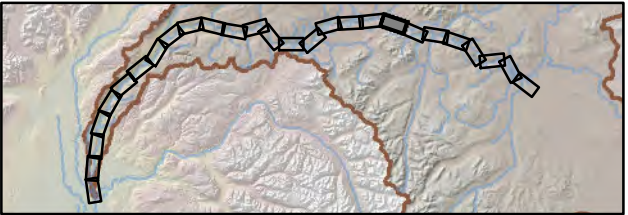
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FeetMeters

Map Projection: NAD83 State Plane Zone 4 (Feet)
Grid Interval: 2000'

General Features			
	Susitna Project River Miles		Mesohabitats
	Susitna Geomorphic Reach Breaks		Glide or Run
	Focus Area		Pool
			Rapid
			Riffle
			Macrohabitats
			Side Slough
			Tributary
			Unidentified
			Upland Slough
			Special Habitat Features
			Backwater
			Beaver Complex



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Map Author: HDR Alaska - MAD

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Fish Barrier and Aquatic Habitat Field Survey Map Book

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FeetMeters

Map Projection: NAD83 State Plane Zone 4 (Feet)
Grid Interval: 2000'

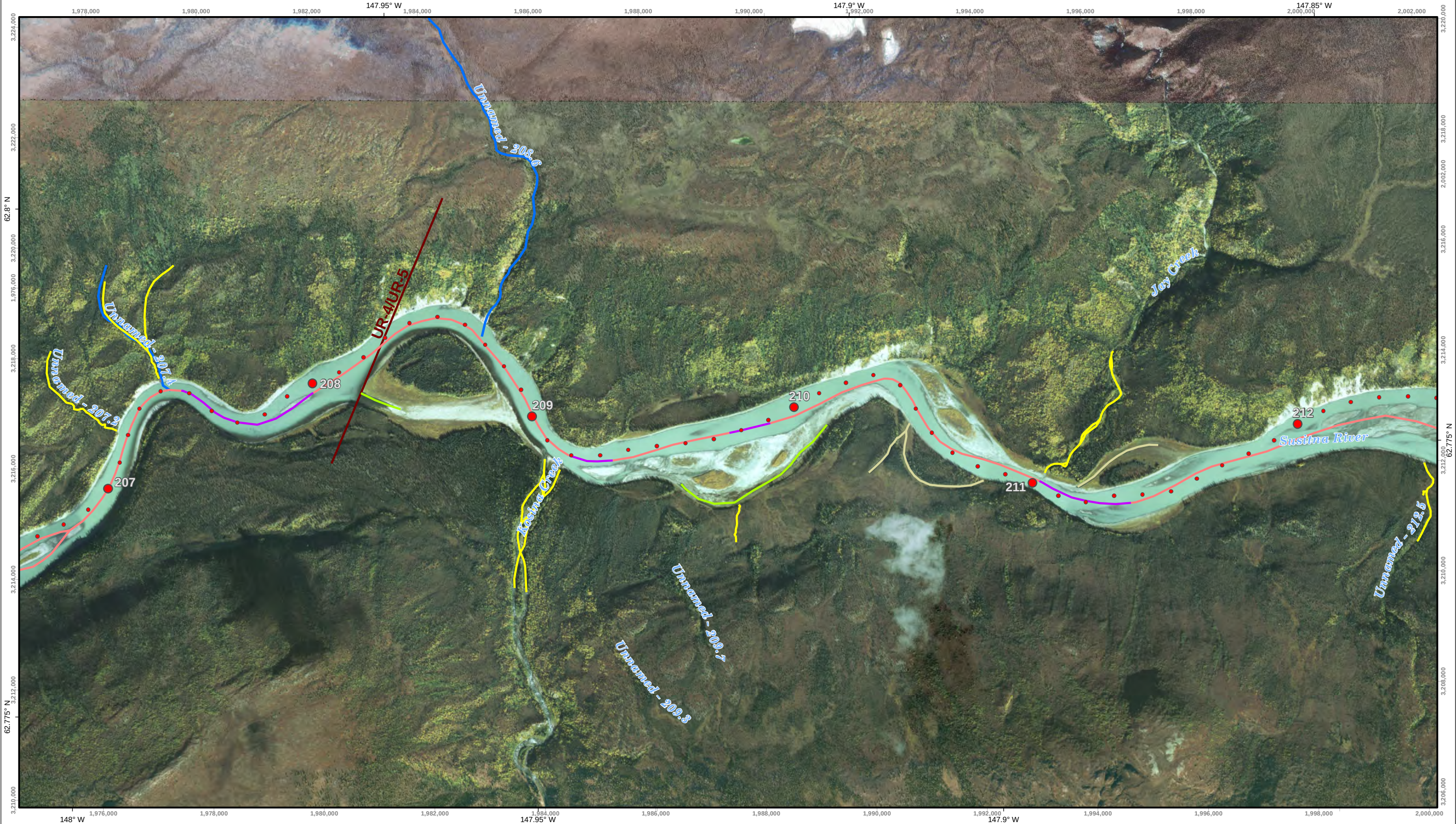
General Features			
	Susitna Project River Miles		Glide or Run
	Susitna Geomorphic Reach Breaks		Pool
	Focus Area		Rapid
			Riffle
			Side Slough
			Tributary
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			Upland Slough
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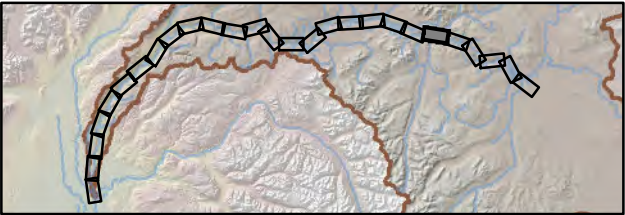
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FeetMeters

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General Features			
	Susitna Project River Miles		Mesohabitats
	Susitna Geomorphic Reach Breaks		Glide or Run
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			Backwater
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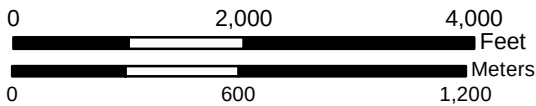




Susitna - Watana Hydroelectric Project
Fish Barrier and Aquatic Habitat Field Survey Map Book



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Map Projection: NAD83 State Plane Zone 4 (Feet)
Grid Interval: 2000'

General Features

- Susitna Project River Miles
- Susitna Geomorphic Reach Breaks
- Focus Area

Mesohabitats

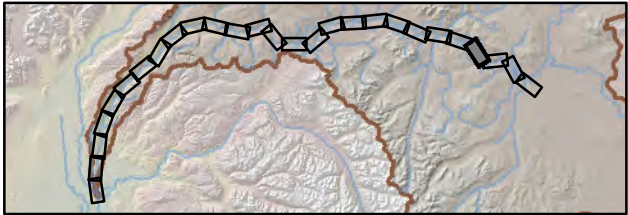
- Glide or Run
- Pool
- Rapid
- Riffle

Macrohabitats

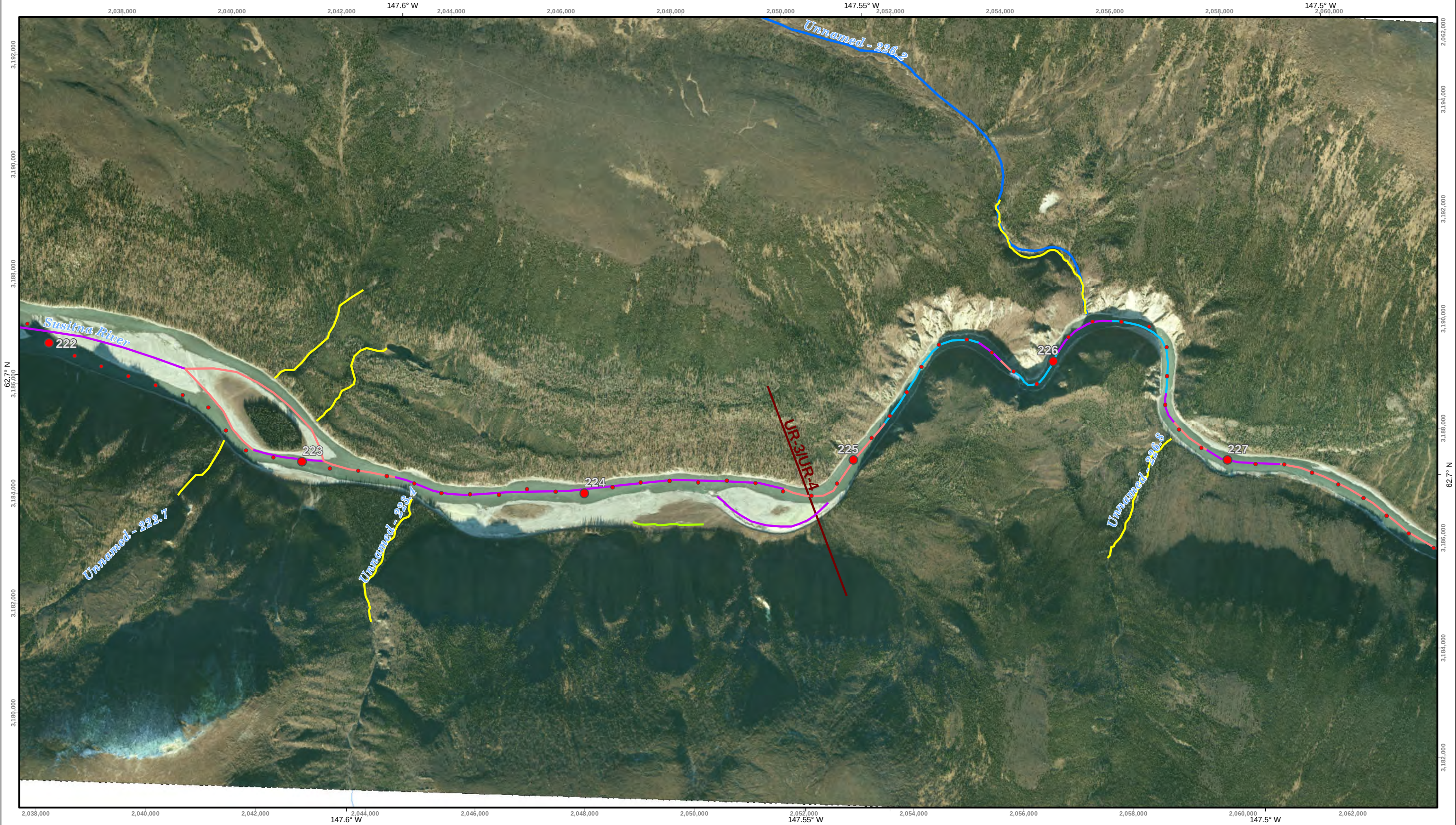
- Side Slough
- Tributary
- Unidentified
- Upland Slough

Special Habitat Features

- Backwater
- Beaver Complex



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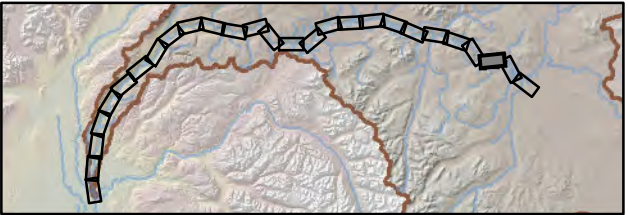
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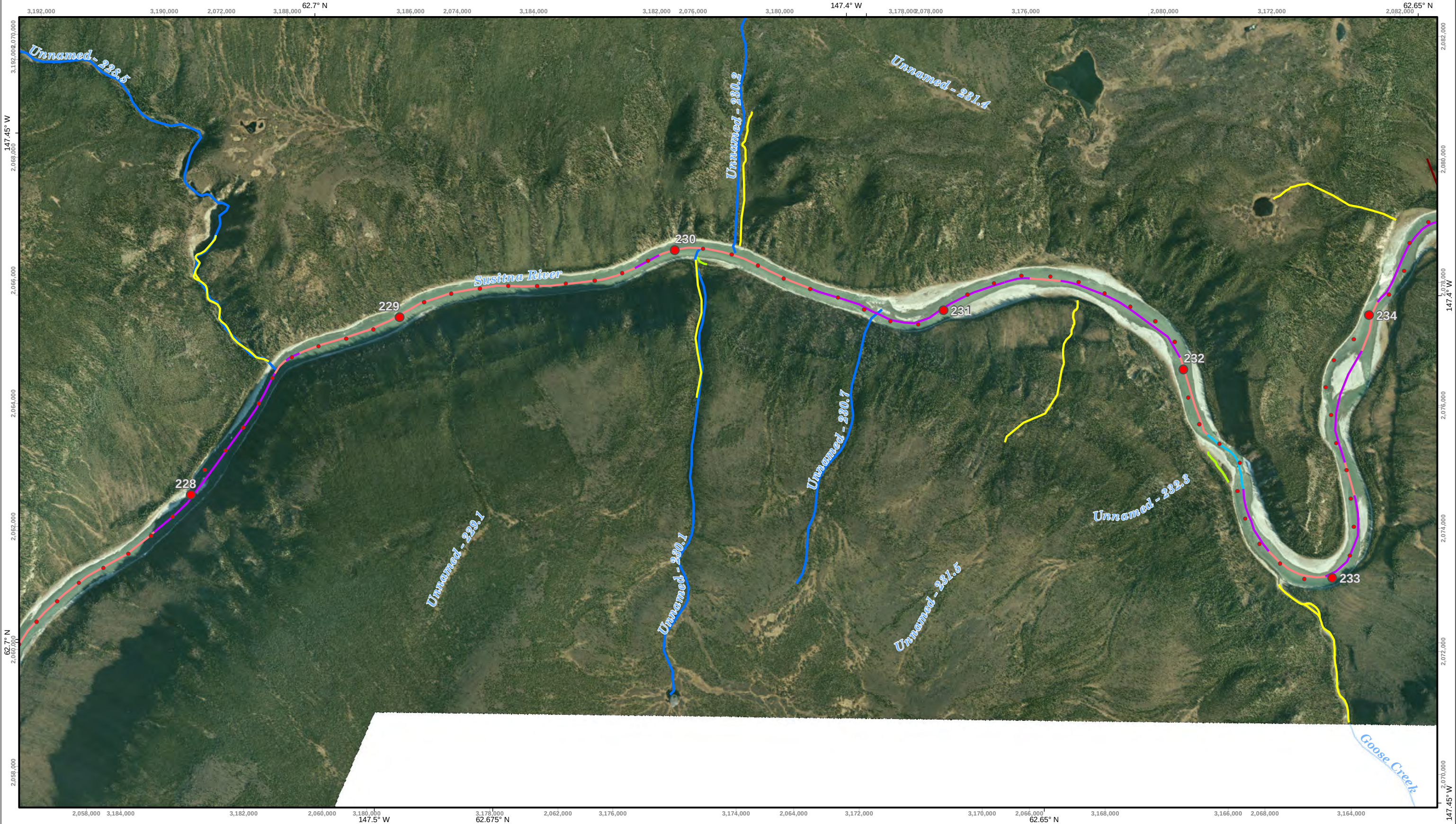
FeetMeters

Map Projection: NAD83 State Plane Zone 4 (Feet)
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General Features			
● Susitna Project River Miles	— Susitna Geomorphic Reach Breaks	— Focus Area	
Mesohabitats			
— Glide or Run	— Pool	— Rapid	— Riffle
Macrohabitats			
— Side Slough	— Tributary	— Unidentified	— Upland Slough
Special Habitat Features			
— Backwater	— Beaver Complex		



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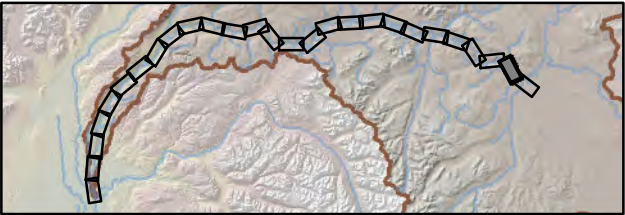
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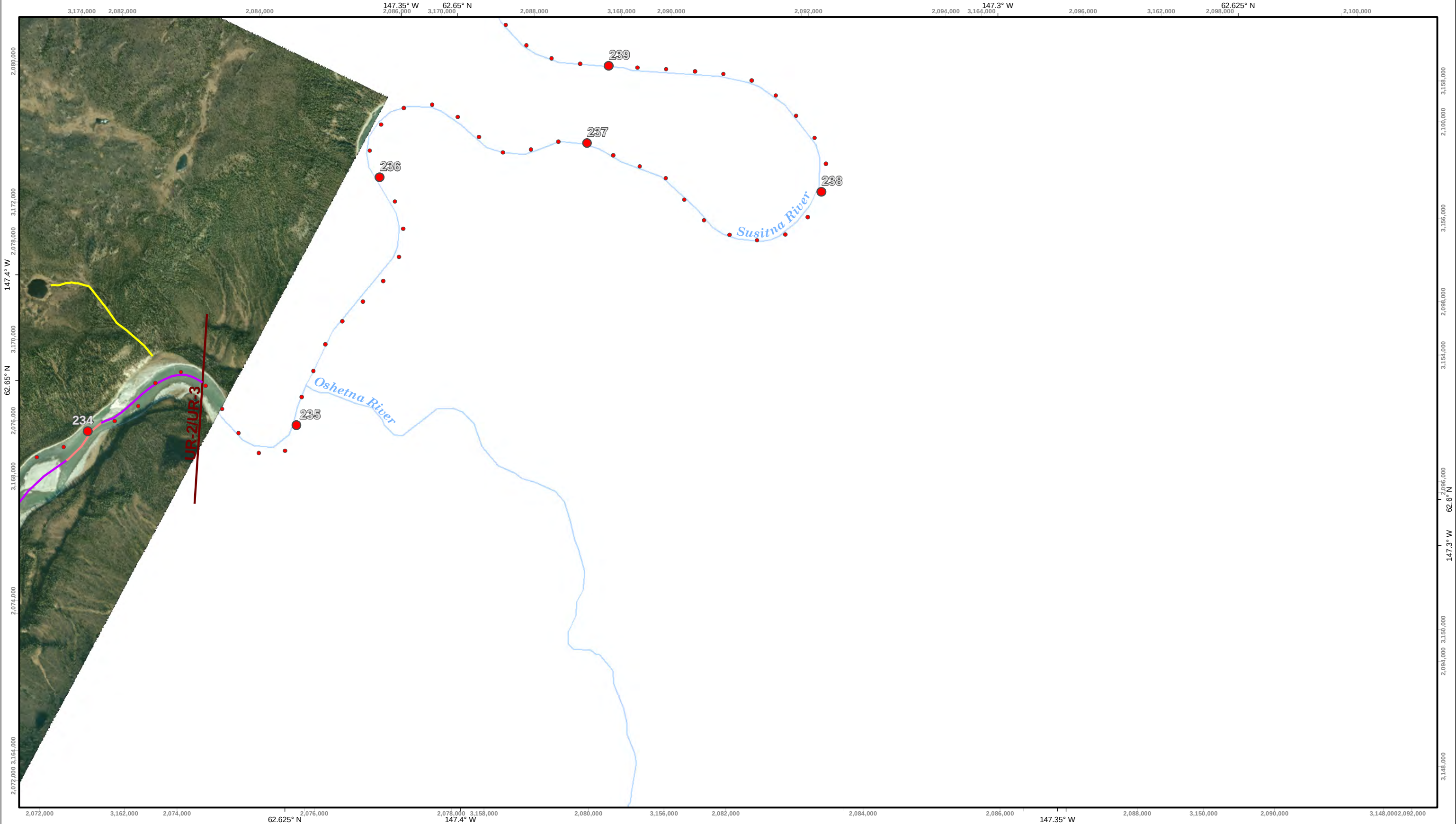
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Grid Interval: 2000'

General Features			
●	Susitna Project River Miles	—	Glide or Run
—	Susitna Geomorphic Reach Breaks	—	Pool
□	Focus Area	—	Rapid
		—	Riffle
Mesohabitats		Macrohabitats	
—	Side Slough	—	Tributary
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Special Habitat Features			
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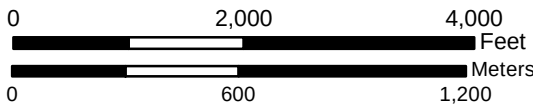
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