

PART A - APPENDIX J: TIR IMAGES

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

Baseline Water Quality Study (5.5)

**Part A - Appendix J
TIR Images**

Initial Study Report

Prepared for

Alaska Energy Authority



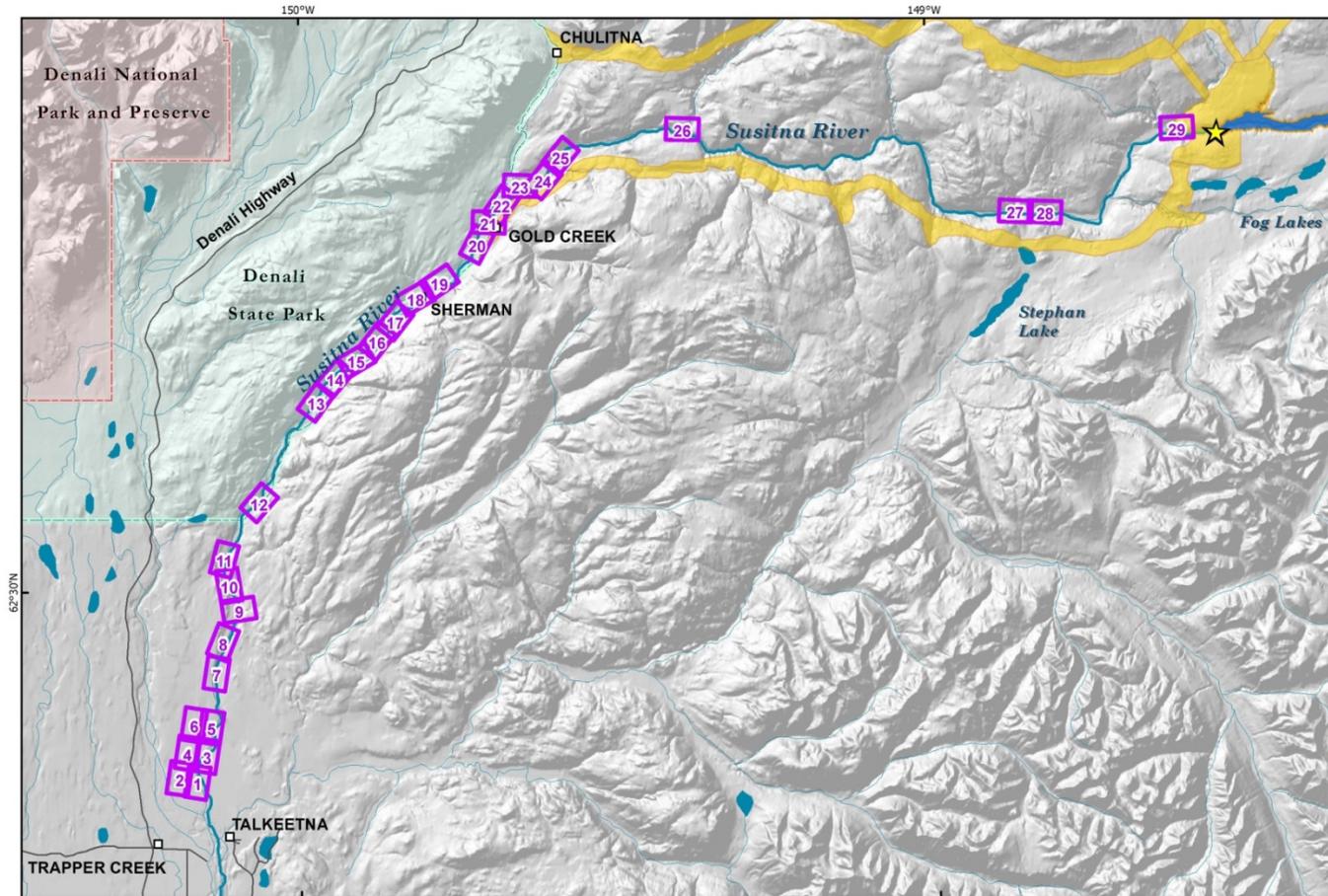
SUSITNA-WATANA HYDRO

Clean, reliable energy for the next 100 years.

Prepared by

Tetra Tech

June 2014



LEGEND

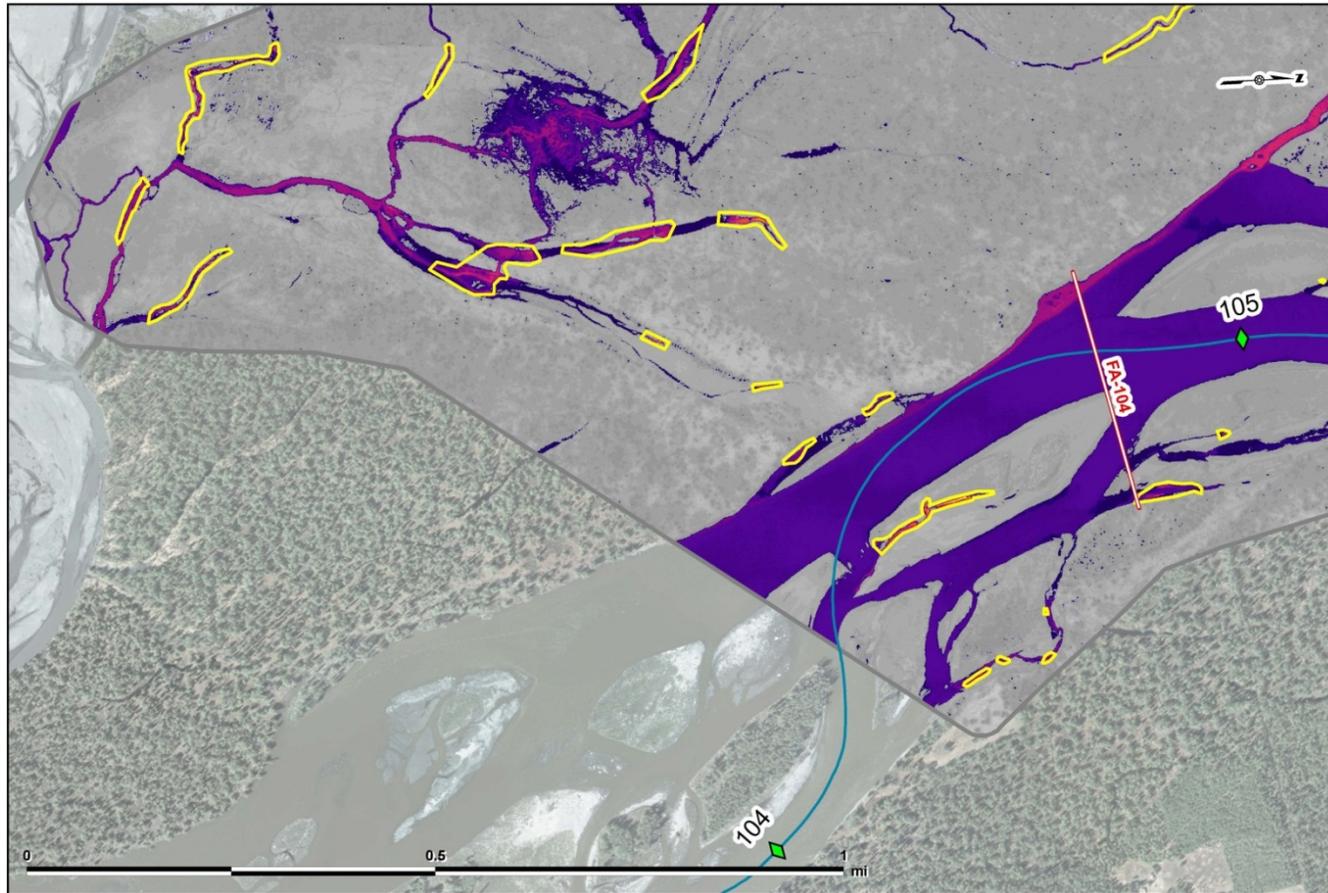
- ★ Proposed Watana Dam Site
- 📍 Proposed Watana Reservoir
- 📄 Map Pages (with page number)
- 🌊 Rivers, Streams, and Lakes
- 🟡 Proposed Study Area



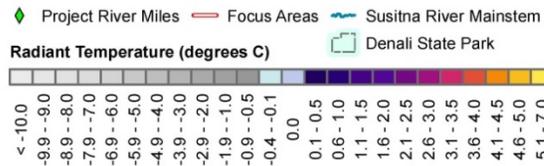
Data Sources: See Map References

Overview Map

Projection: Alaska Albers NAD 1983
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 Map Author: URS Alaska, Cynthia Kirkham
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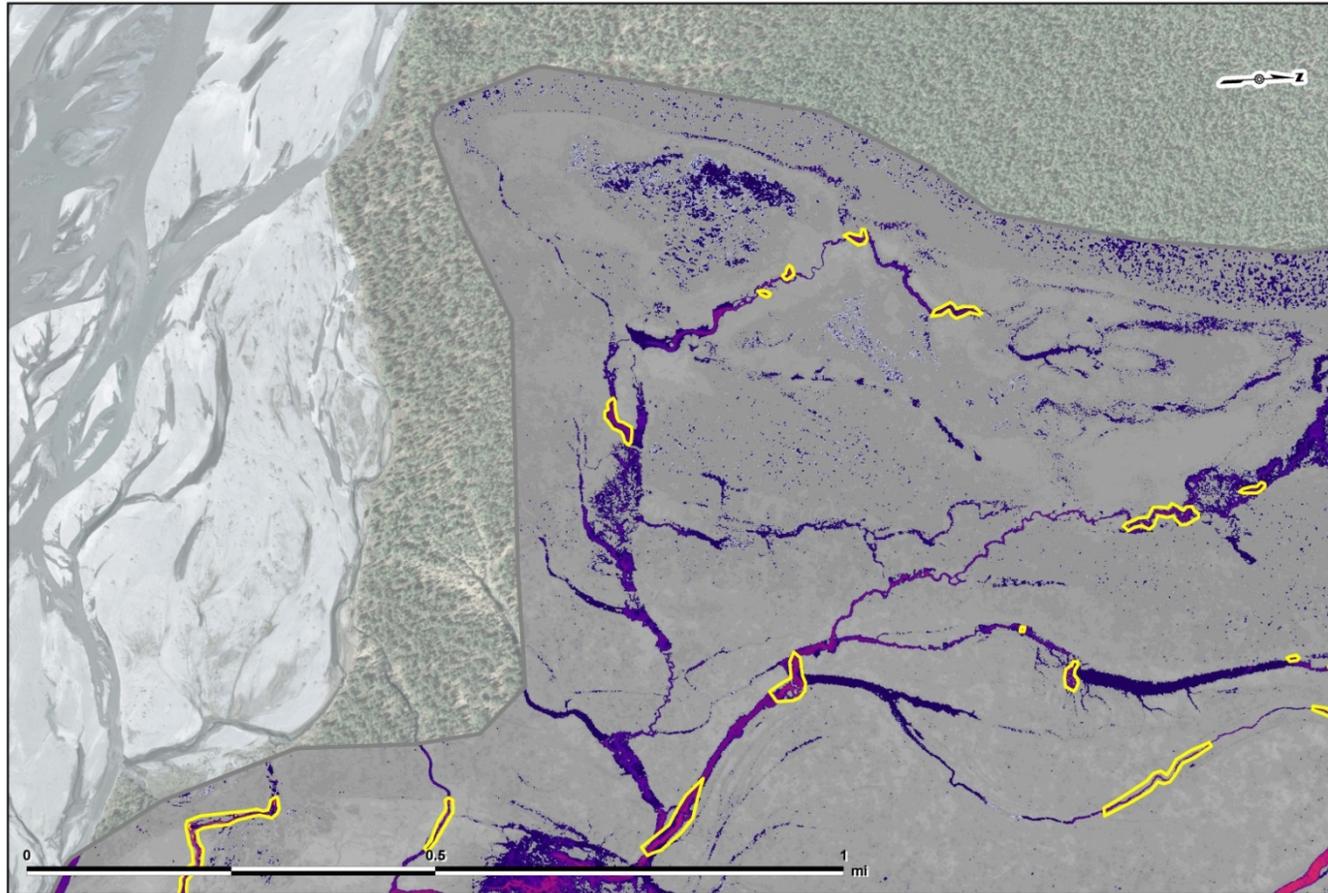
Focus Area 104/Whiskers Slough, Map 1 of 6



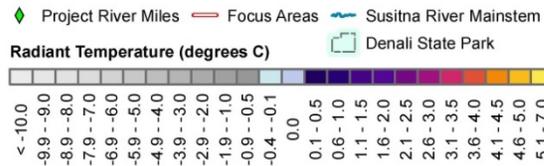
Data Sources: See Map References

Map Page 1 of 29

Projection: Alaska Albers NAD 1983
 Date Created: 1/10/2014
 Map Author: URS Alaska, Cynthia Kirkham
 File: ThermalData\October2013_20140110.mxd



LEGEND



Increased Groundwater Activity (by date flown)



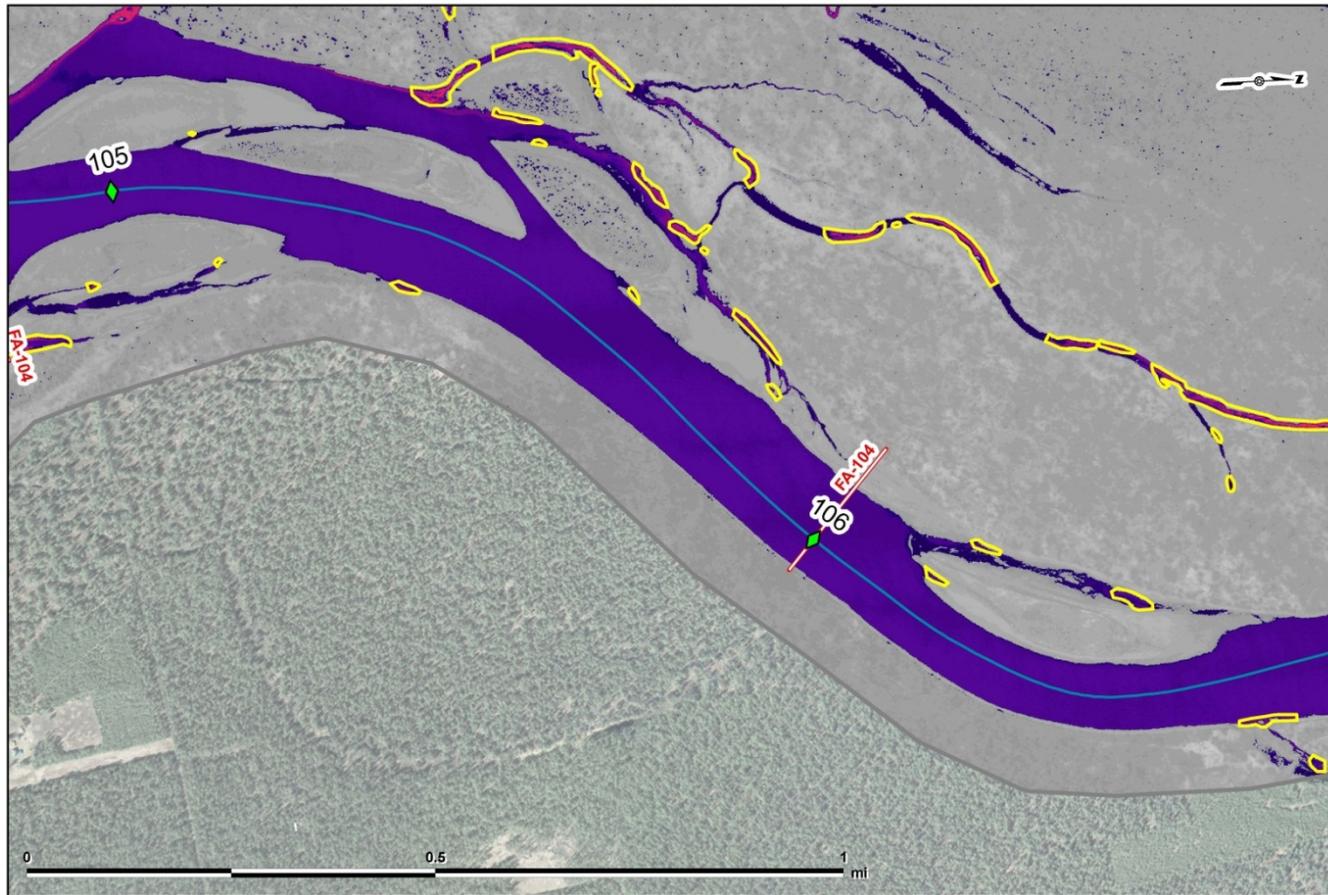
Focus Area 104/Whiskers Slough, Map 2 of 6



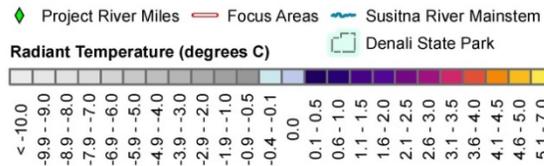
Data Sources: See Map References

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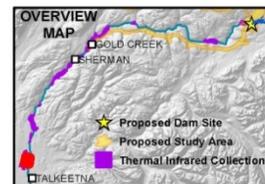
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Increased Groundwater Activity (by date flown)



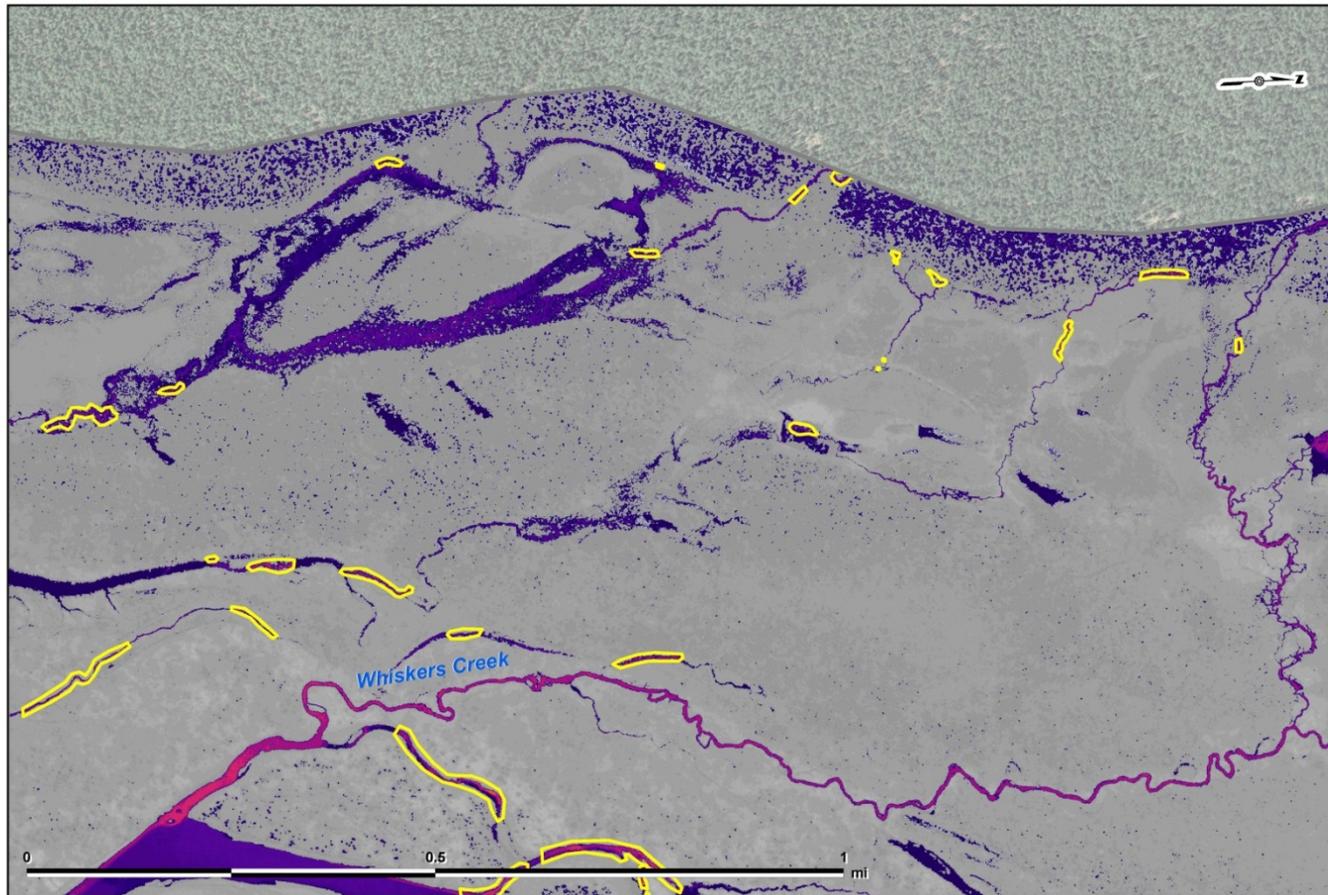
Focus Area 104/Whiskers Slough, Map 3 of 6



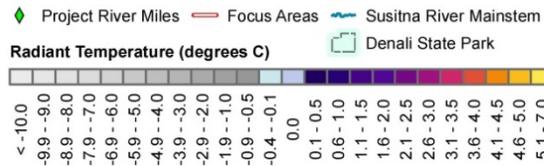
Data Sources: See Map References

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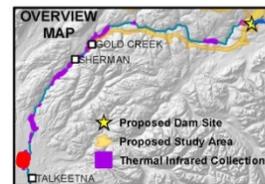
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Increased Groundwater Activity (by date flow)



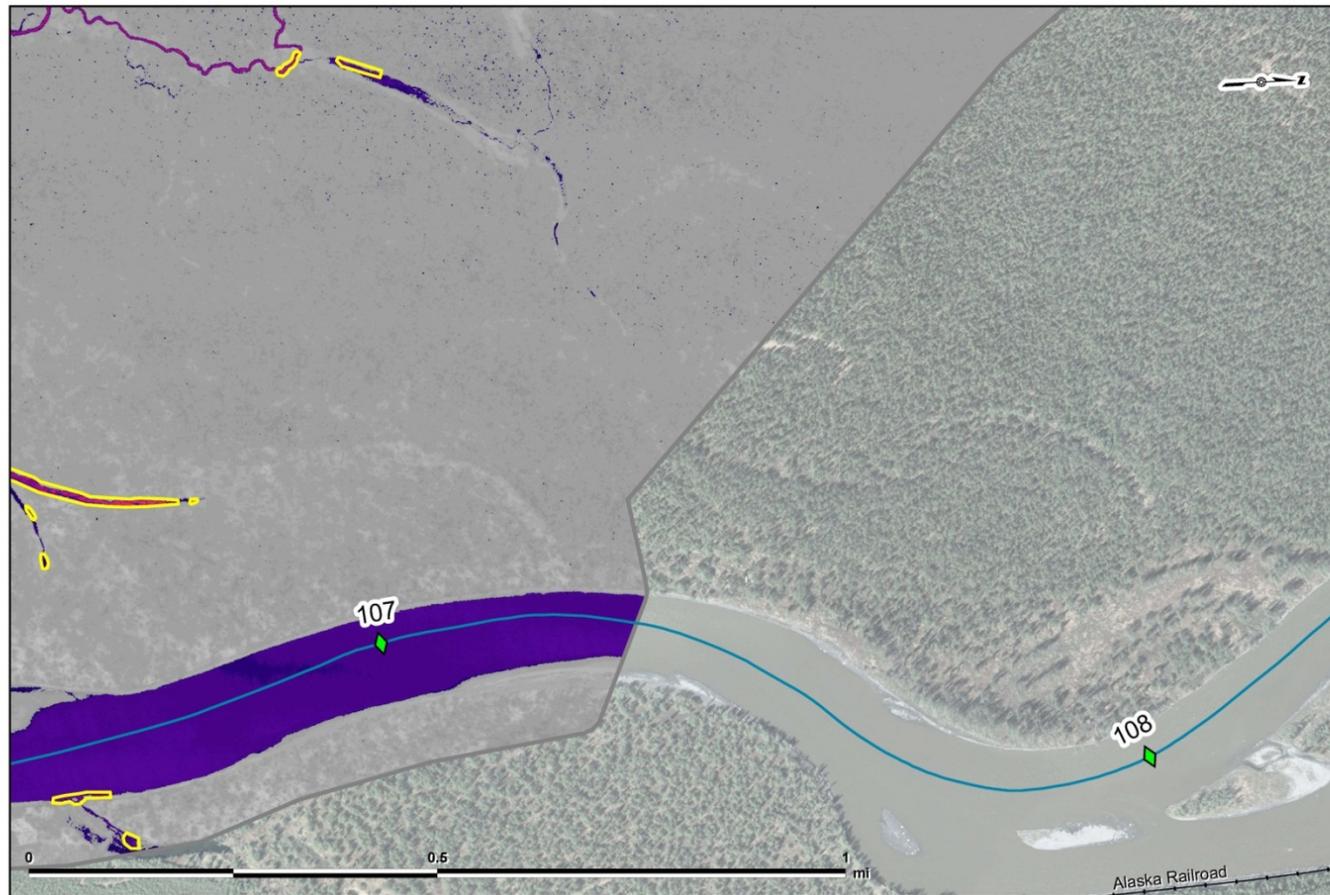
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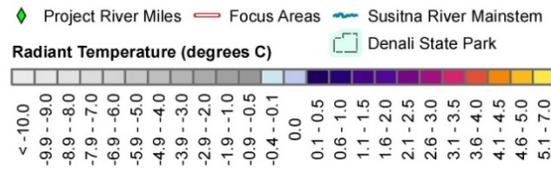
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Map Page 4 of 29

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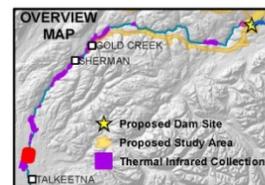
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Increased Groundwater Activity (by date flown)



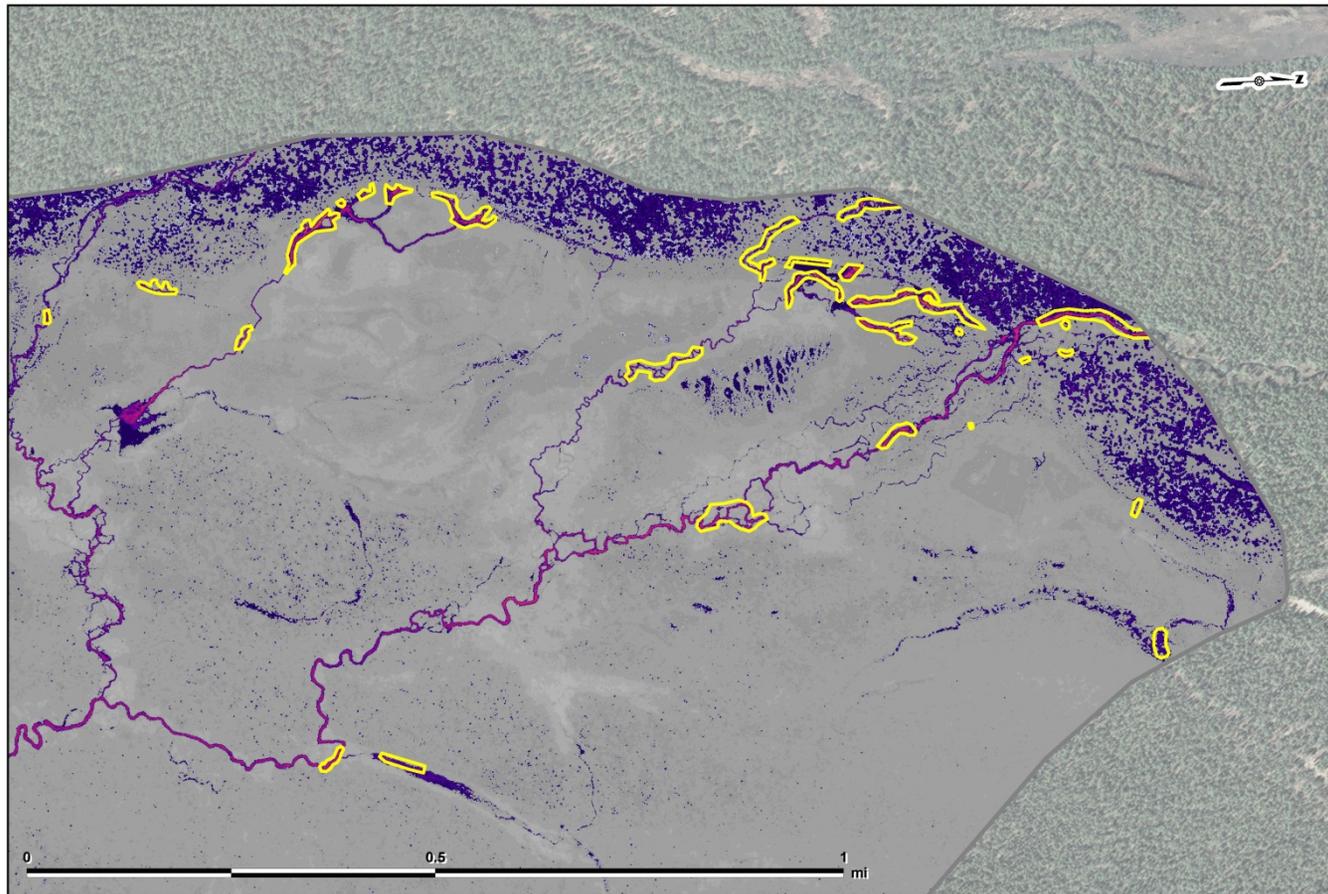
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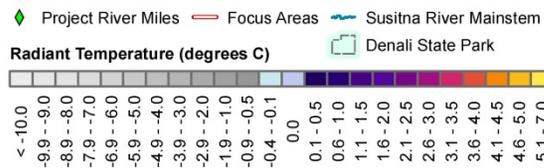
Data Sources: See Map References

Map Page 5 of 29

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 Map Author: URS Alaska, Cynthia Kirkham
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Increased Groundwater Activity (by date flown)



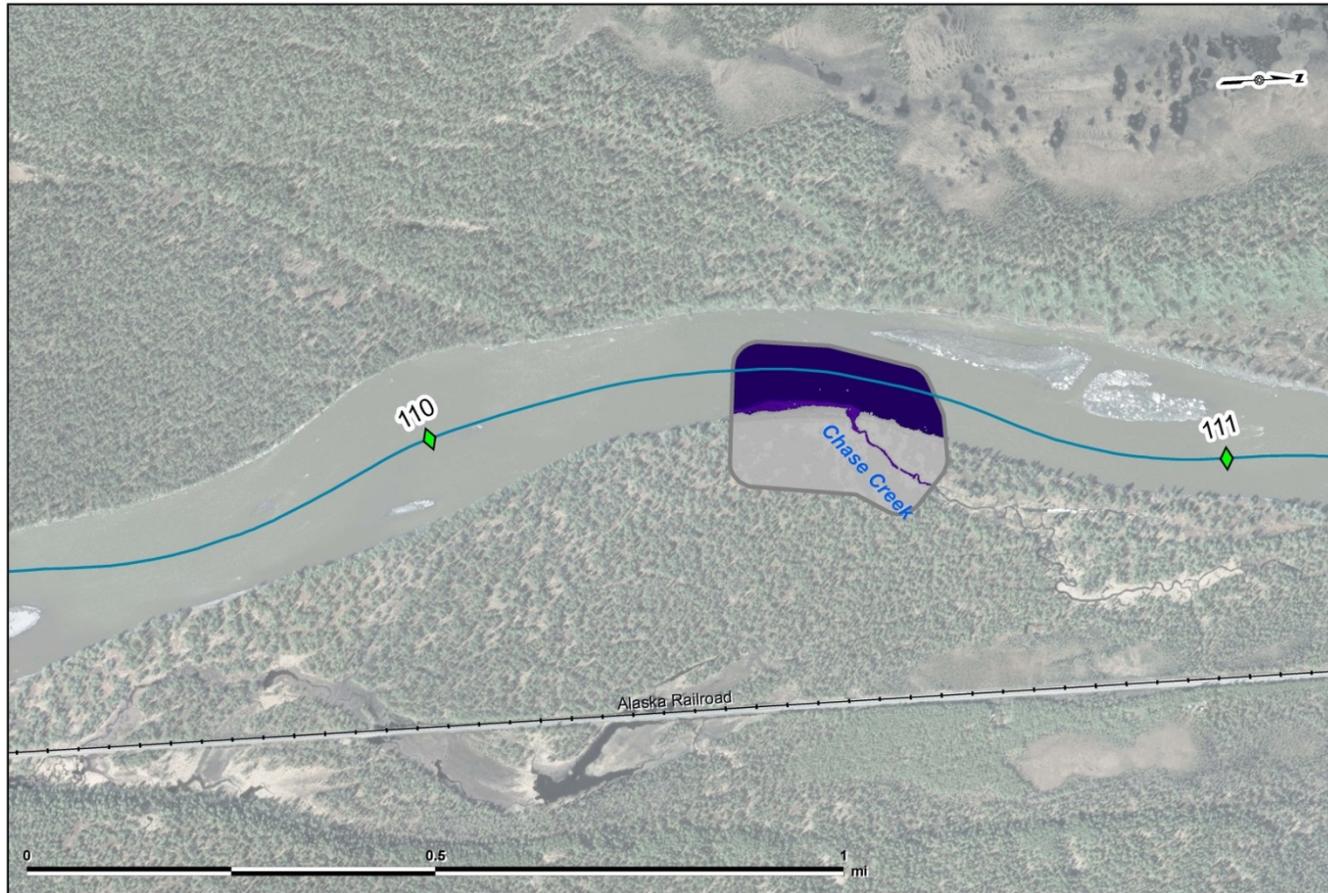
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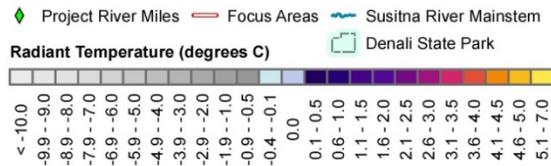
Data Sources: See Map References

Map Page 6 of 29

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Increased Groundwater Activity (by date flown)



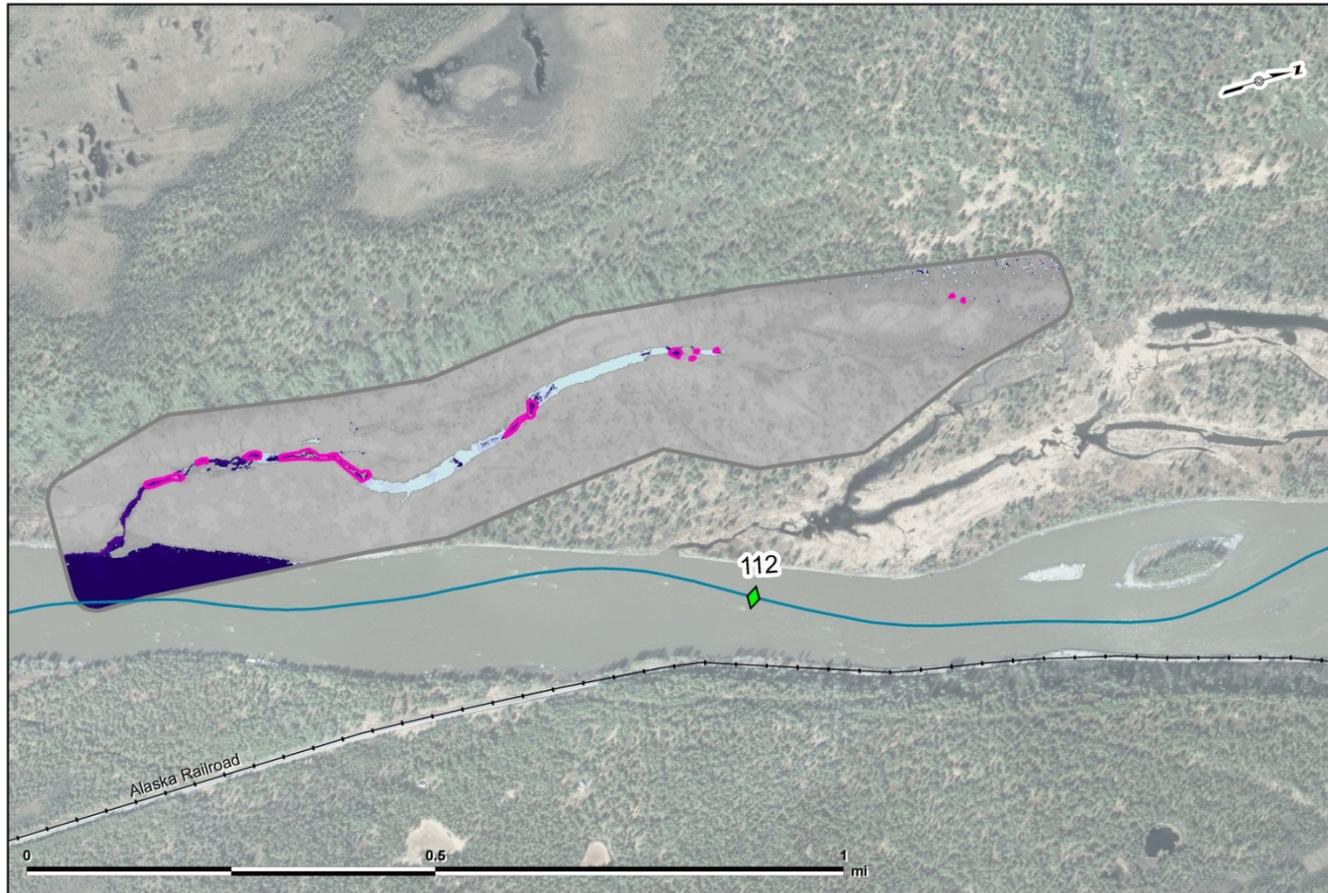
Chase Creek Mouth



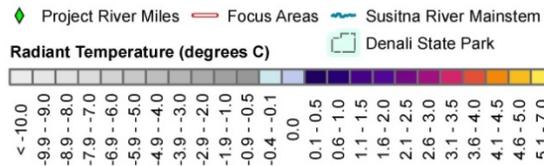
Data Sources: See Map References

Map Page 7 of 29

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Increased Groundwater Activity (by date flown)



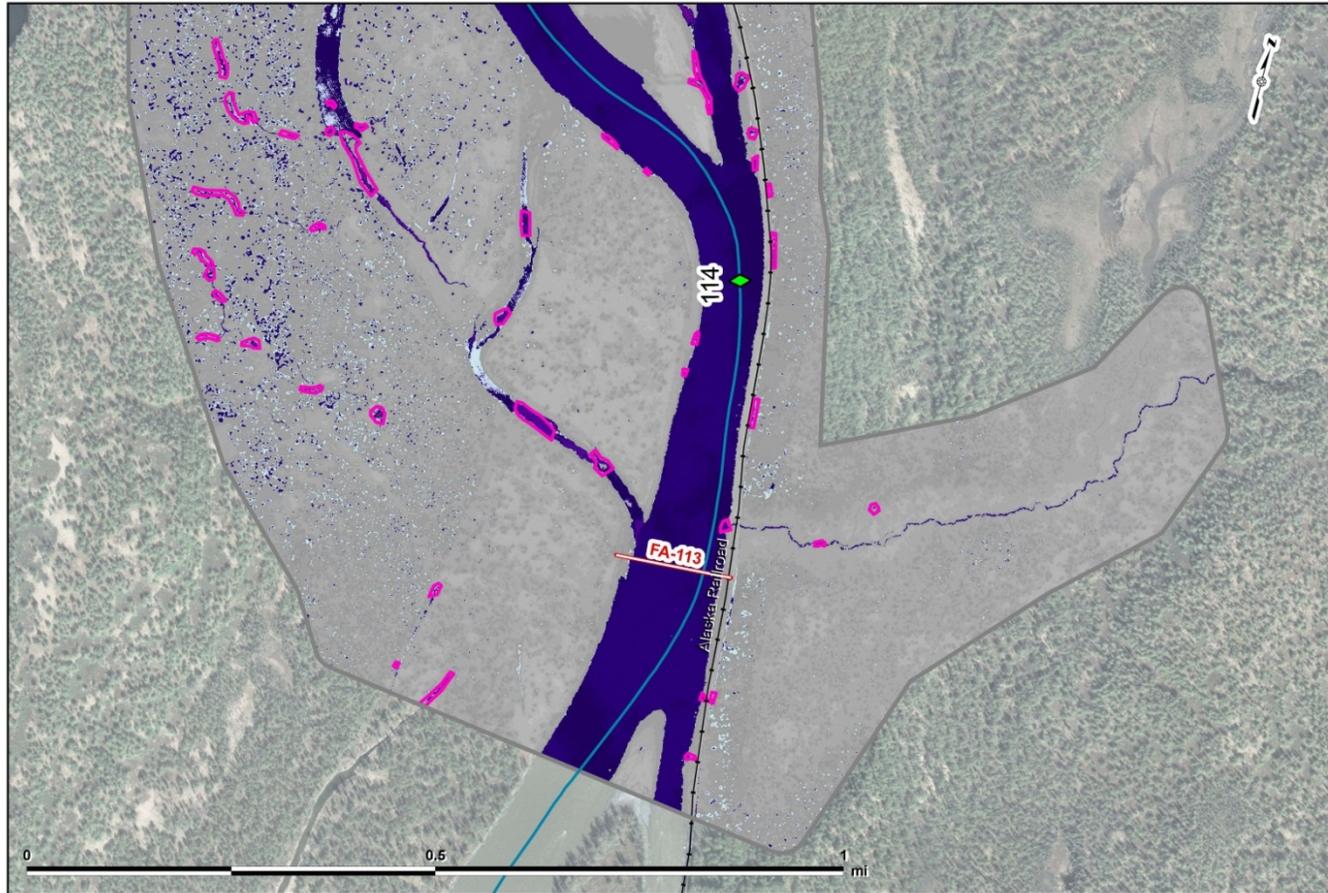
Slough 5



Data Sources: See Map References

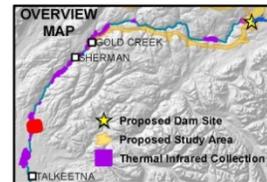
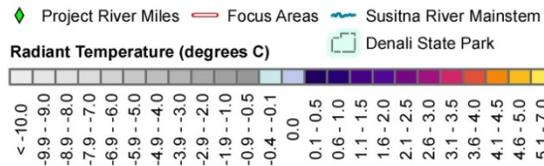
Map Page 8 of 29

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Focus Areas 113 and 115, Map 1 of 3

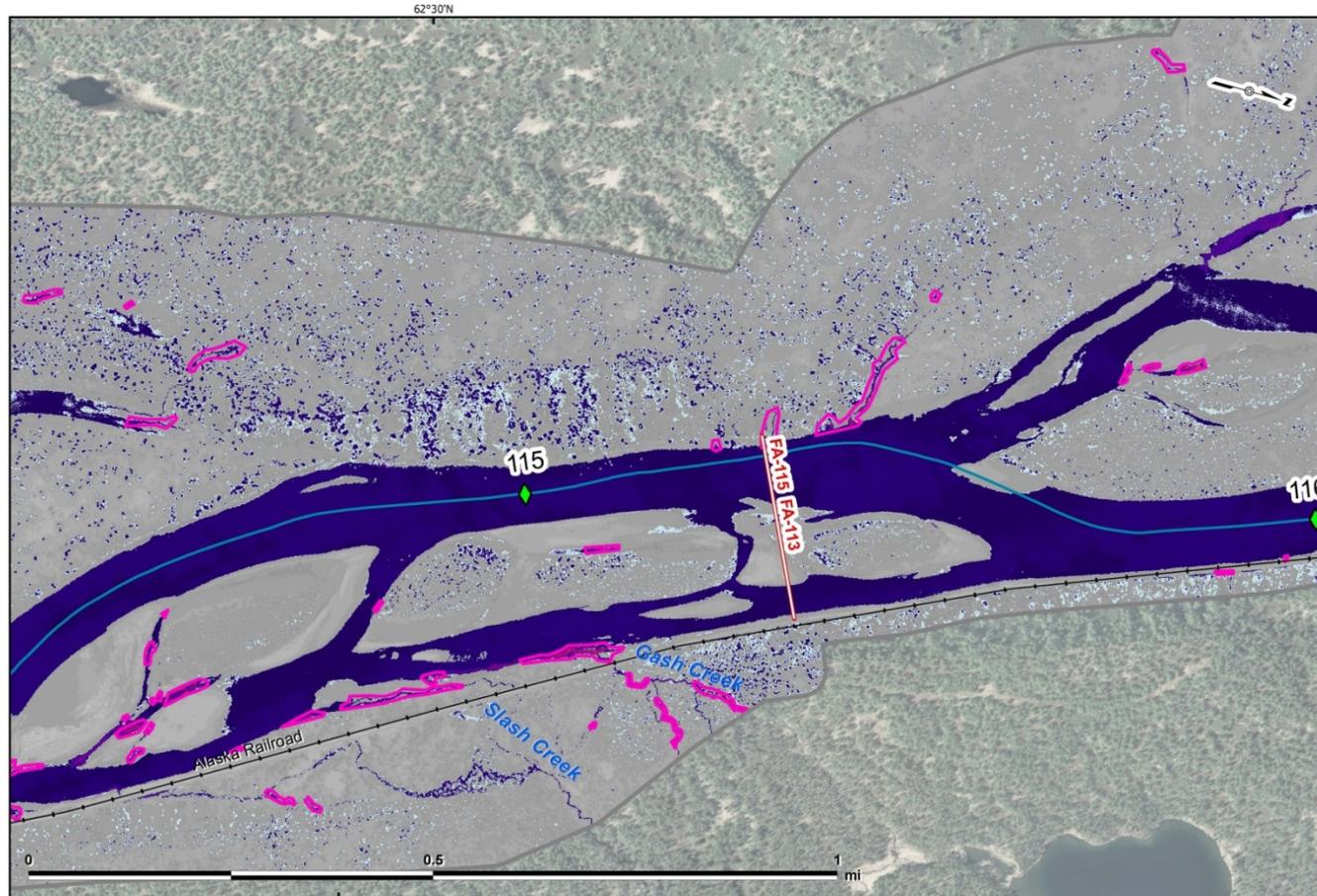
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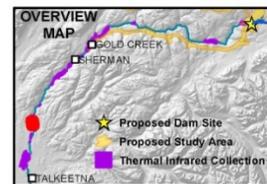
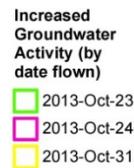
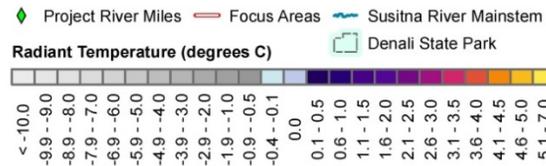
Map Page 9 of 29

Projection: Alaska Albers NAD 1983
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Focus Areas 113 and 115, Map 2 of 3

LEGEND

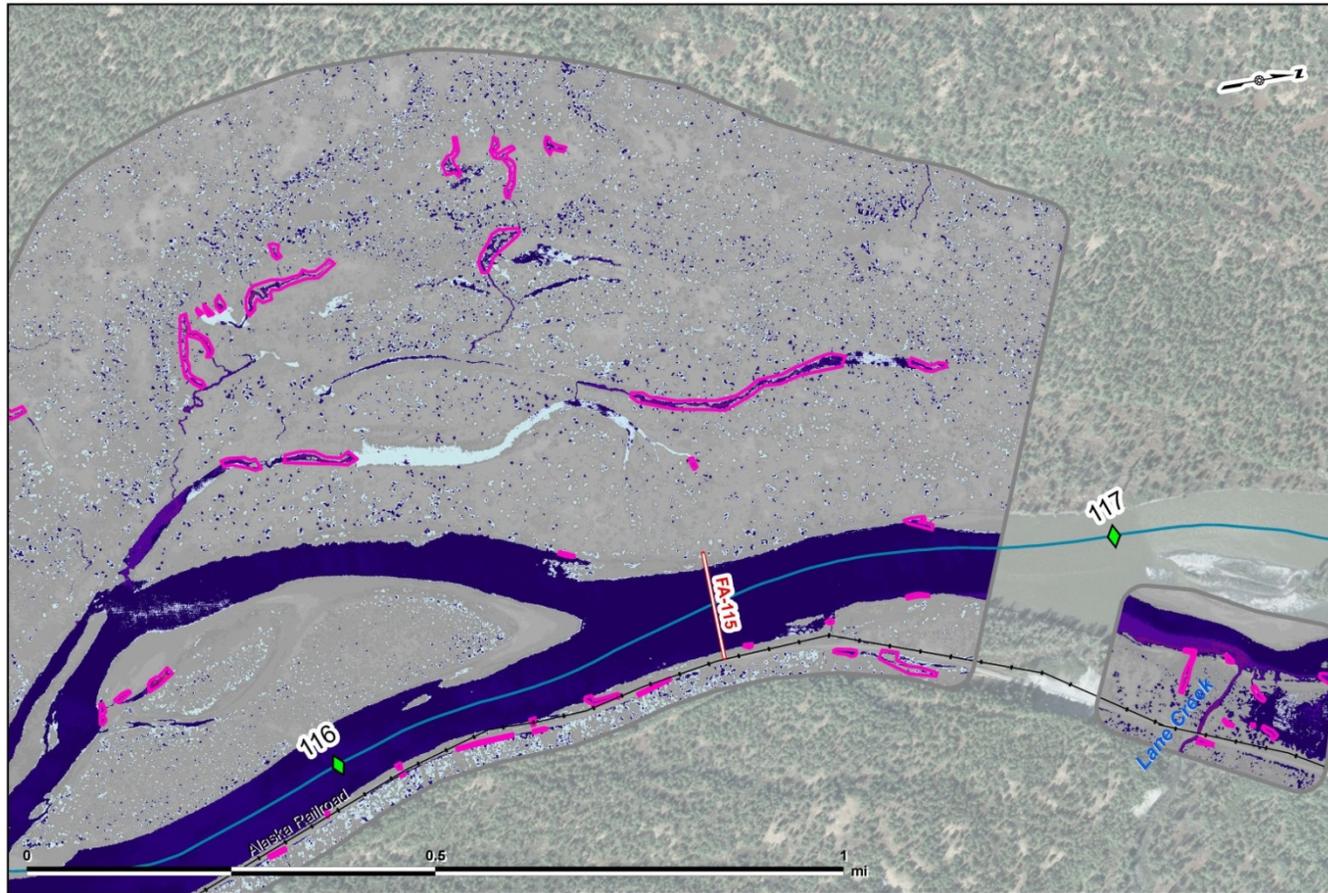


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Data Sources: See Map References

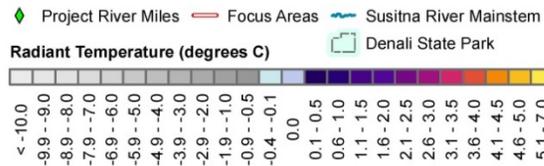
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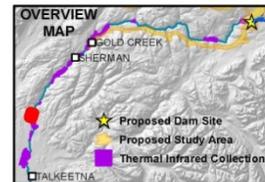


Focus Area 115 and Lane Creek Mouth, Map 3 of 3

LEGEND



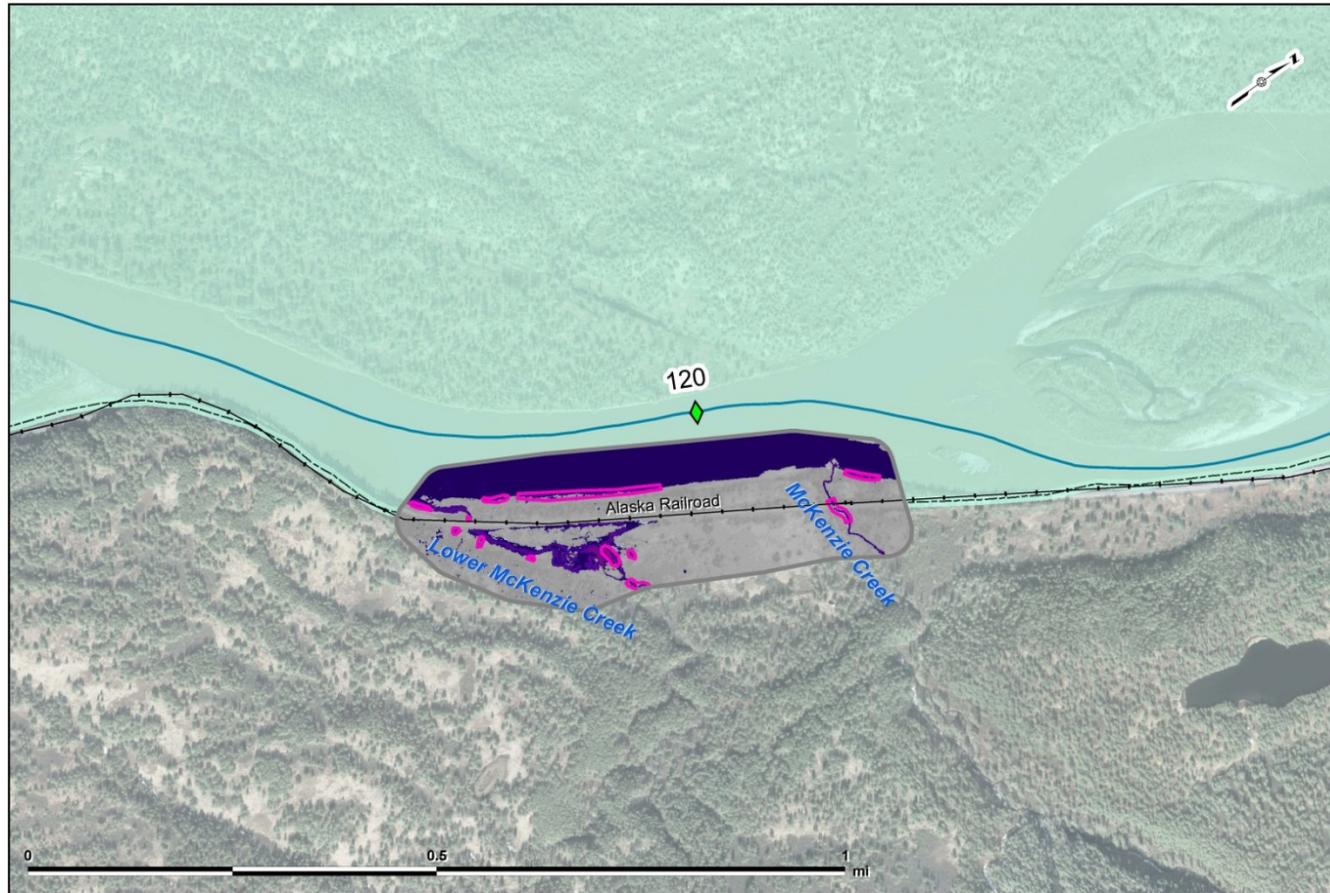
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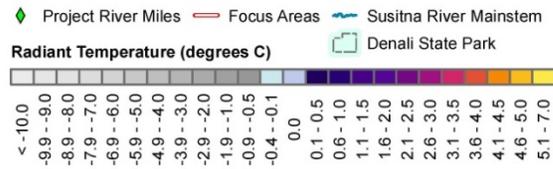
Data Sources: See Map References

Map Page 11 of 29

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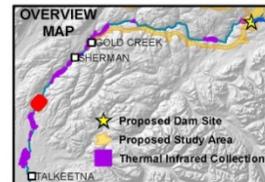
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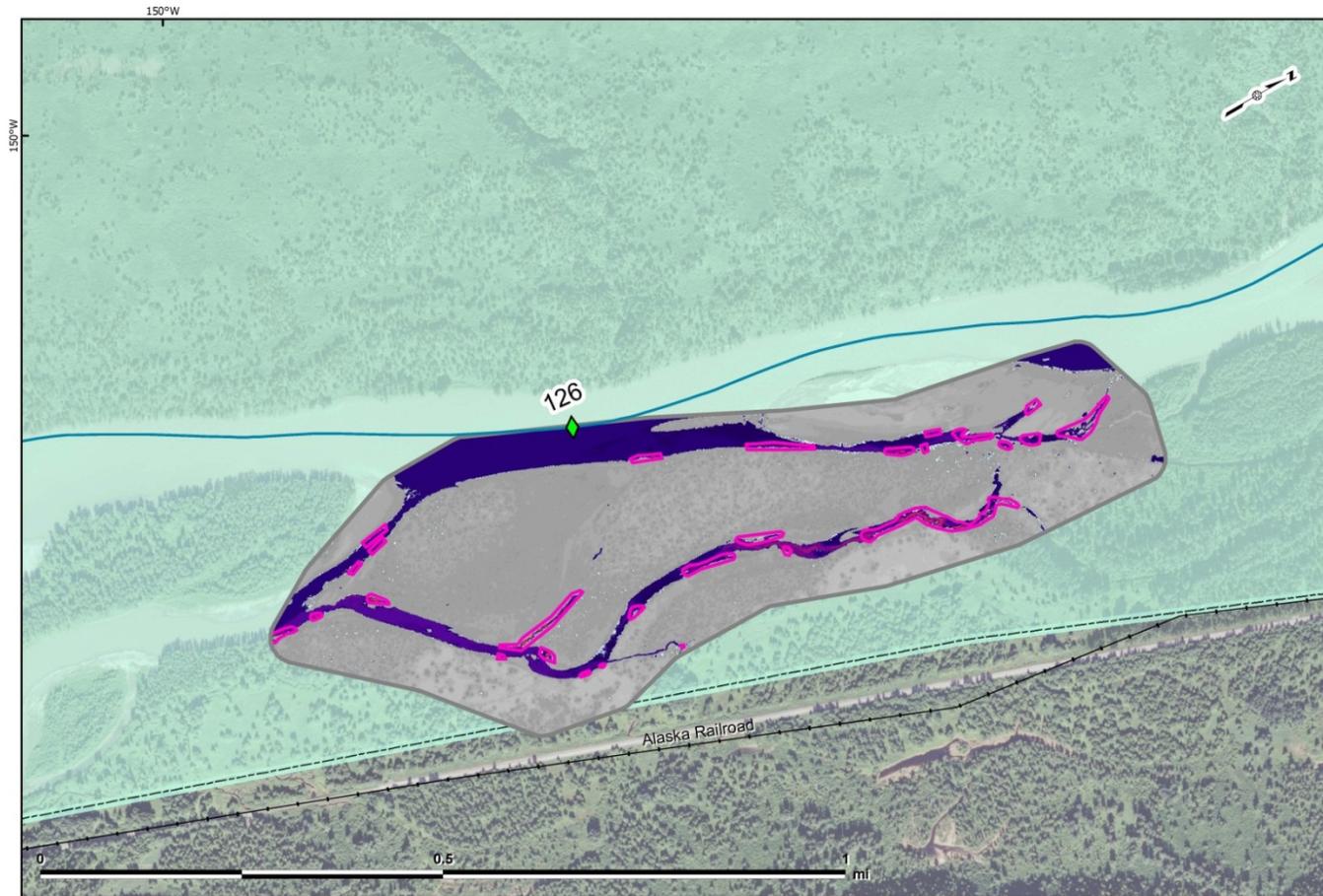
Lower McKenzie Creek Mouth



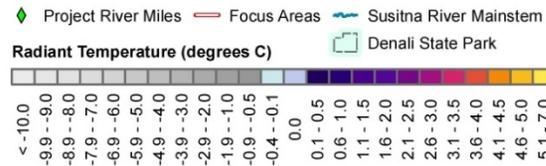
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Map Page 12 of 29

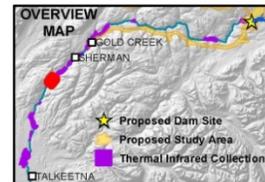
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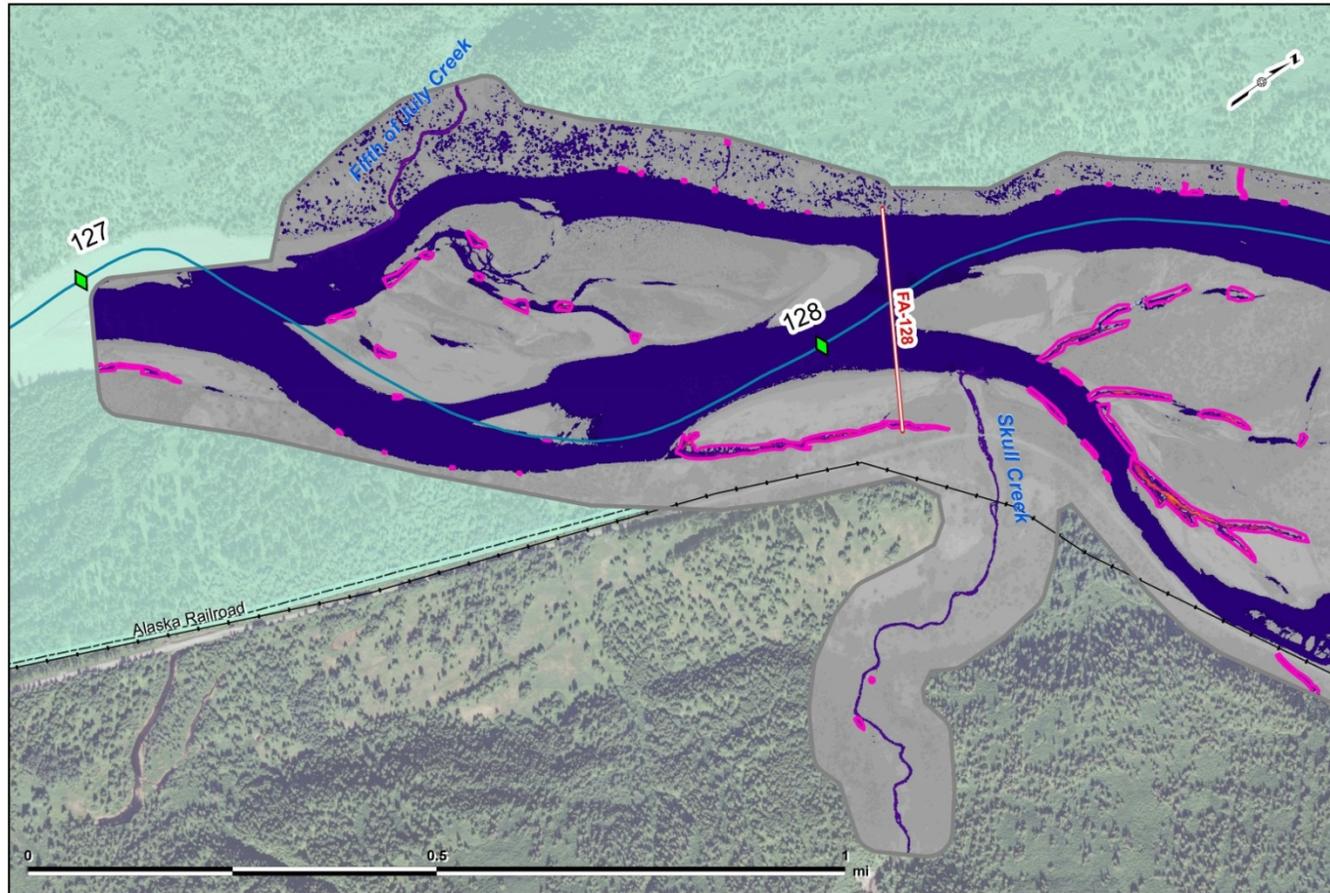
Slough 8B



Data Sources: See Map References

Map Page 13 of 29

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 Date Created: 1/10/2014
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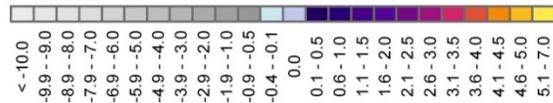


Moose Slough, 5th of July Creek

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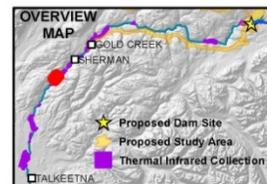
- ◆ Project River Miles
- Focus Areas
- Susitna River Mainstem
- Denali State Park

Radiant Temperature (degrees C)



Increased Groundwater Activity (by date flown)

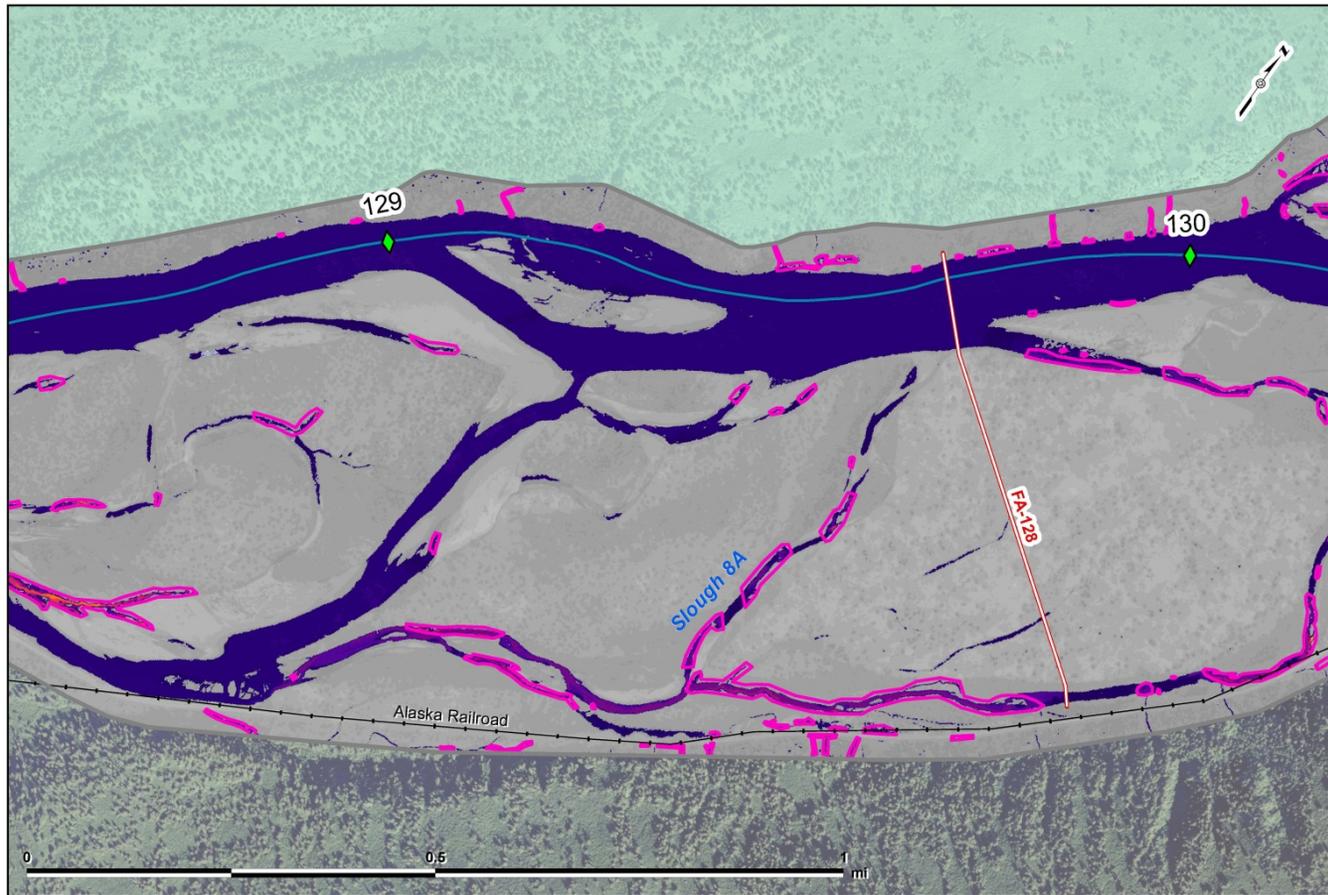
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- 2013-Oct-24
- 2013-Oct-31



Data Sources: See Map References

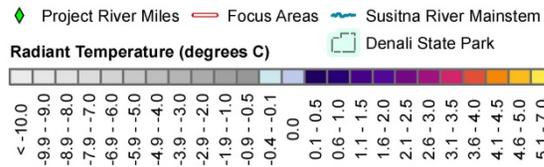
Map Page 14 of 29

Projection: Alaska Albers NAD 1983
 Date Created: 1/10/2014
 Map Author: URS Alaska, Cynthia Kirkham
 File: ThermalData\October2013_20140110.mxd



Focus Area 128/Skull Creek (Slough 8A), Map 1 of 2

LEGEND



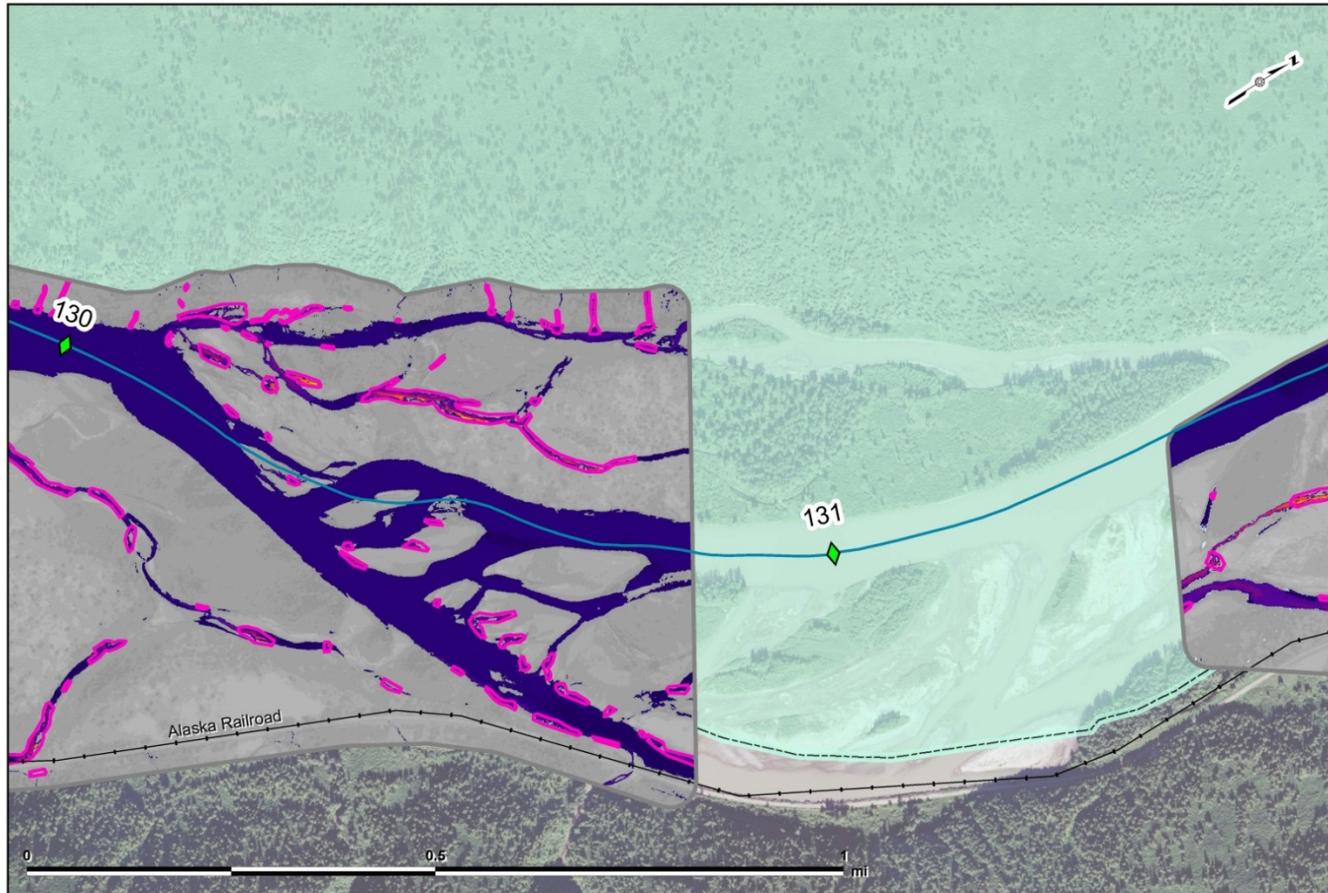
Increased Groundwater Activity (by date flown)



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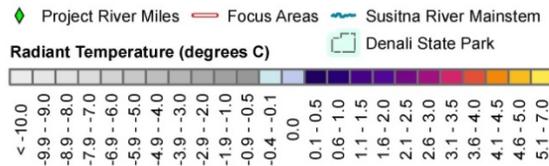
Map Page 15 of 29

Projection: Alaska Albers NAD 1983
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Focus Area 128/Skull Creek (Slough 8A), Map 2 of 2

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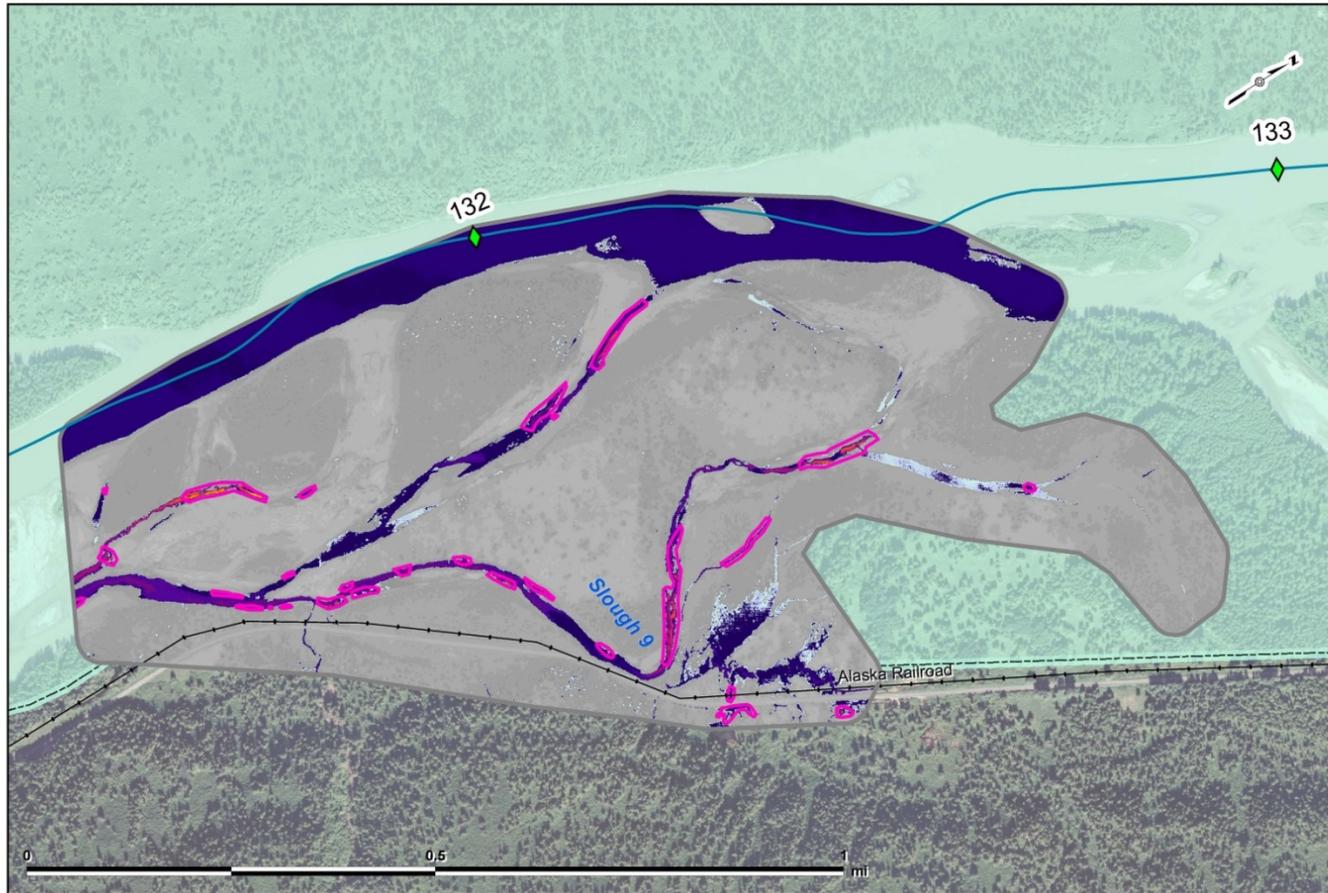
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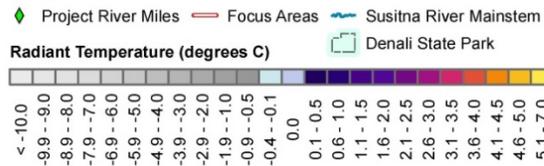
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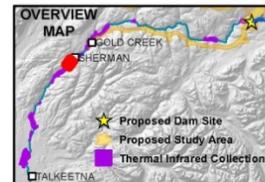
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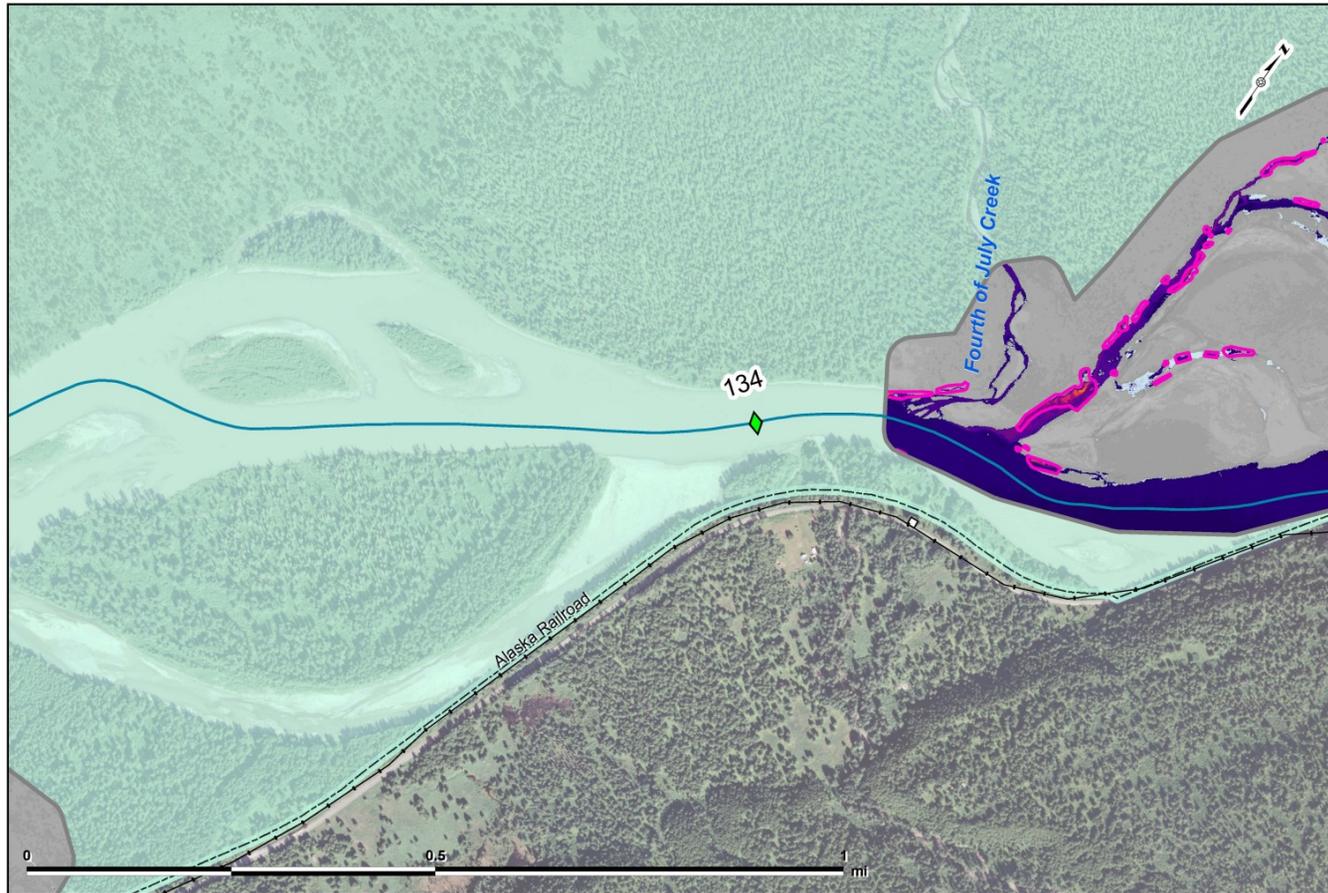
Slough 9 and Slough 9B



Data Sources: See Map References

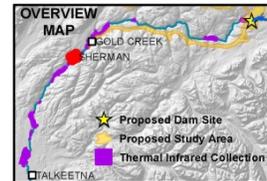
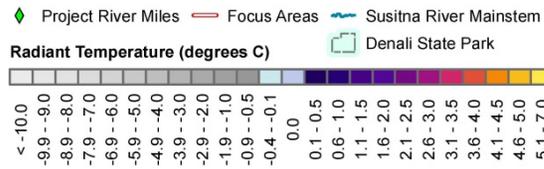
Map Page 17 of 29

Projection: Alaska Albers NAD 1983
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Side Channel 10A, 4th of July Creek, Map 1 of 2

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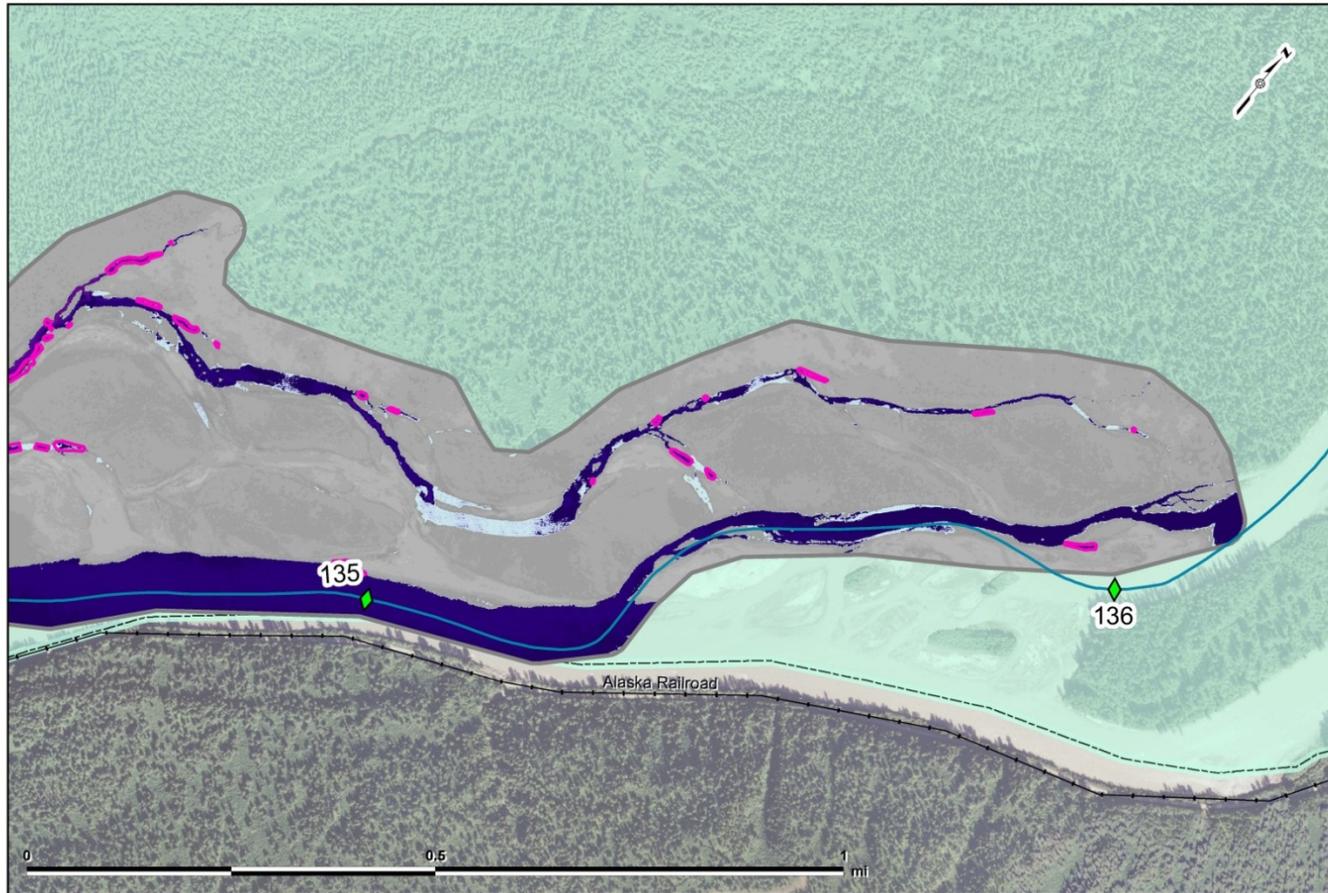


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Data Sources: See Map References

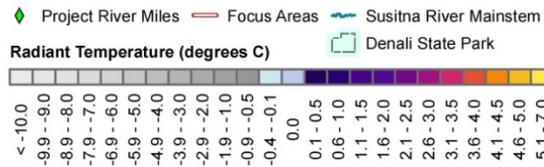
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Side Channel 10A, 4th of July Creek, Map 2 of 2

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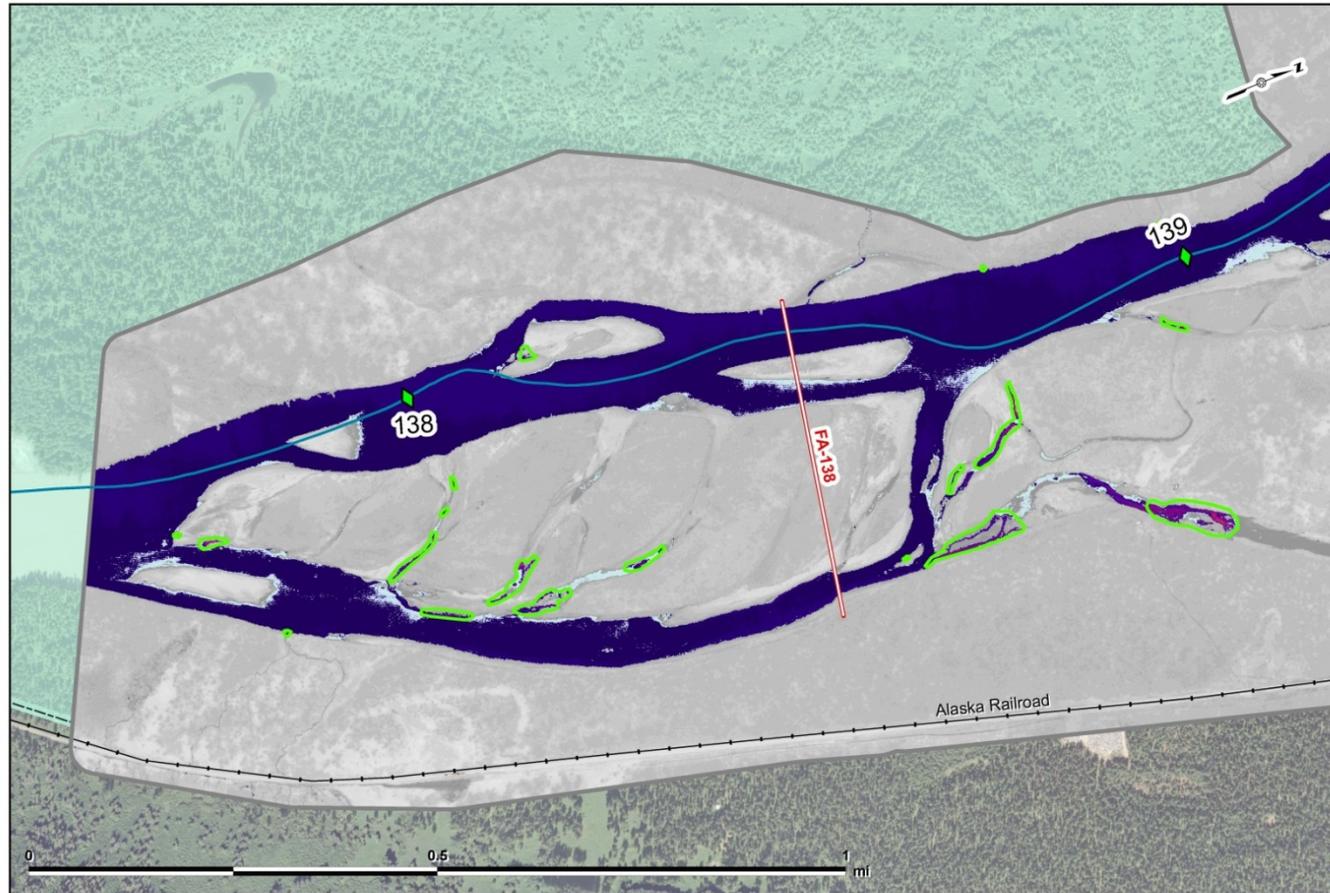
Increased Groundwater Activity (by date flown)



Data Sources: See Map References

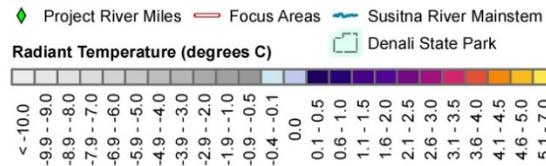
Map Page 19 of 29

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Focus Area 138/Gold Creek, Map 1 of 2

LEGEND



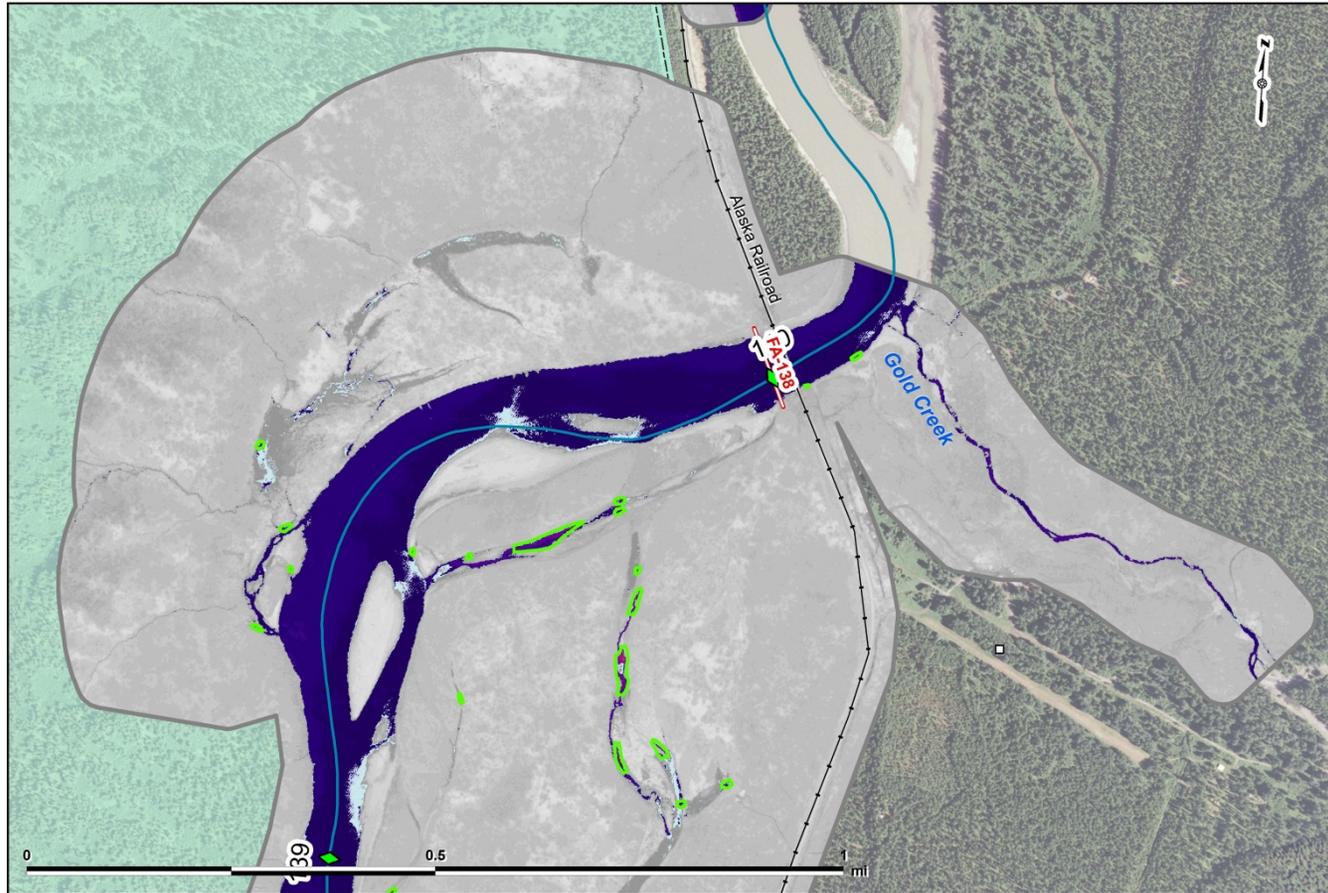
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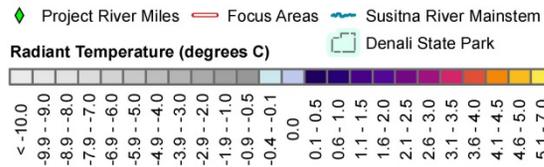
Map Page 20 of 29

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Focus Area 138/Gold Creek, Map 2 of 2

LEGEND



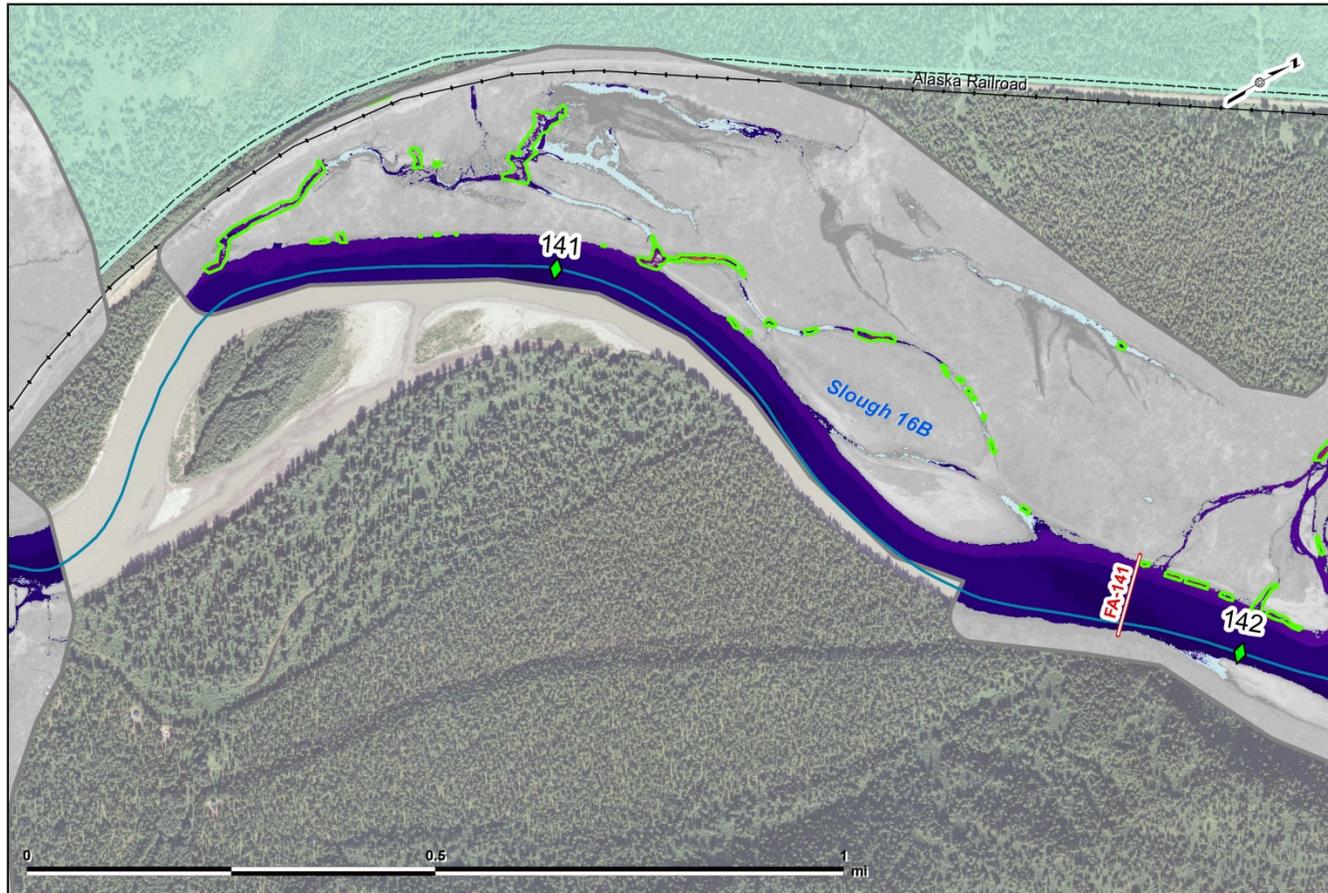
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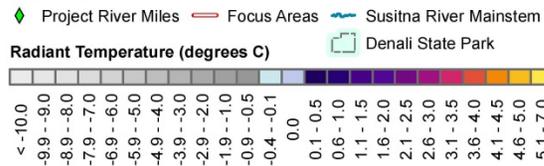
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Map Page 21 of 29

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Increased Groundwater Activity (by date flown)



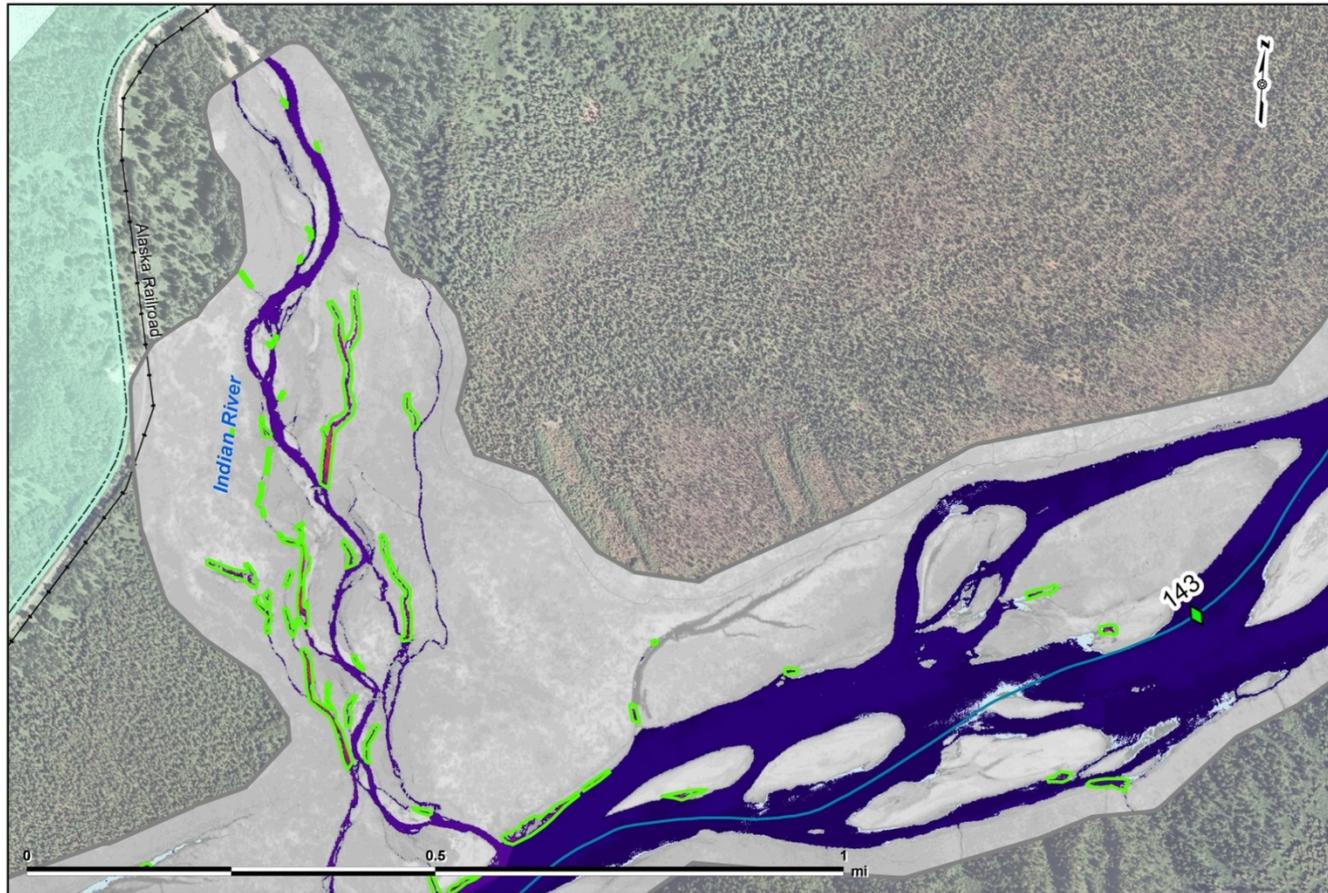
Slough 15



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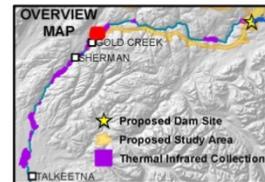
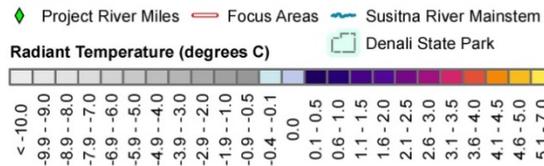
Map Page 22 of 29

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Focus Areas 141 and 144, Map 1 of 3

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Data Sources: See Map References

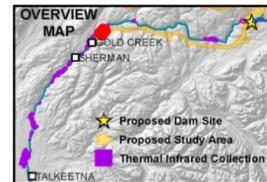
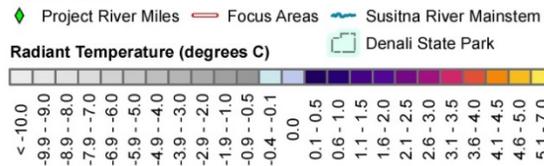
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Focus Areas 141 and 144, Map 2 of 3

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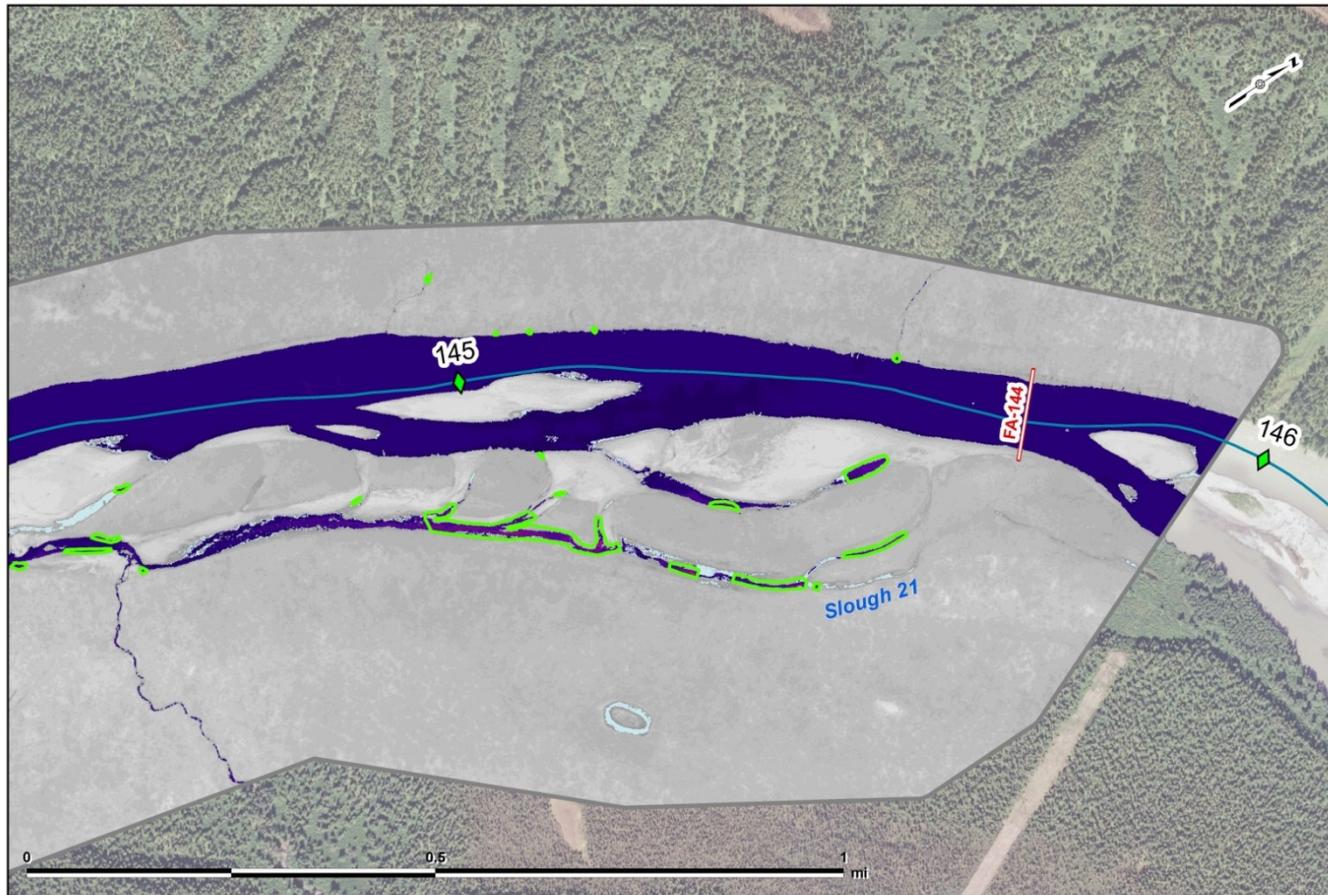


ALASKA ENERGY AUTHORITY

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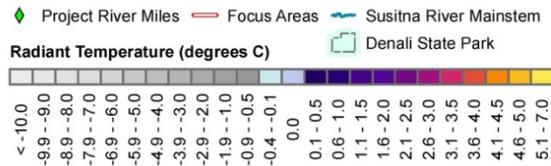
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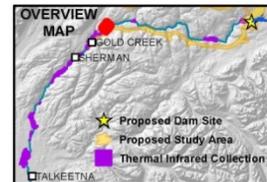


Focus Areas 141 and 144, Map 3 of 3

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Increased Groundwater Activity (by date flown)



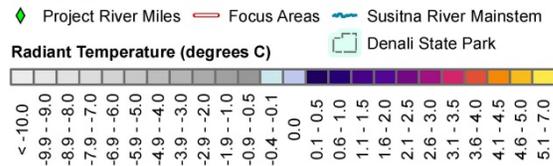
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Map Page 25 of 29

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 Date Created: 1/10/2014
 Map Author: URS Alaska, Cynthia Kirkham
 File: ThermalData\October2013_20140110.mxd



LEGEND



Increased Groundwater Activity (by date flown)



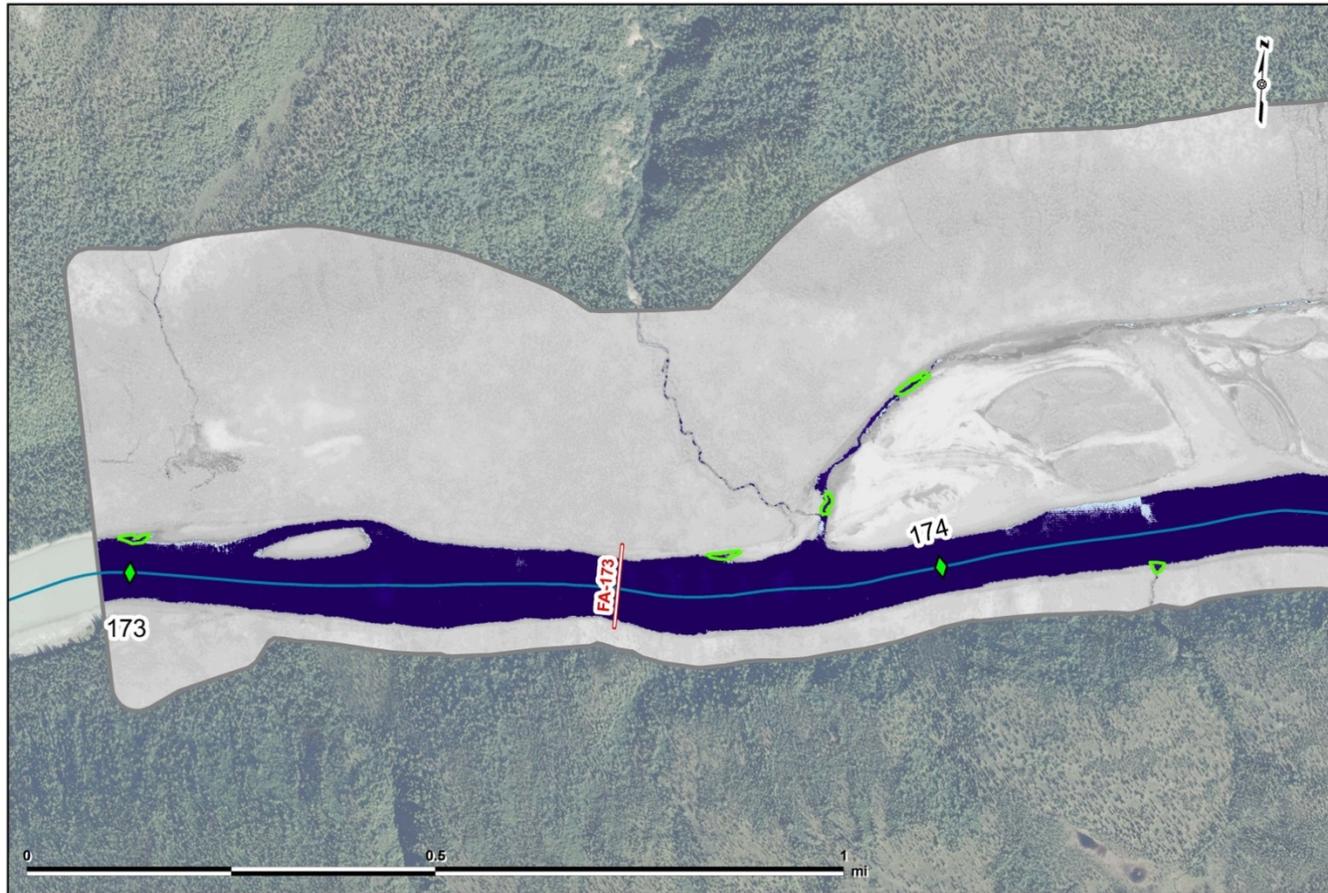
Focus Area 151



Data Sources: See Map References

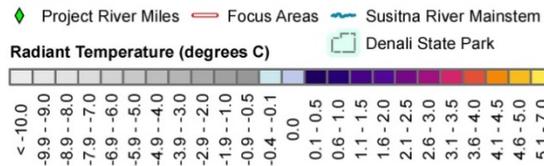
Map Page 26 of 29

Projection: Alaska Albers NAD 1983
 Date Created: 1/10/2014
 Map Author: URS Alaska, Cynthia Kirkham
 File: ThermalDataOctober2013_20140110.mxd



Focus Area 173, Map 1 of 2

LEGEND



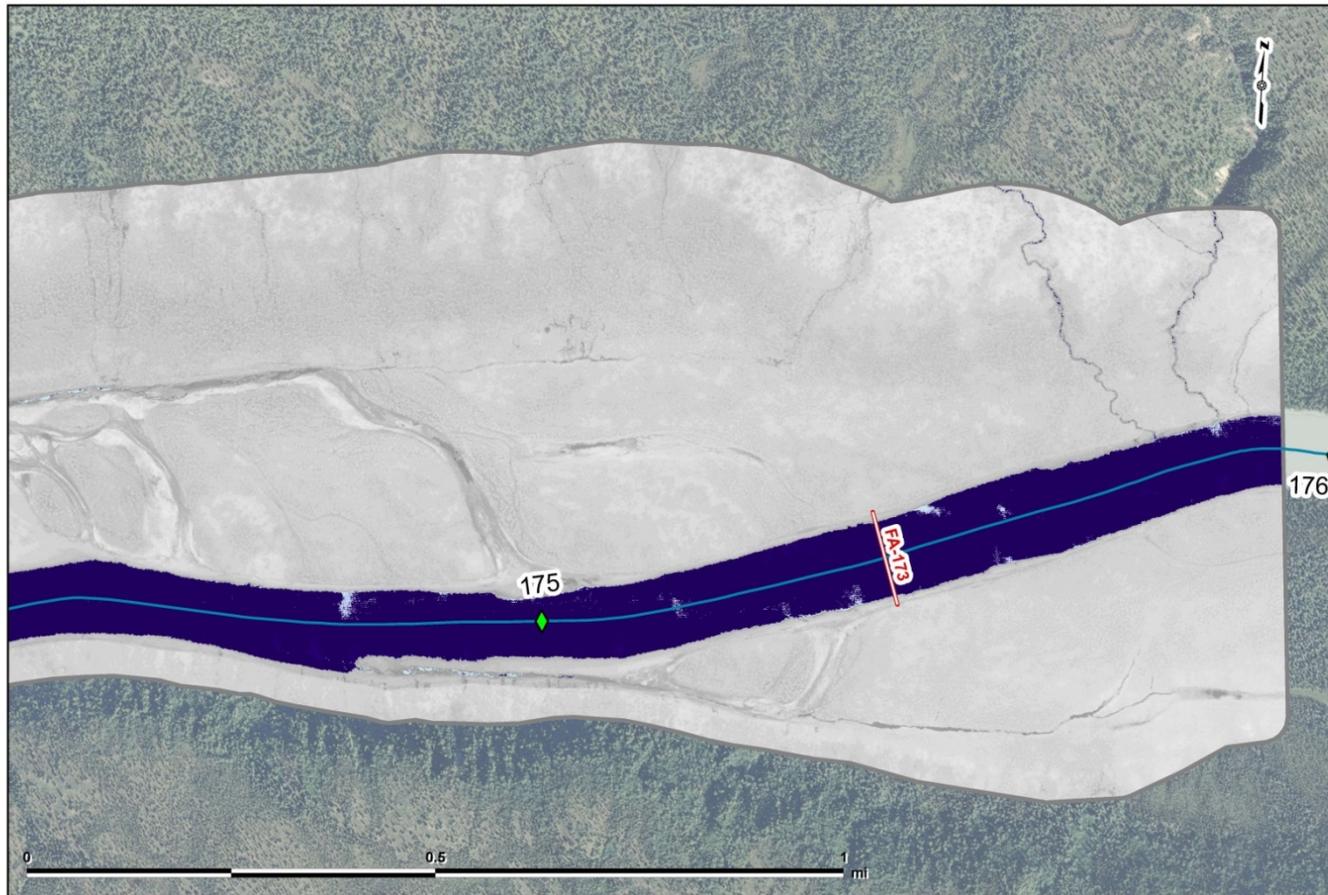
Increased Groundwater Activity (by date flown)



Data Sources: See Map References

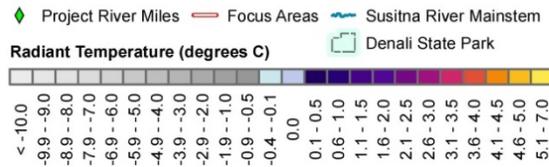
Map Page 27 of 29

Projection: Alaska Albers NAD 1983
 Date Created: 1/10/2014
 Map Author: URS Alaska, Cynthia Kirkham
 File: ThermalData/October2013_20140110.mxd



Focus Area 173, Map 2 of 2

LEGEND



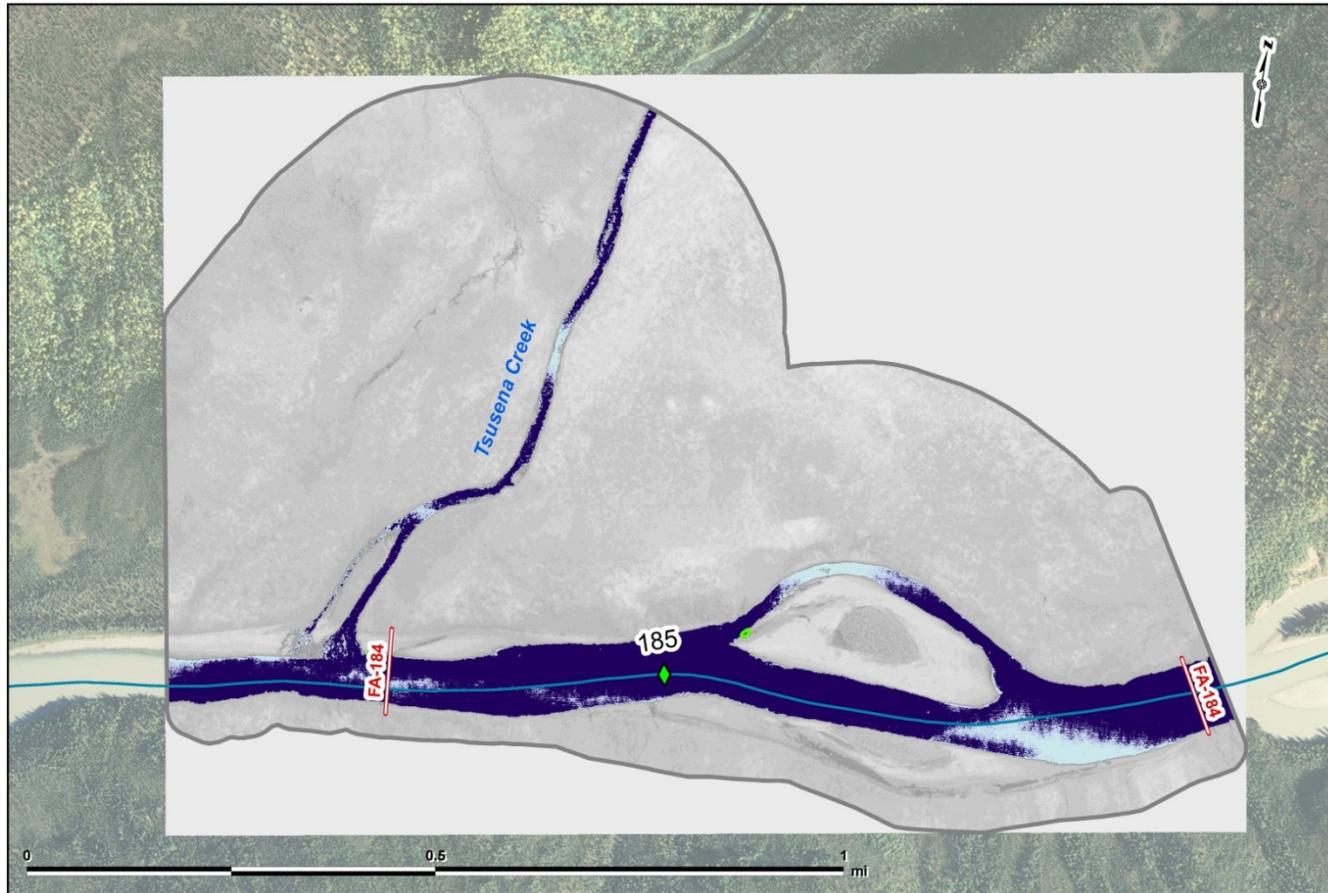
Increased Groundwater Activity (by date flow)



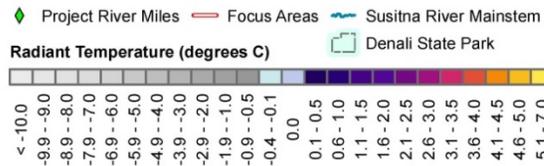
Data Sources: See Map References

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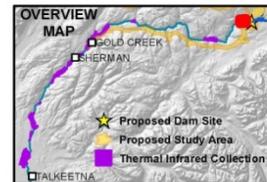
Projection: Alaska Albers NAD 1983
 Date Created: 1/10/2014
 Map Author: URS Alaska, Cynthia Kirkham
 File: ThermalData\October2013_20140110.mxd



LEGEND



Increased Groundwater Activity (by date flown)



Focus Area 184



Data Sources: See Map References

Map Page 29 of 29

Projection: Alaska Albers NAD 1983
 Date Created: 1/10/2014
 Map Author: URS Alaska, Cynthia Kirkham
 File: ThermalData/October2013_20140110.mxd