

Susitna-Watana Hydroelectric Project Document

ARLIS Uniform Cover Page

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Notes: Contains: appendix D. Baseline water quality data -- appendix E. Baseline water quality chlorophyll data -- appendix F. Focus area location maps -- appendix G. Focus area water quality data -- appendix H. Focus area water quality chlorophyll data -- appendix I. Interim study report water quality photographs. The following parts of Section 5.5 appear in separate files: Main report ; Figures ; Appendix A ; Appendices B-C ; Appendices D-I ; Appendix J.		

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APPENDIX D: BASELINE WATER QUALITY DATA

APPENDIX E: BASELINE WATER QUALITY CHLOROPHYLL DATA

APPENDIX F: FOCUS AREA LOCATION MAPS

APPENDIX G: FOCUS AREA WATER QUALITY DATA

APPENDIX H: FOCUS AREA WATER QUALITY CHLOROPHYLL DATA

APPENDIX I: INTERIM STUDY REPORT WATER QUALITY
PHOTOGRAPHS

Susitna-Watana Hydroelectric Project (FERC No. 14241)

Baseline Water Quality Study (5.5)

Appendix D Baseline Water Quality Data

Initial Study Report

Prepared for

Alaska Energy Authority



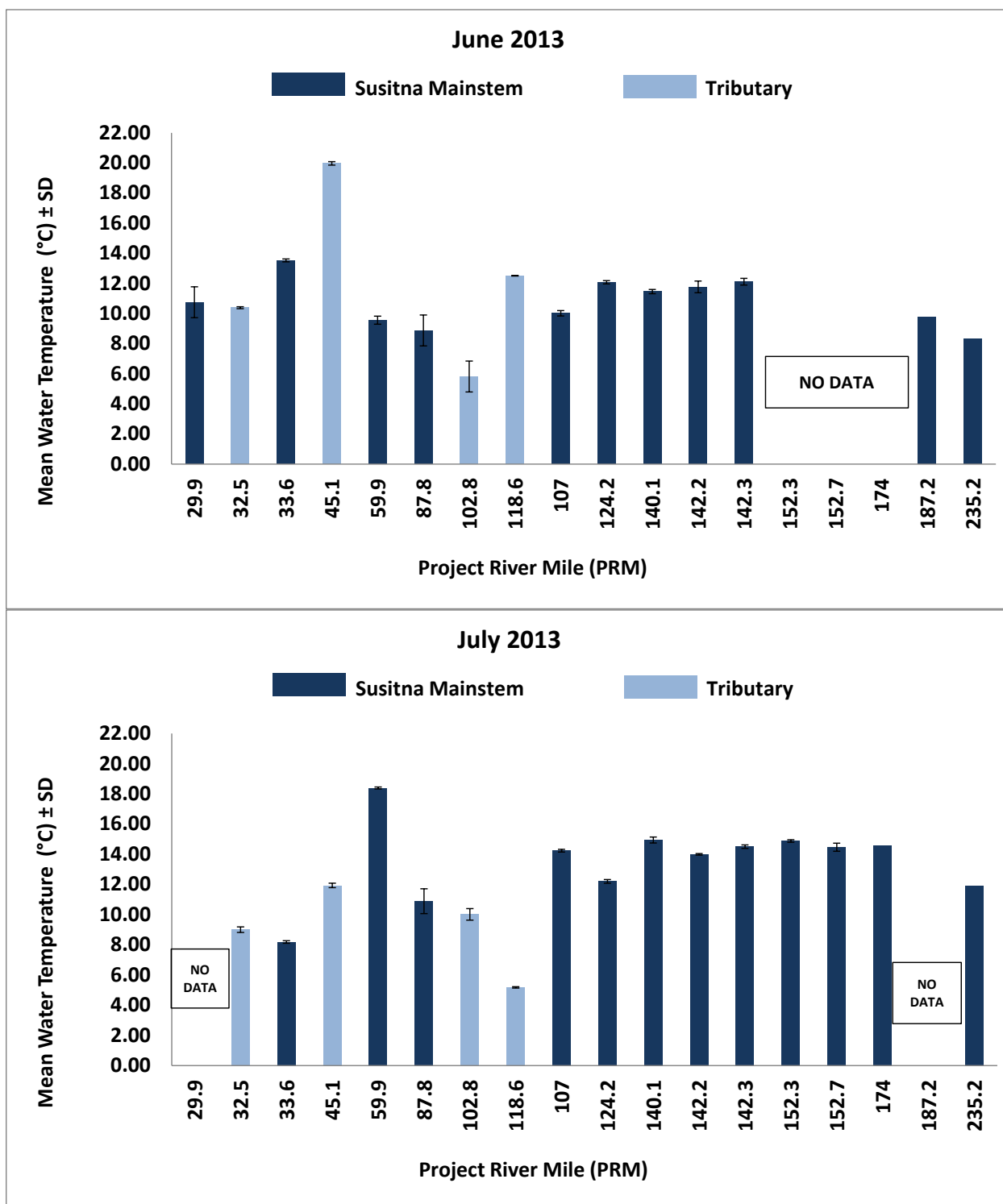
SUSITNA-WATANA HYDRO

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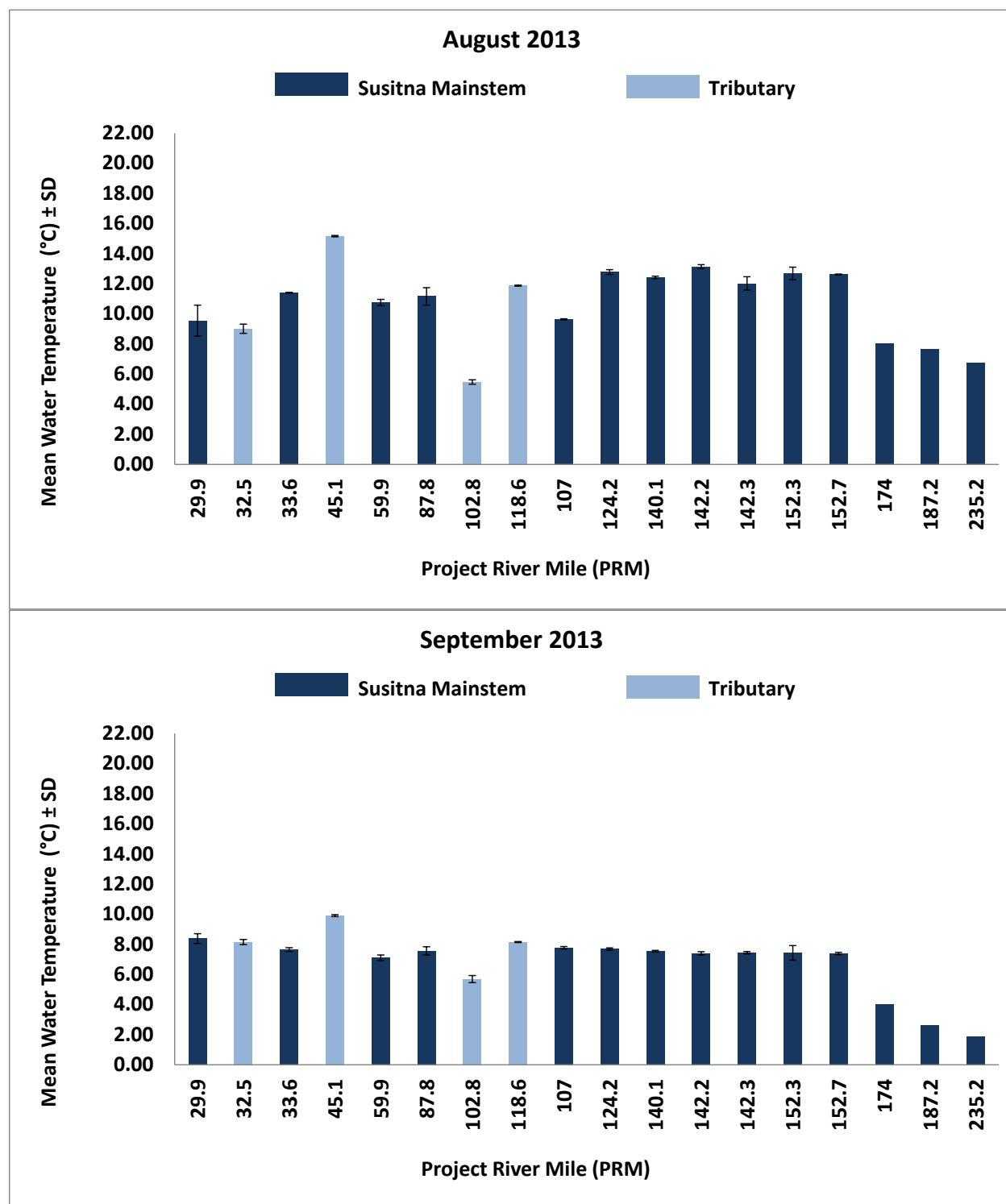
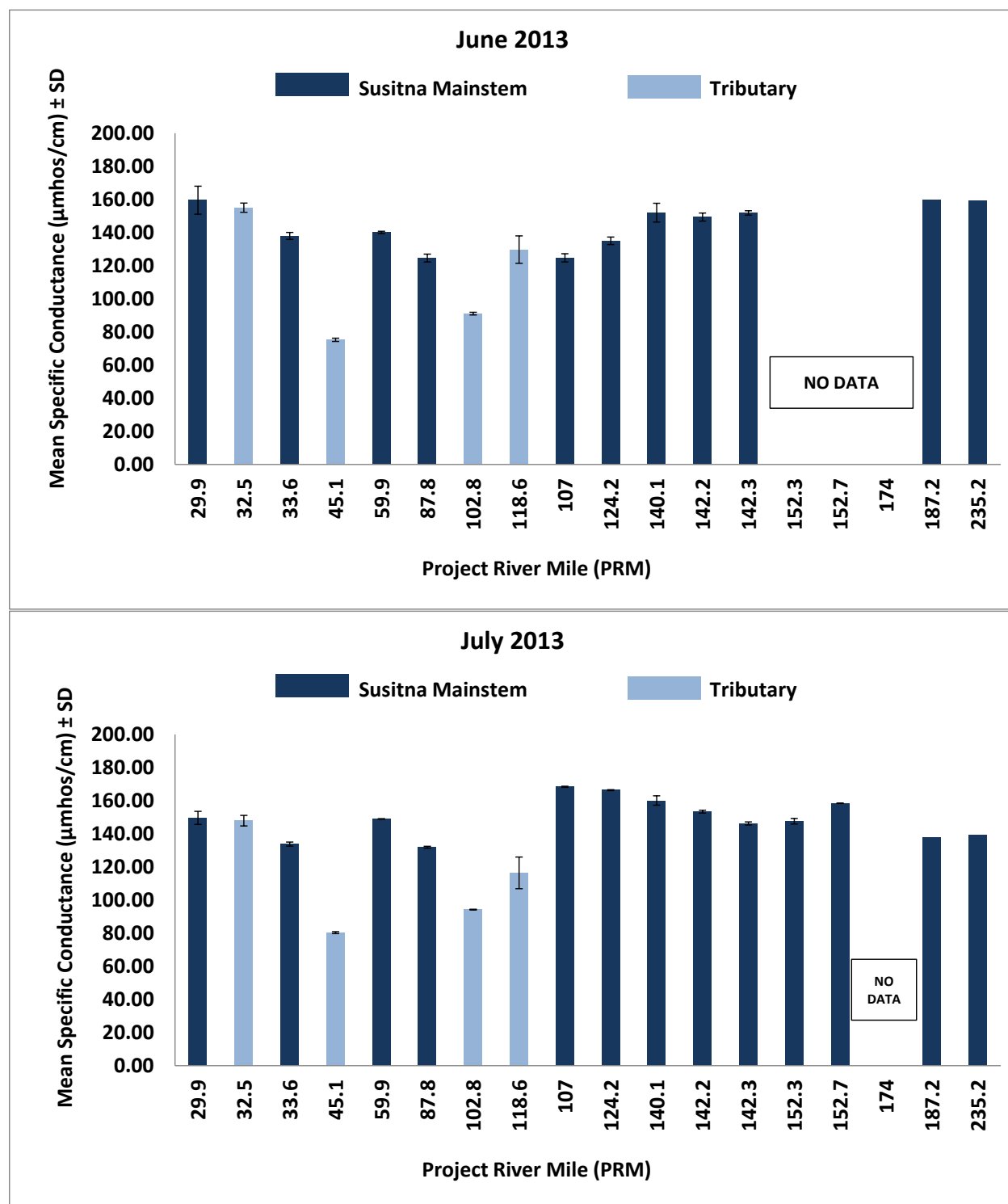


Figure D-1. Temperature for the Susitna River, 2013.



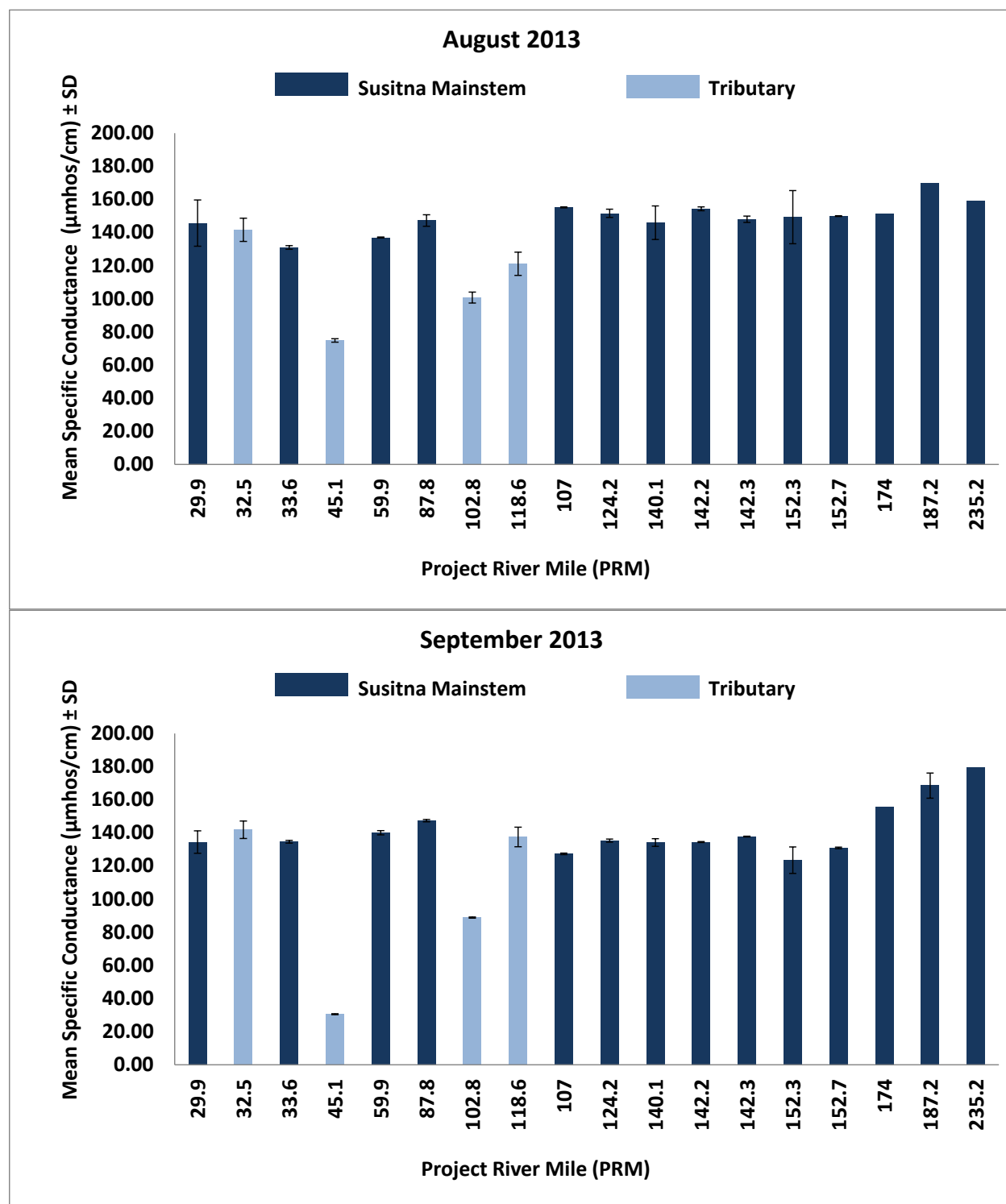
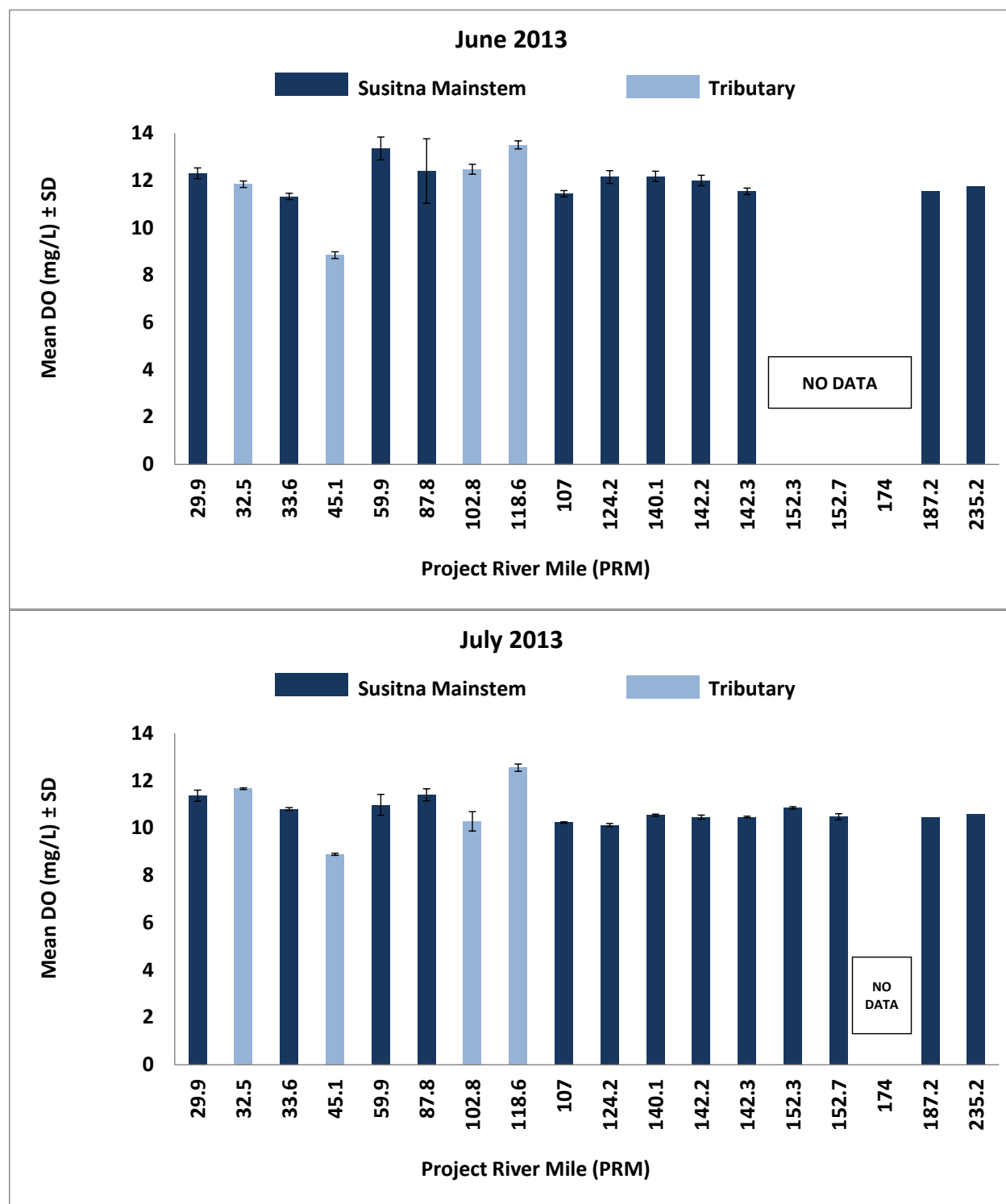


Figure D-2. Specific Conductance for the Susitna River, 2013.



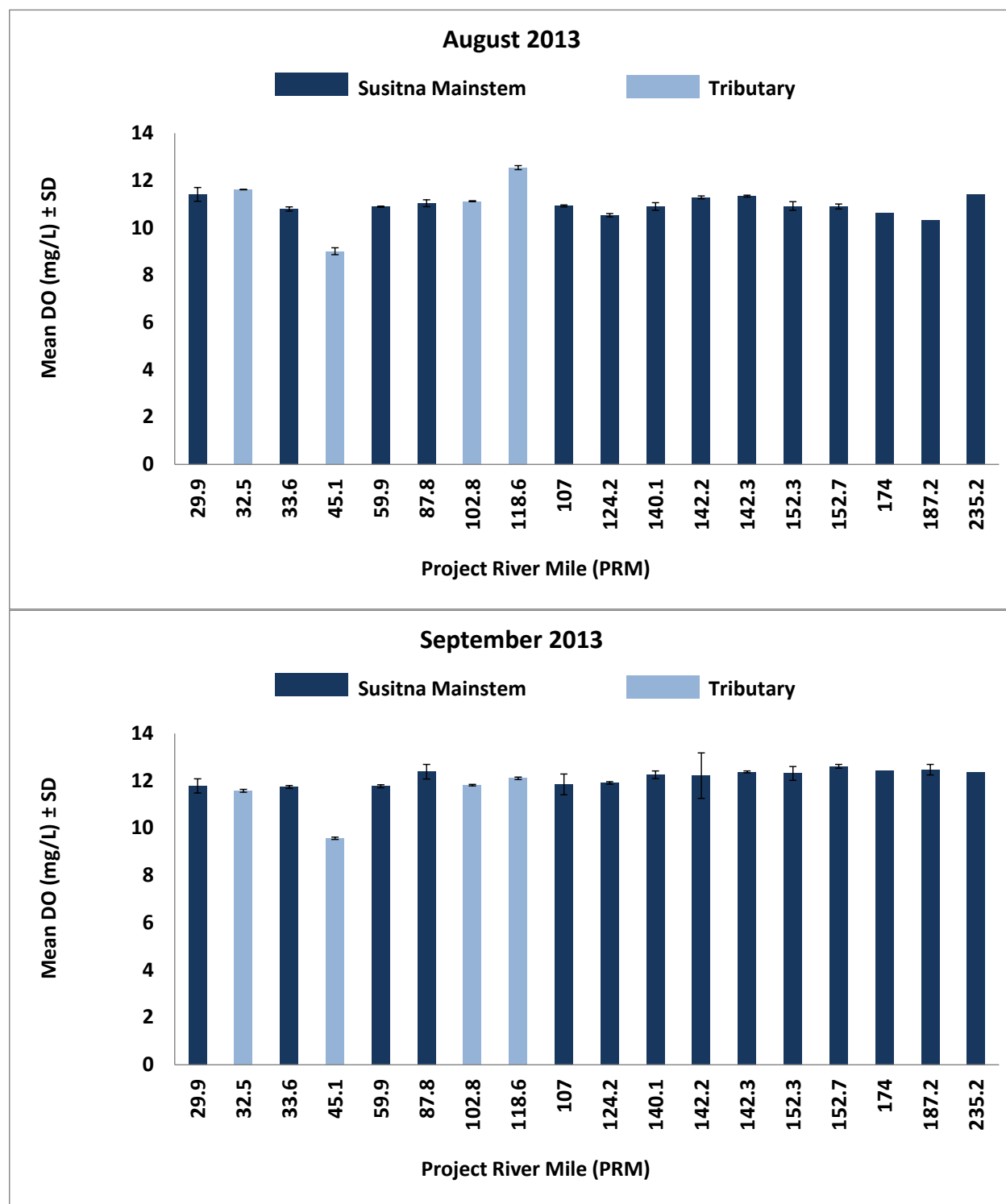
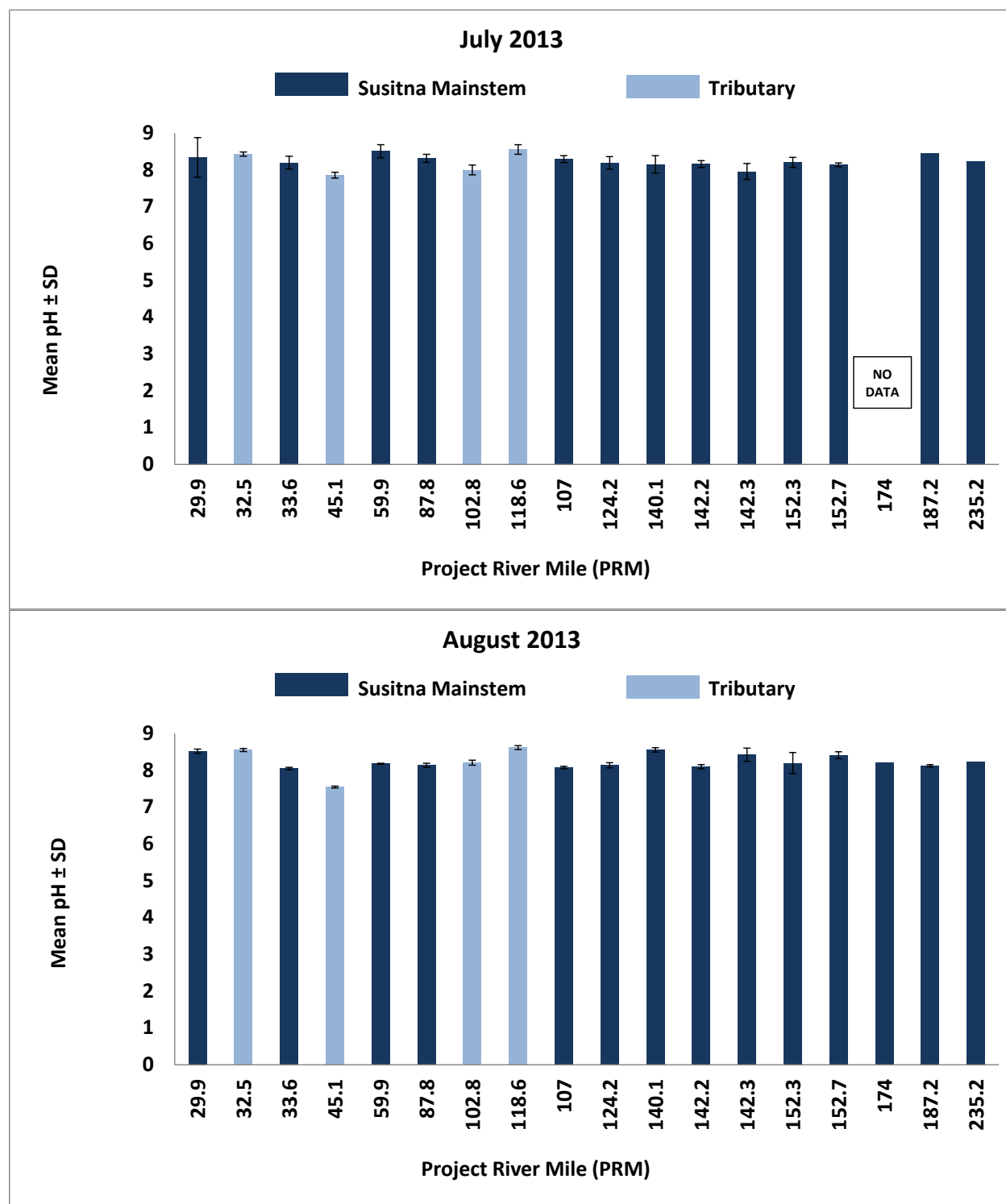


Figure D-3. Dissolved Oxygen Concentrations for the Susitna River, 2013.



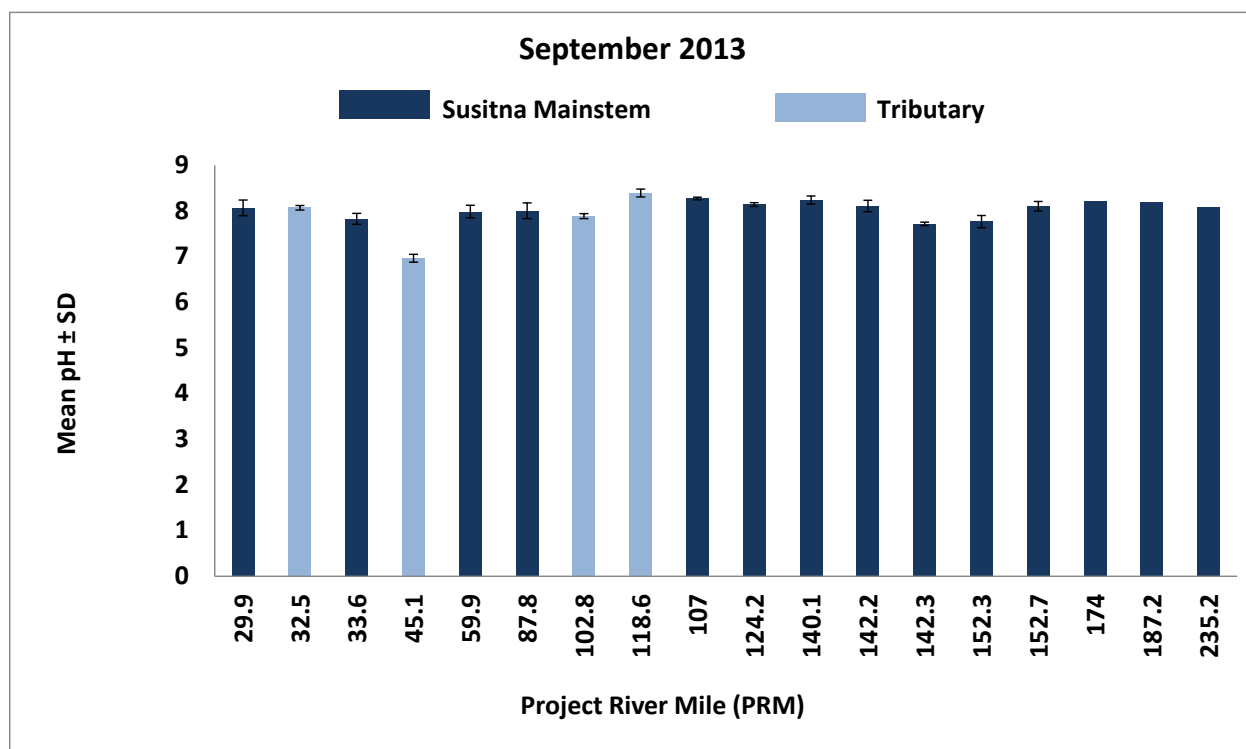
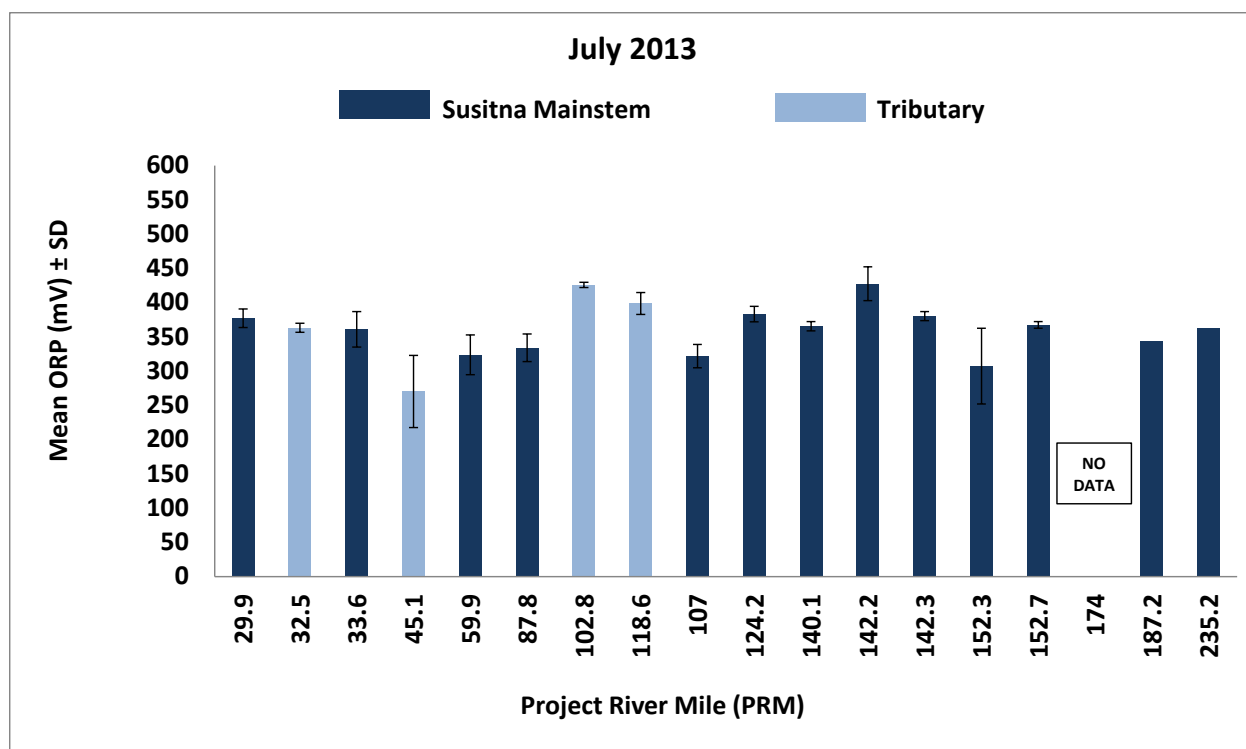


Figure D-4. pH Values for the Susitna River, 2013.



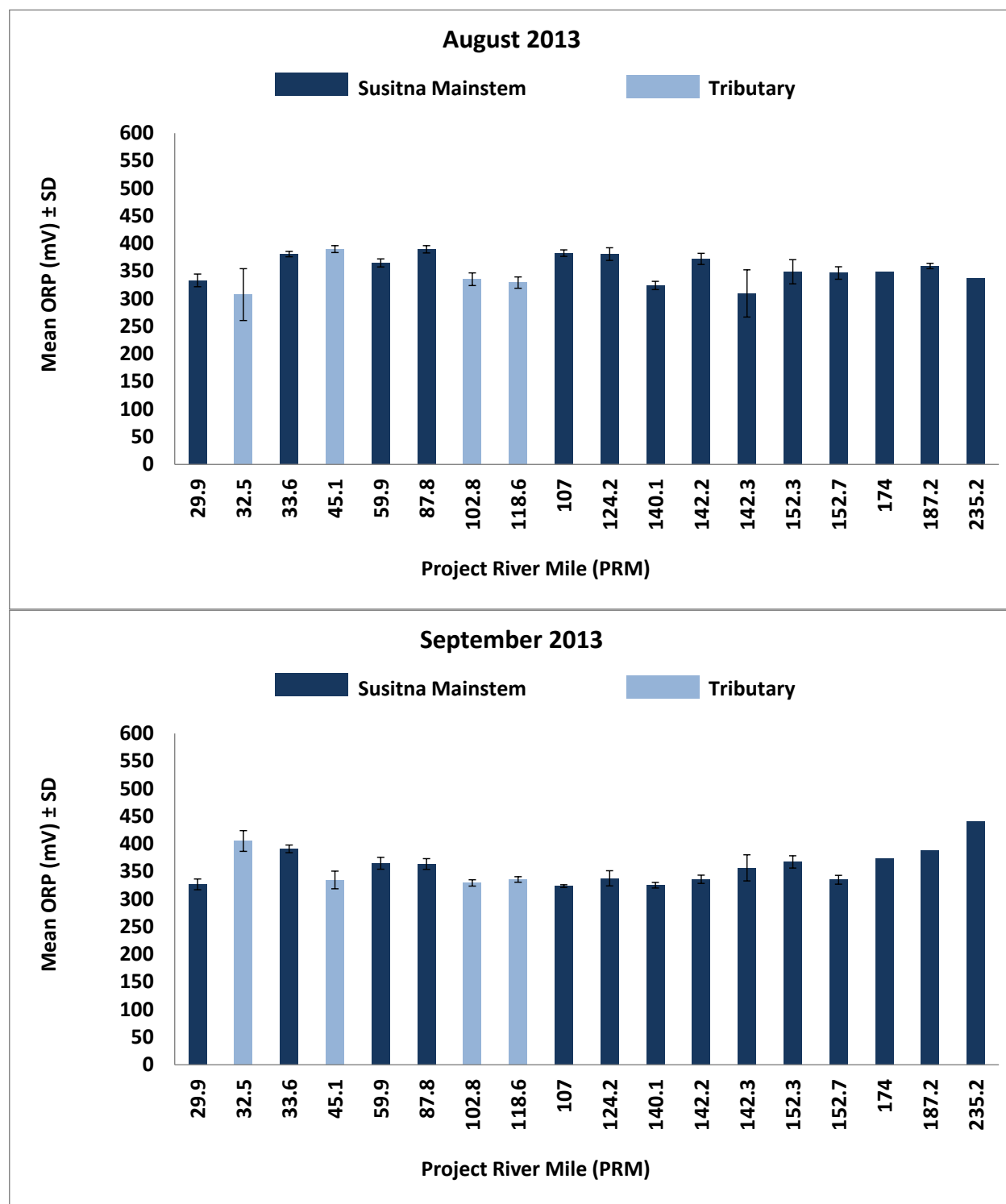
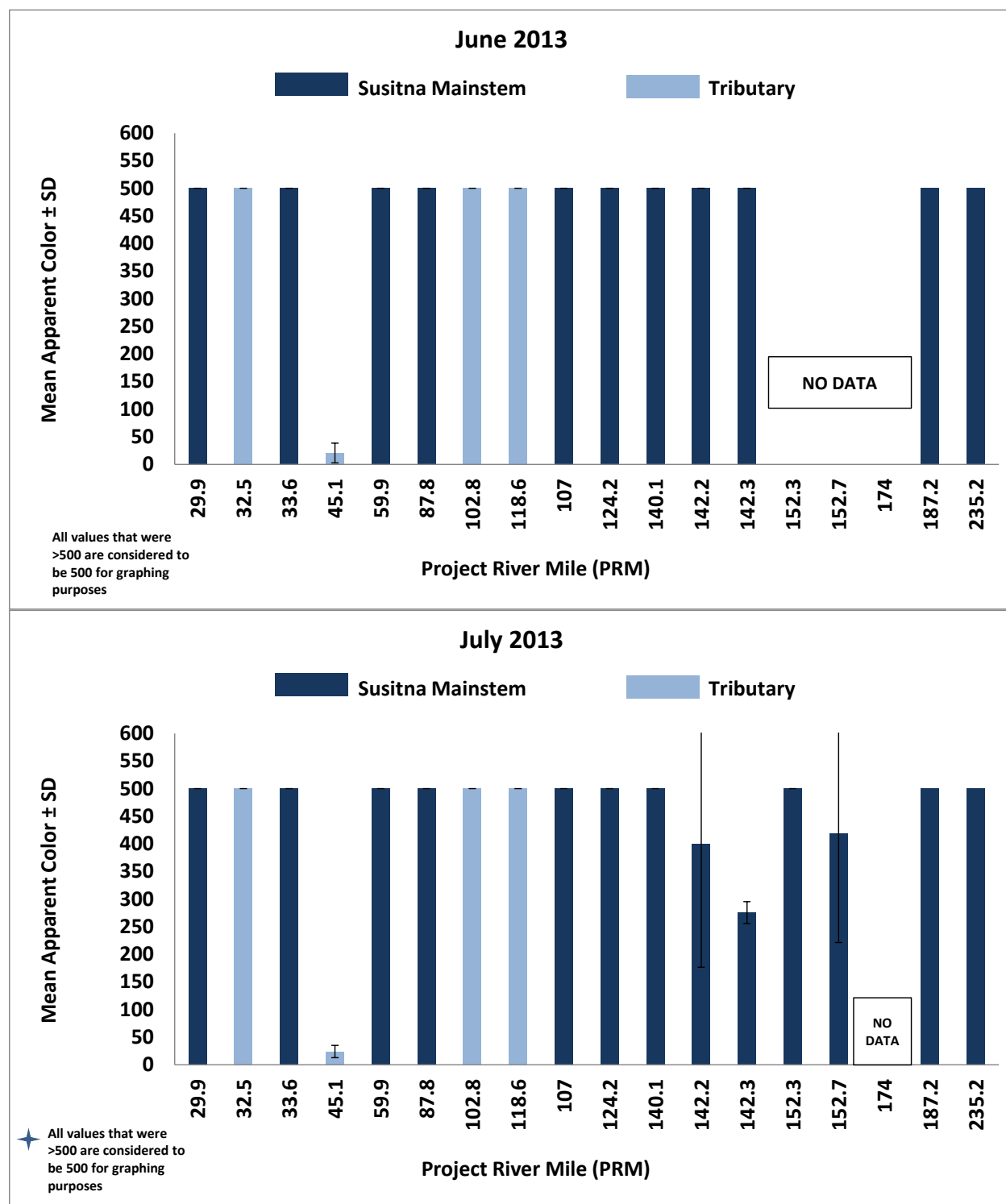


Figure D-5. Redox Potential for the Susitna River, 2013.



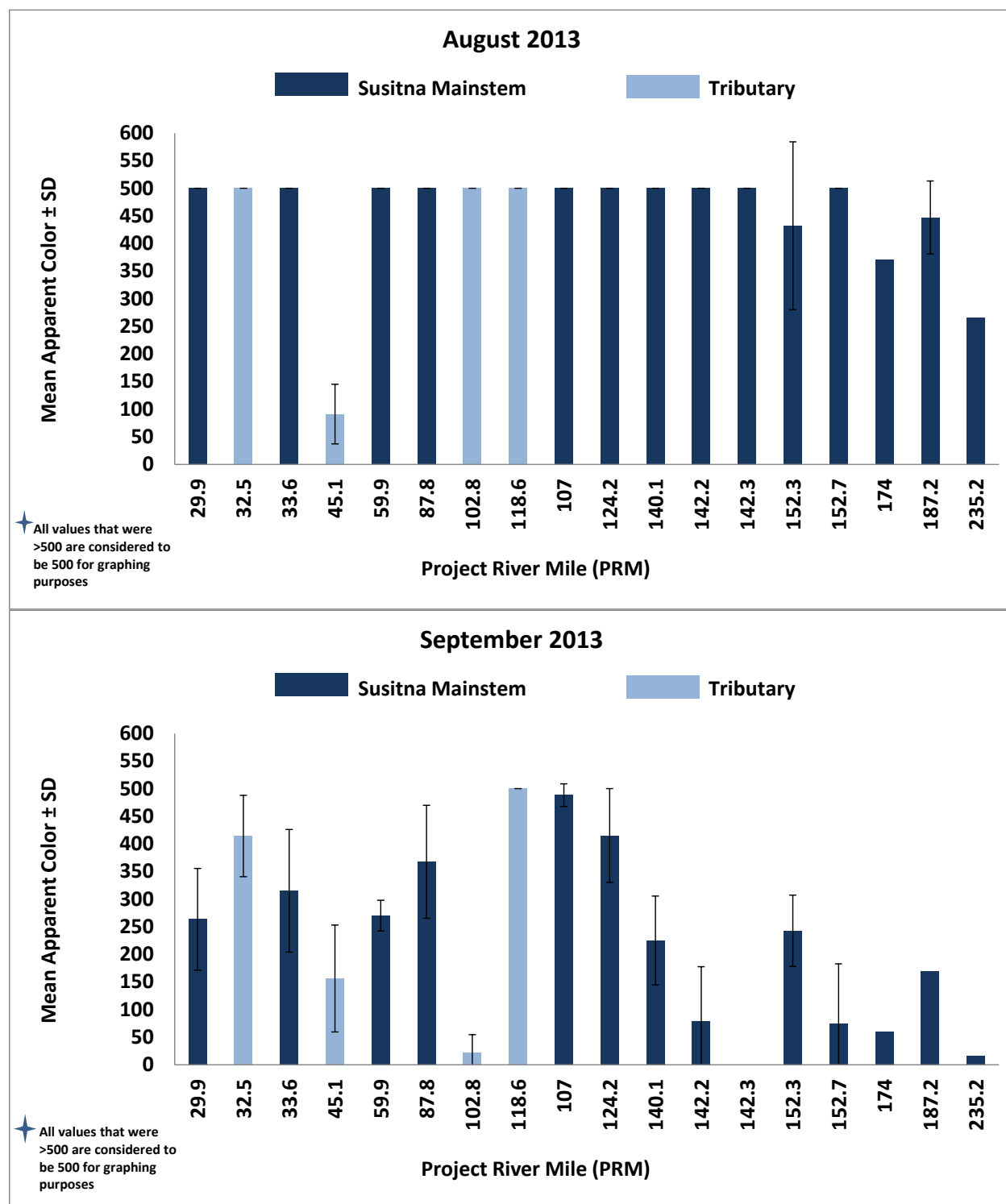
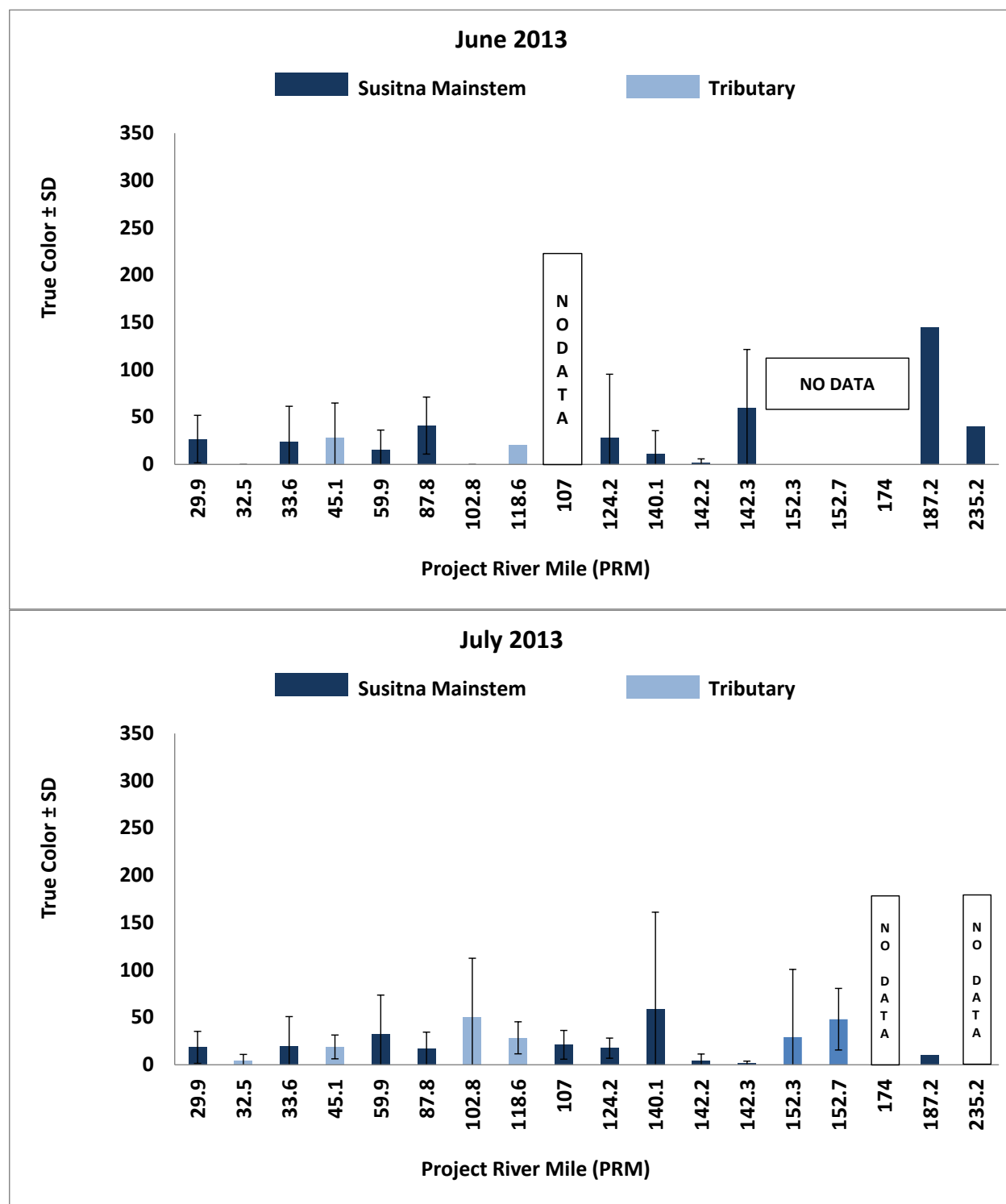


Figure D-6. Apparent Color for the Susitna River, 2013.



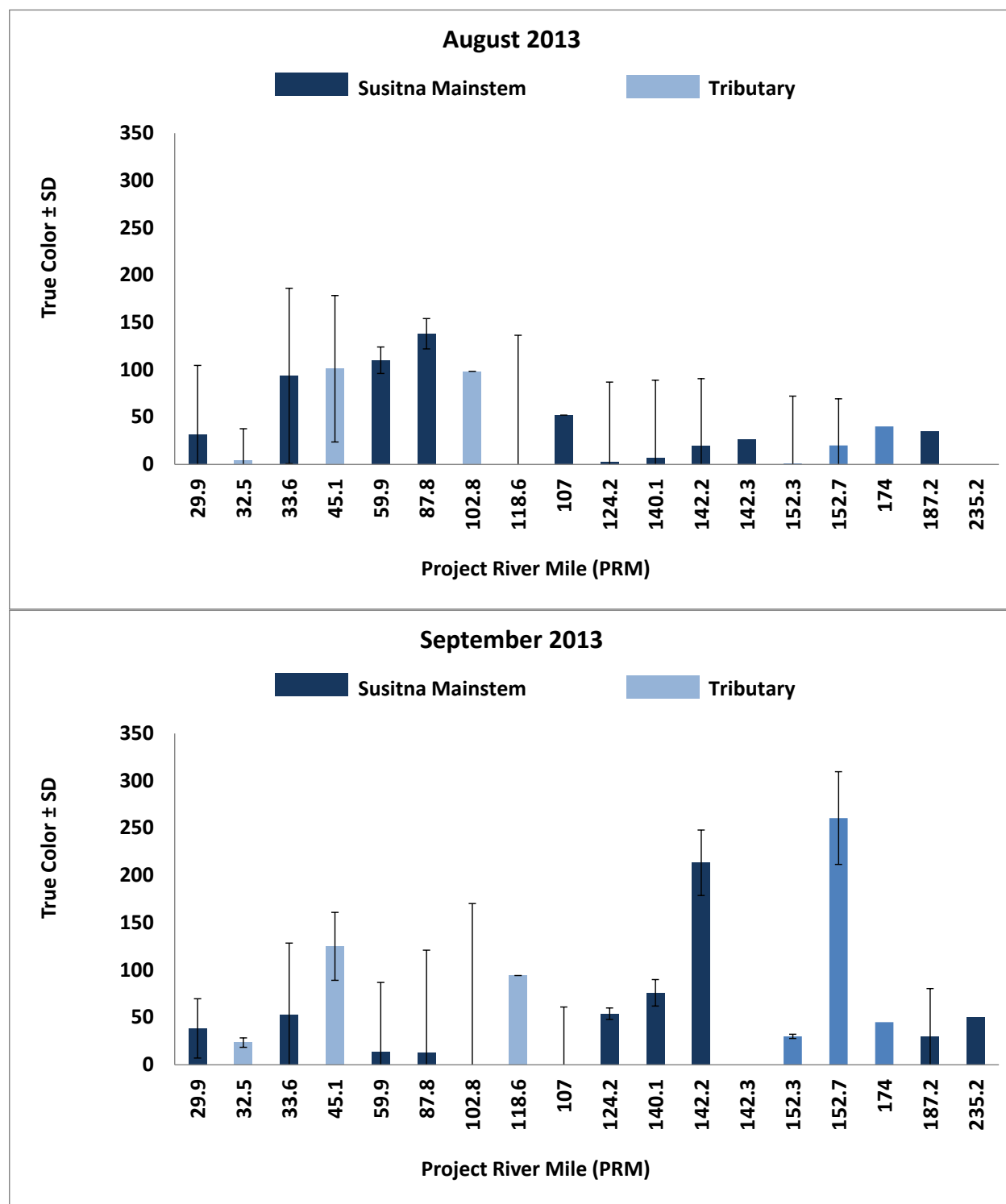


Figure D-7. True Color for the Susitna River, 2013.

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

Baseline Water Quality Study (5.5)

**Appendix E
Baseline Water Quality Chlorophyll Data**

Initial Study Report

Prepared for

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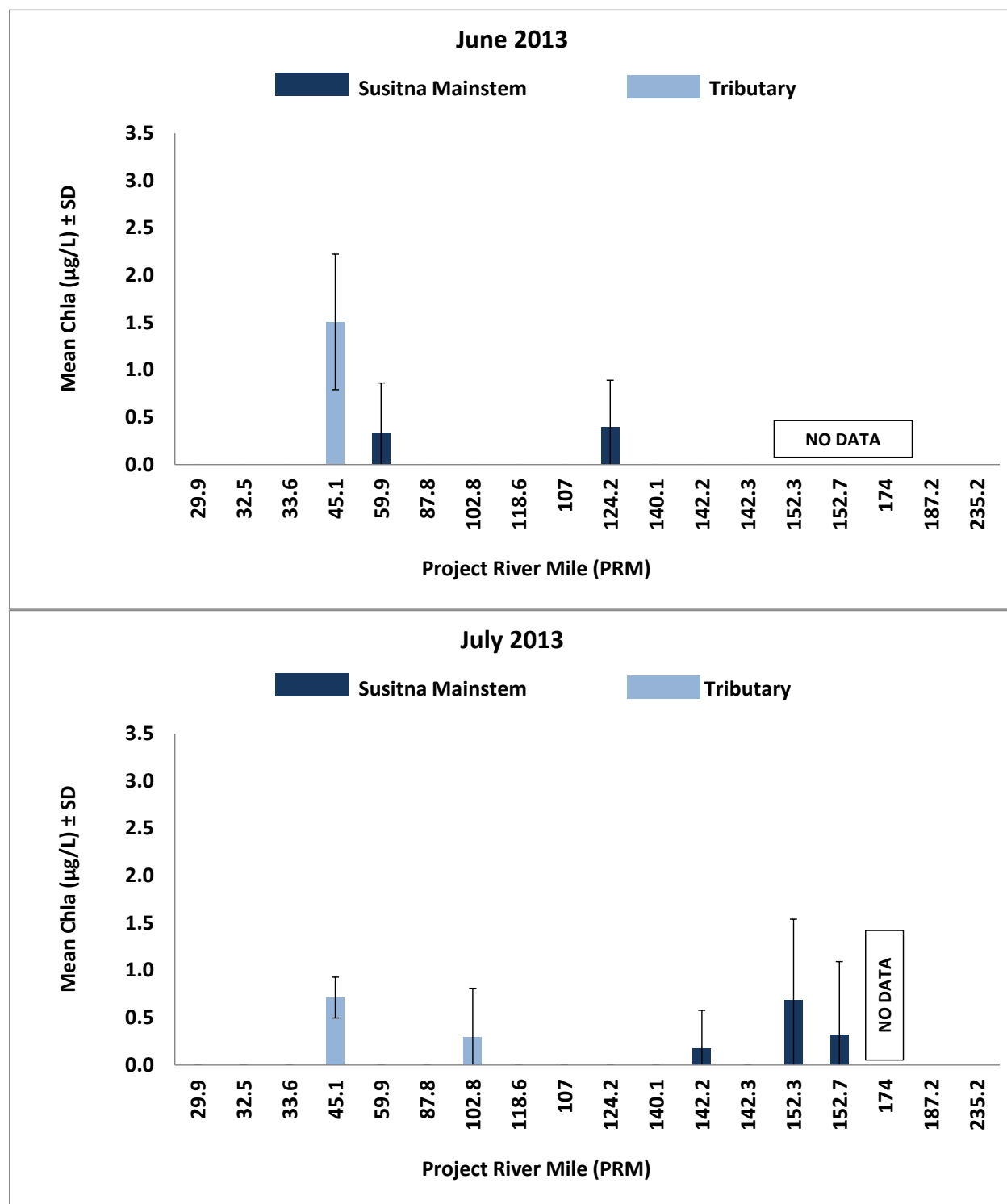


Figure E-1. Chlorophyll a Concentrations in the Susitna River, June-July 2013.

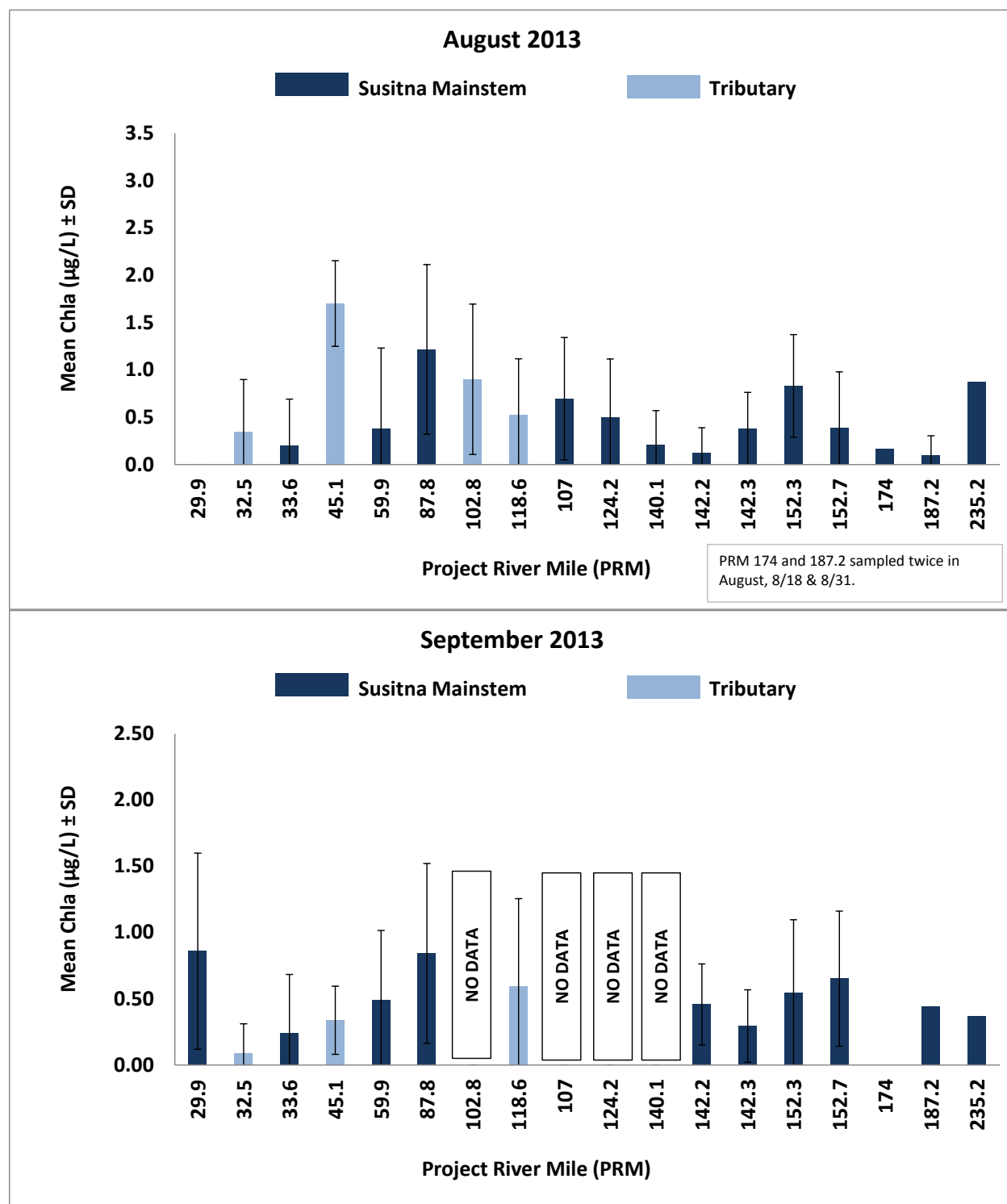


Figure E-2. Chlorophyll a Concentrations in the Susitna River, August-September 2013.

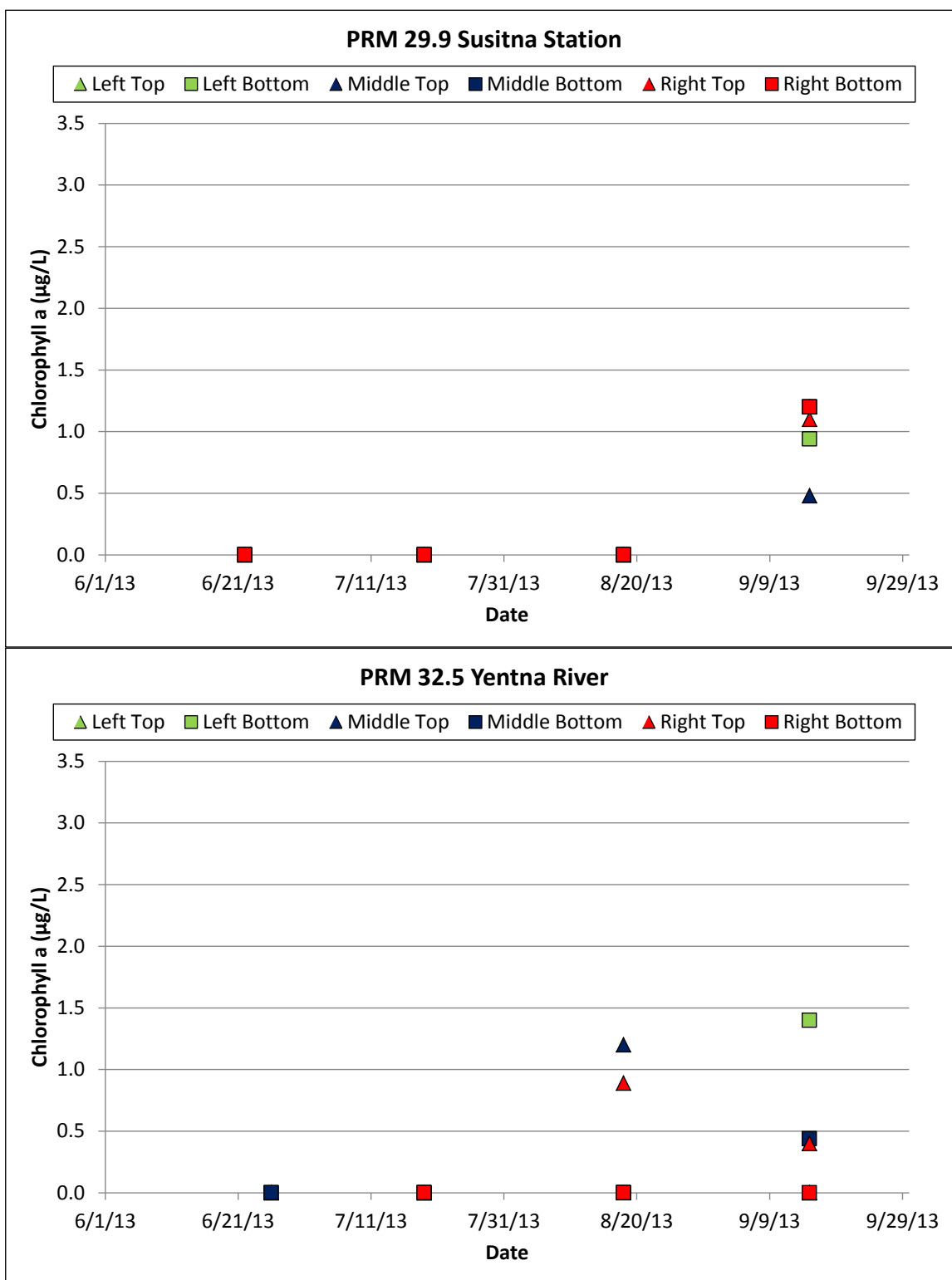


Figure E-3. Chlorophyll a Concentrations at Monitoring Locations in the Susitna River, 2013

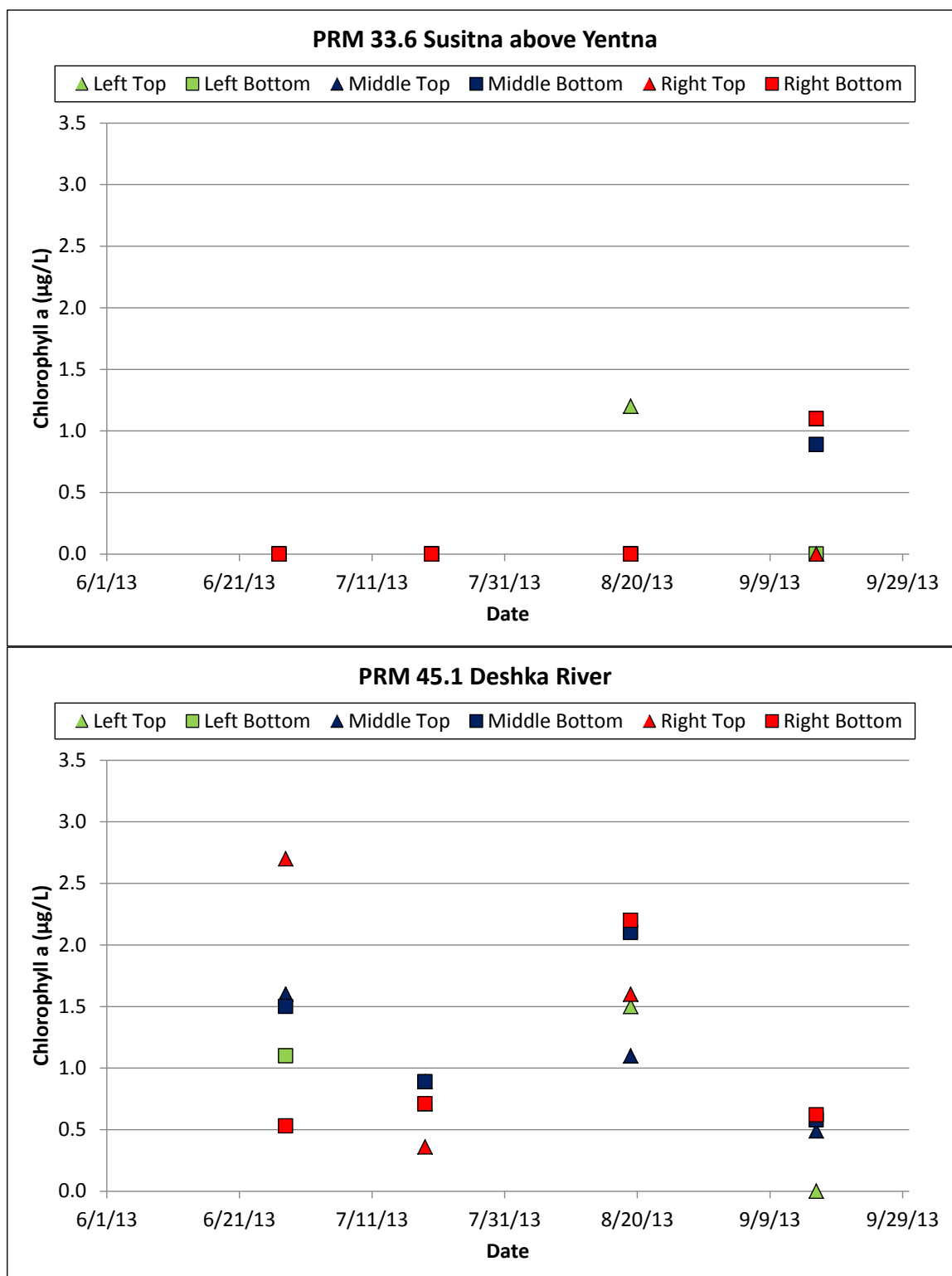


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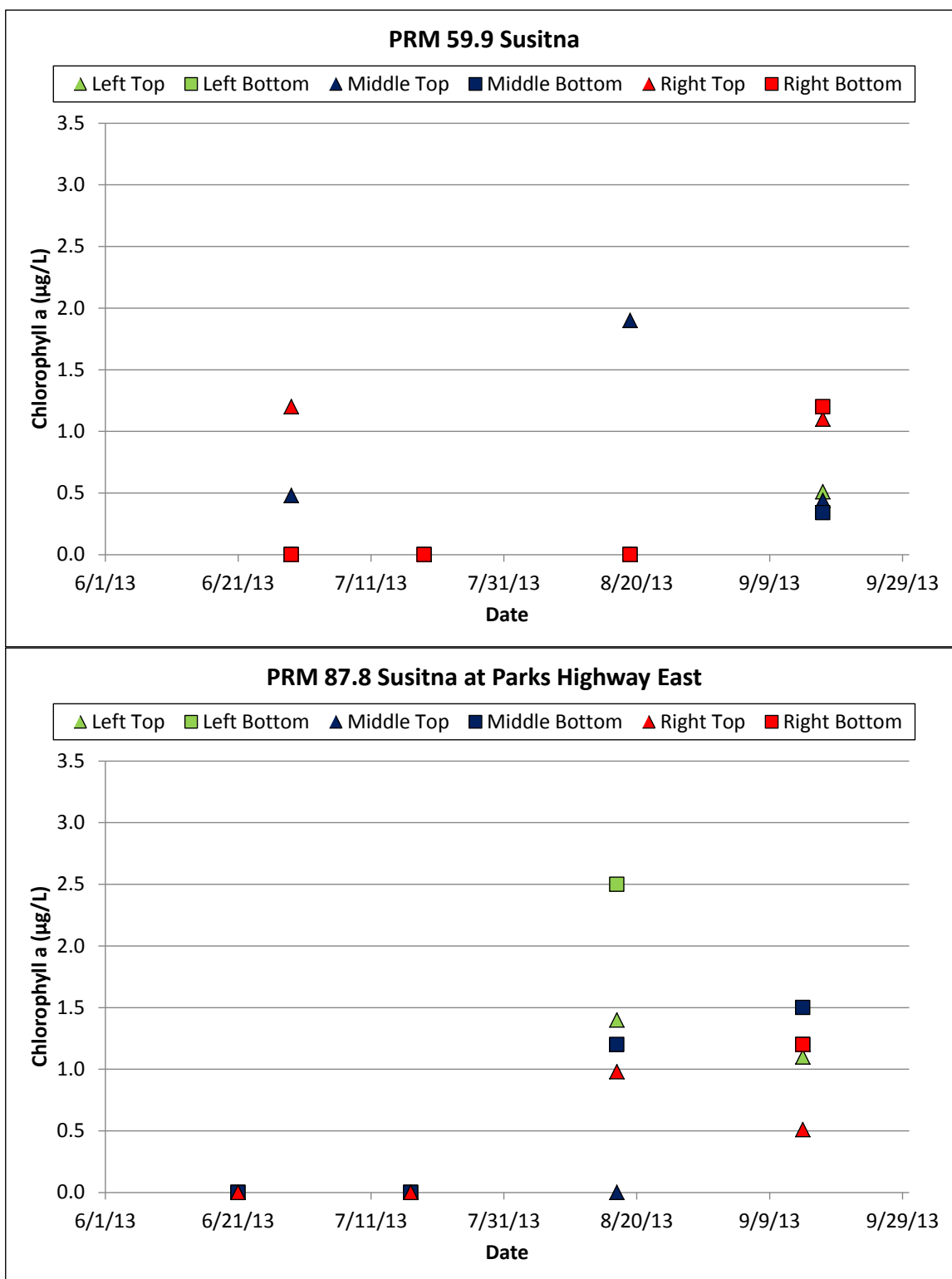


Figure E-3. Chlorophyll a Concentrations at Monitoring Locations in the Susitna River, 2013 (cont.).

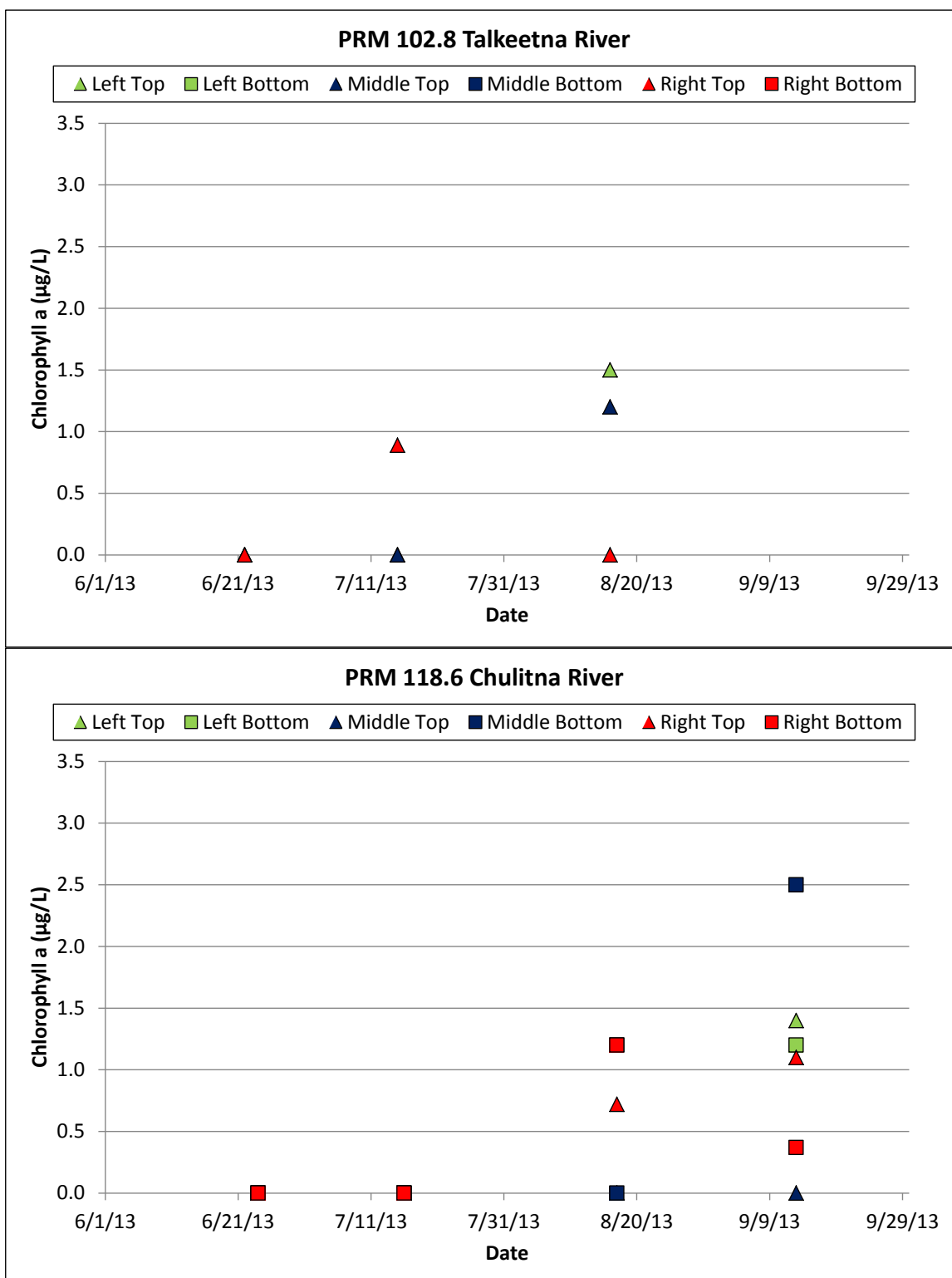


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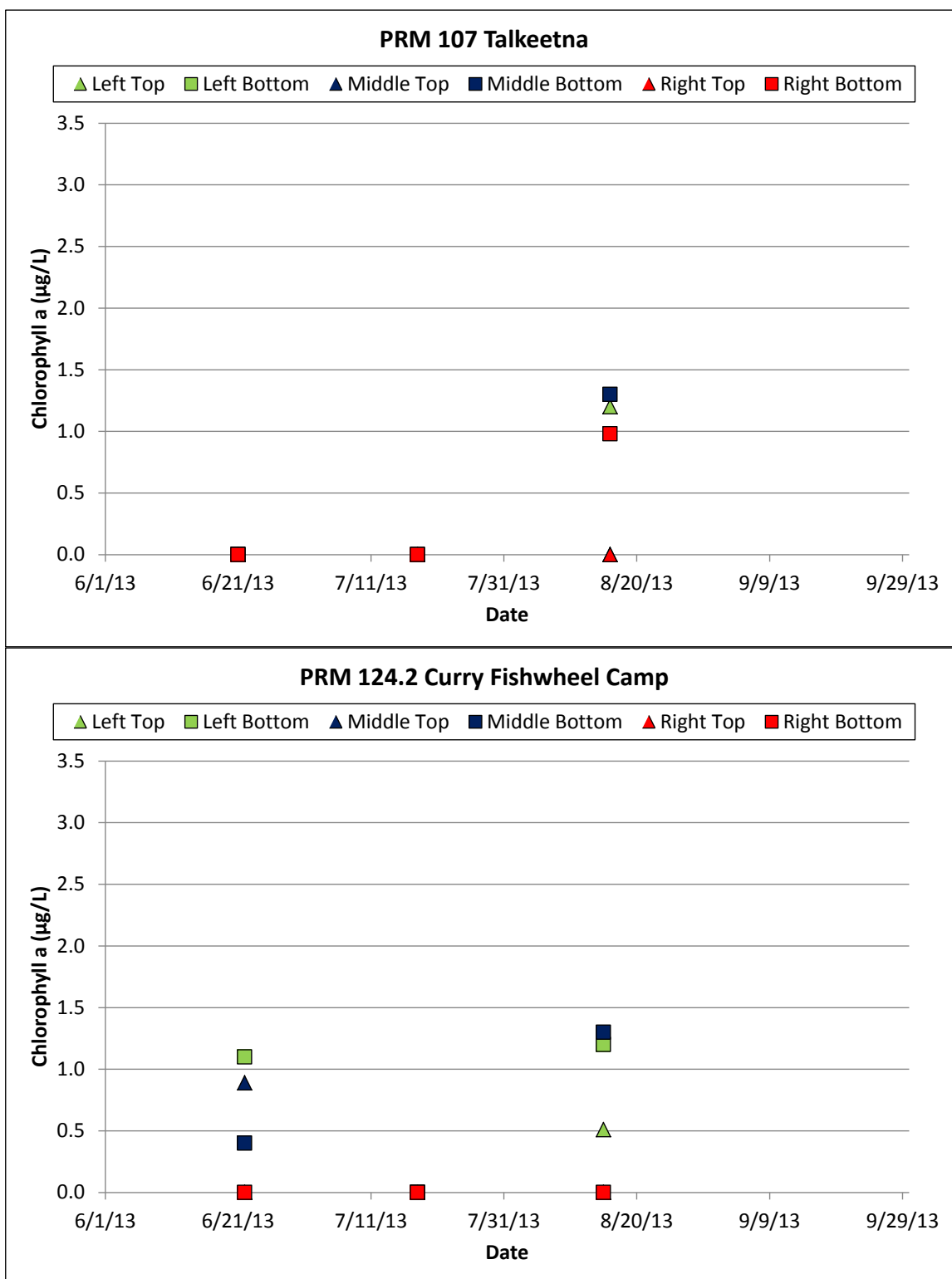


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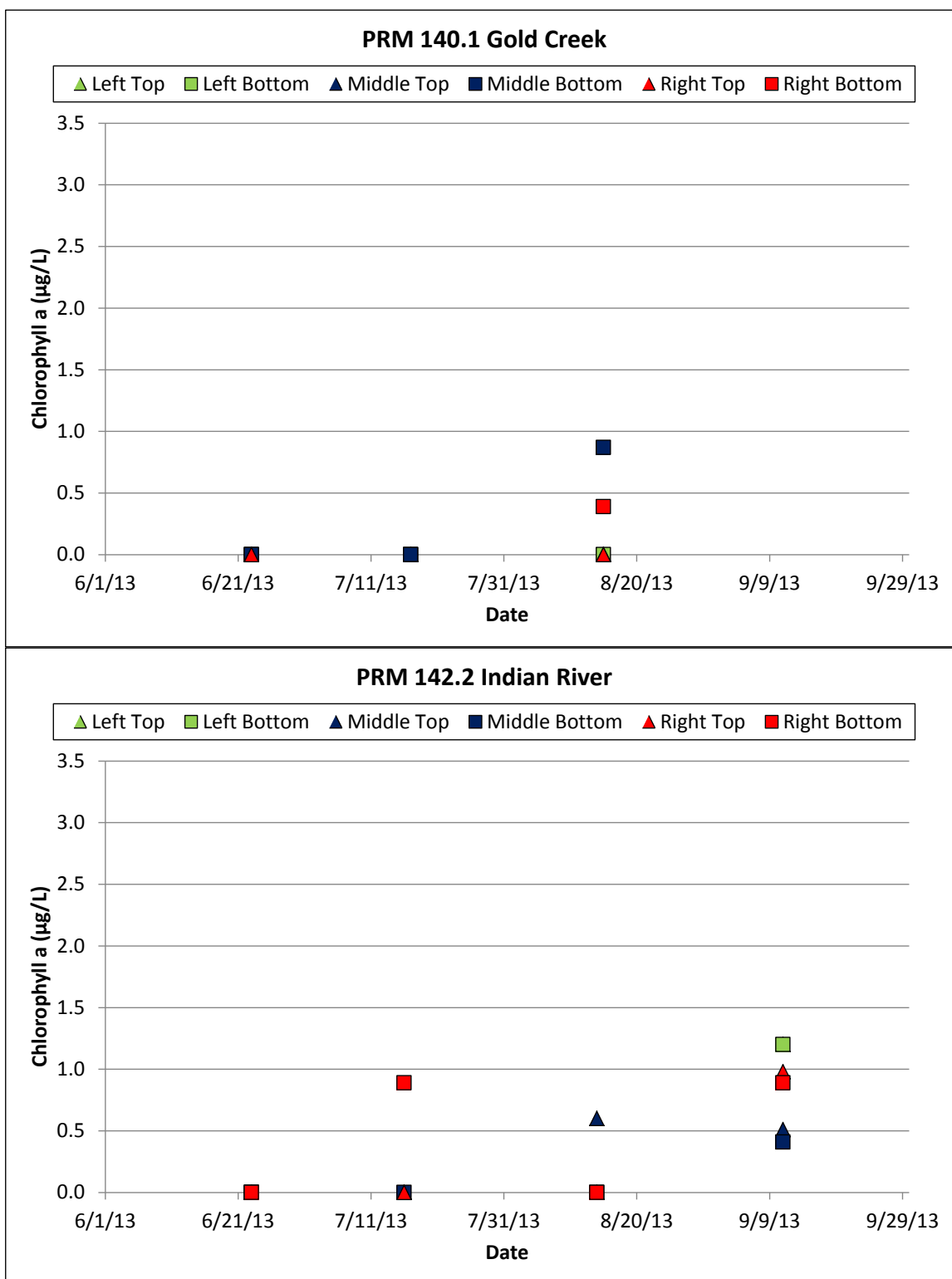


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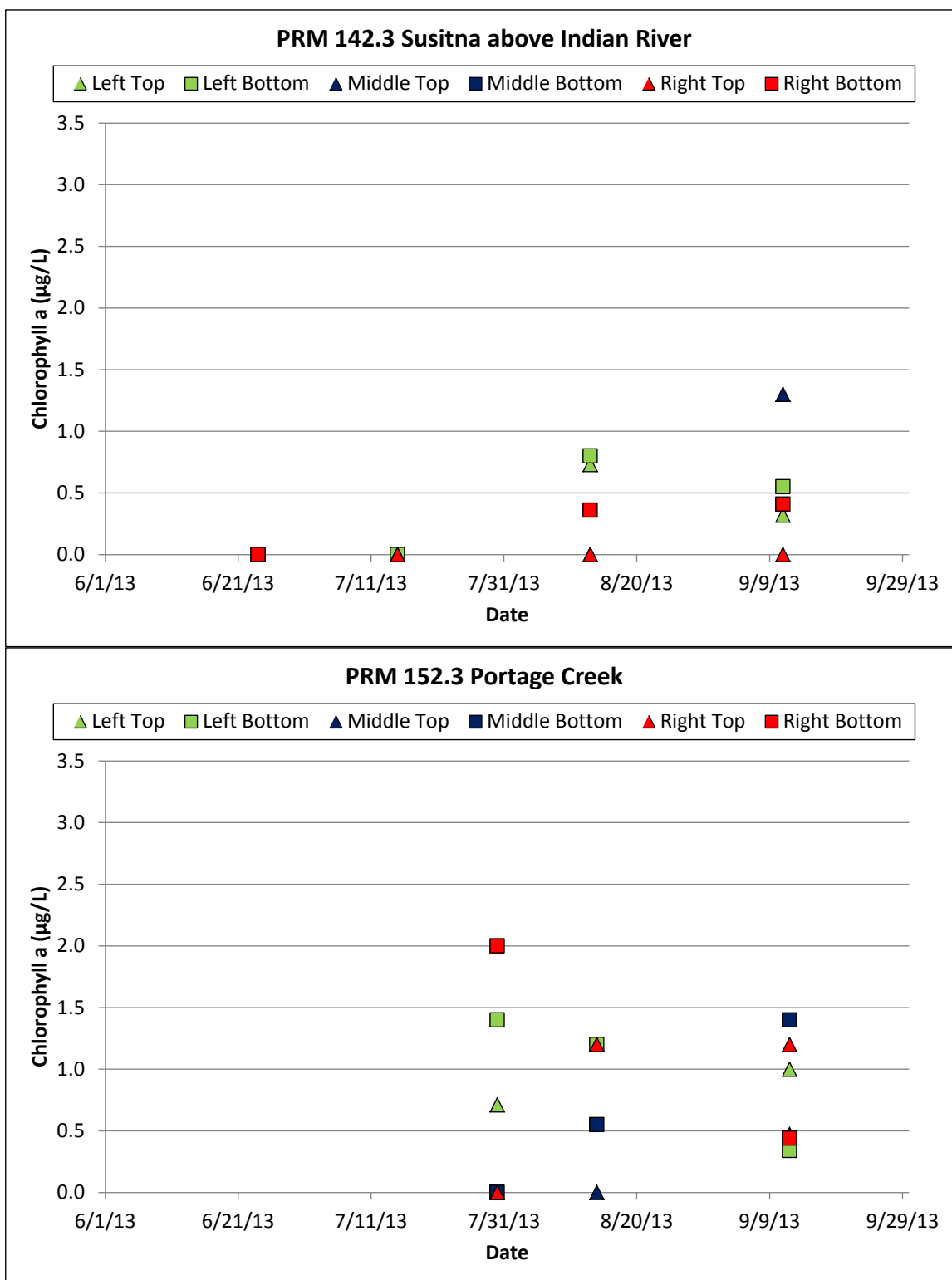


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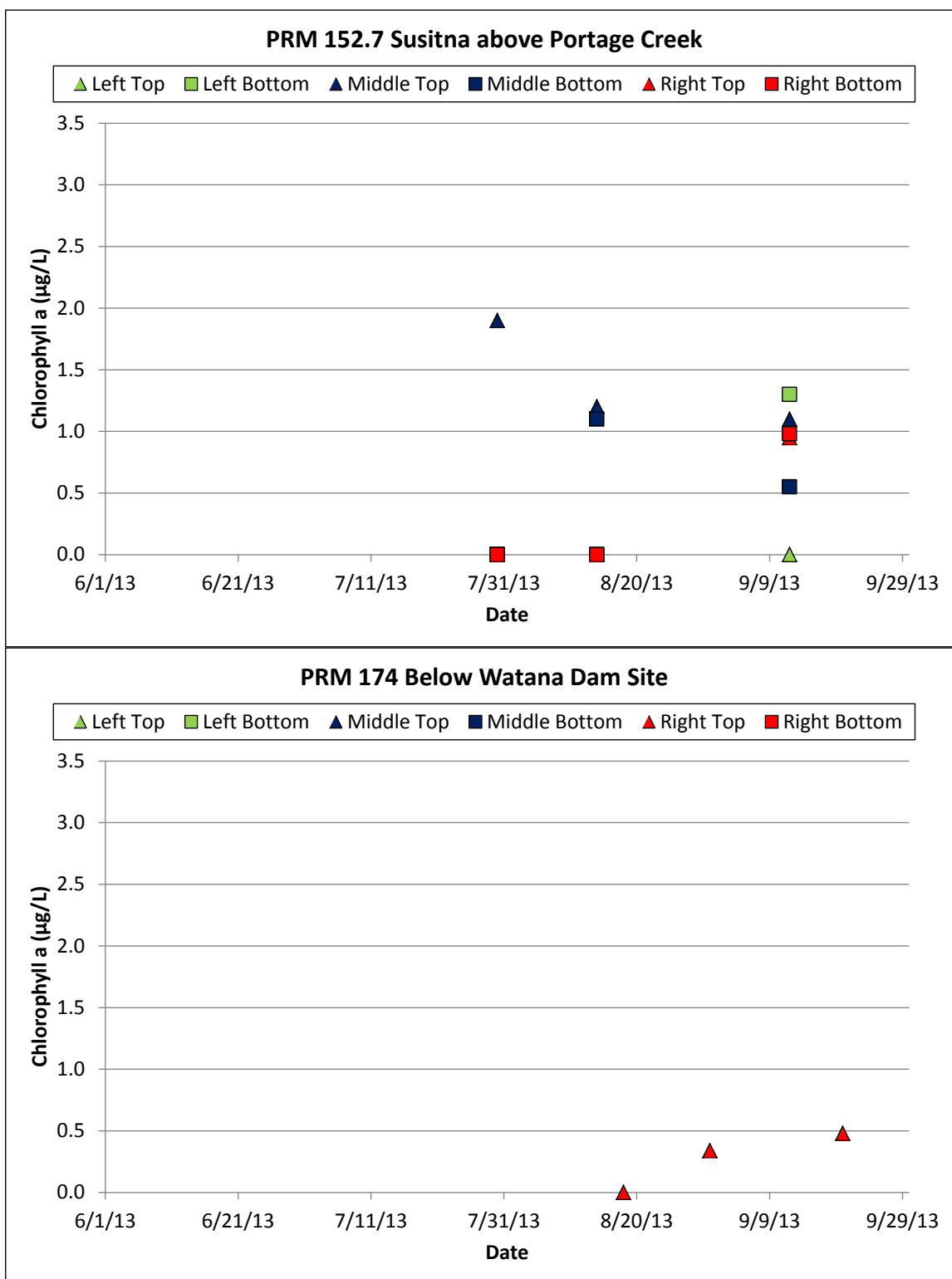


Figure E-3. Chlorophyll a Concentrations at Monitoring Locations in the Susitna River, 2013 (cont.).

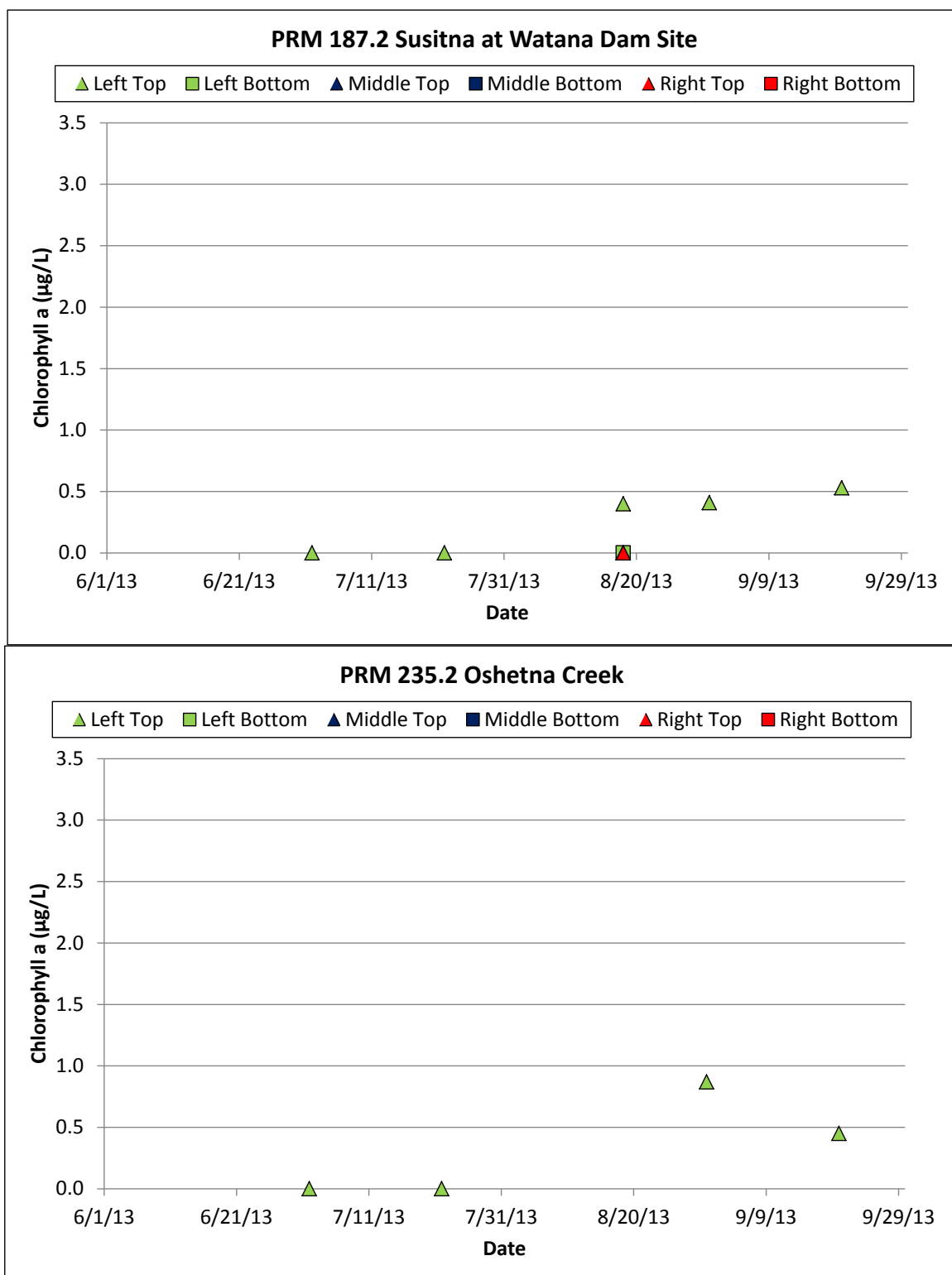


Figure E-3. Chlorophyll a Concentrations at Monitoring Locations in the Susitna River, 2013 (cont.).

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

Baseline Water Quality Study (5.5)

**Appendix F
Focus Area Location Maps**

Initial Study Report

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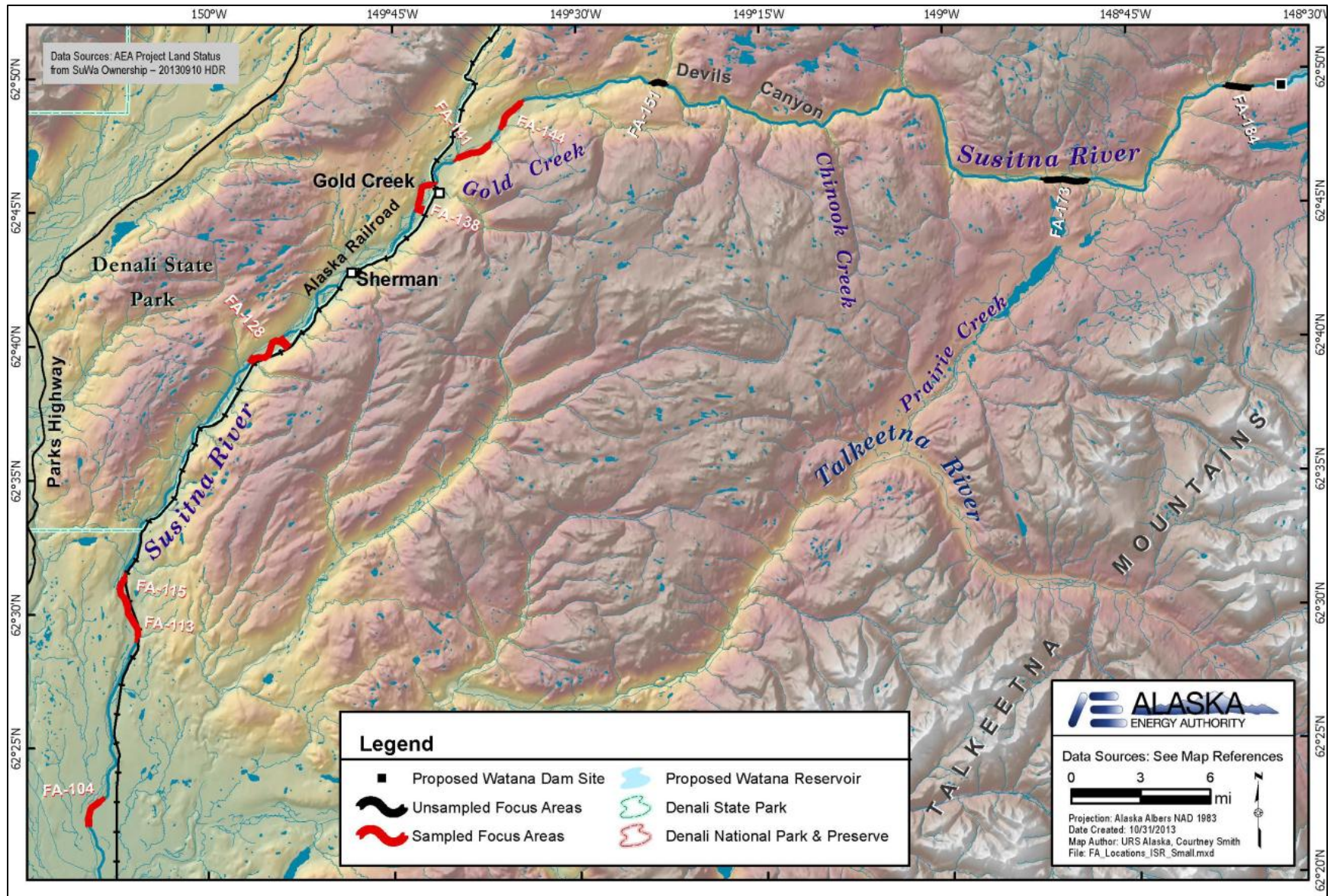


Figure F-1. Focus Area Location Overview

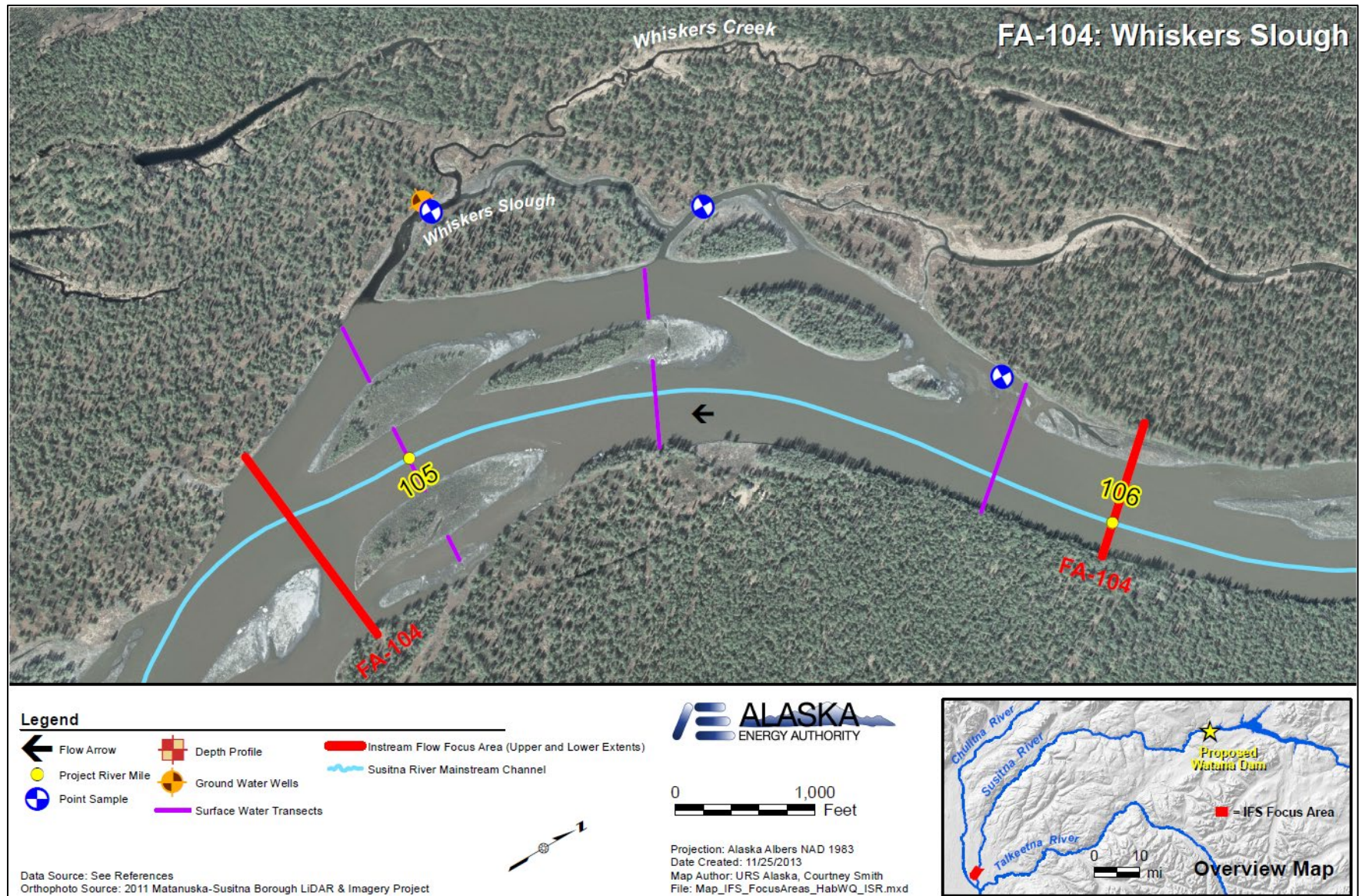


Figure F-2. Focus Area 104: Whiskers Slough

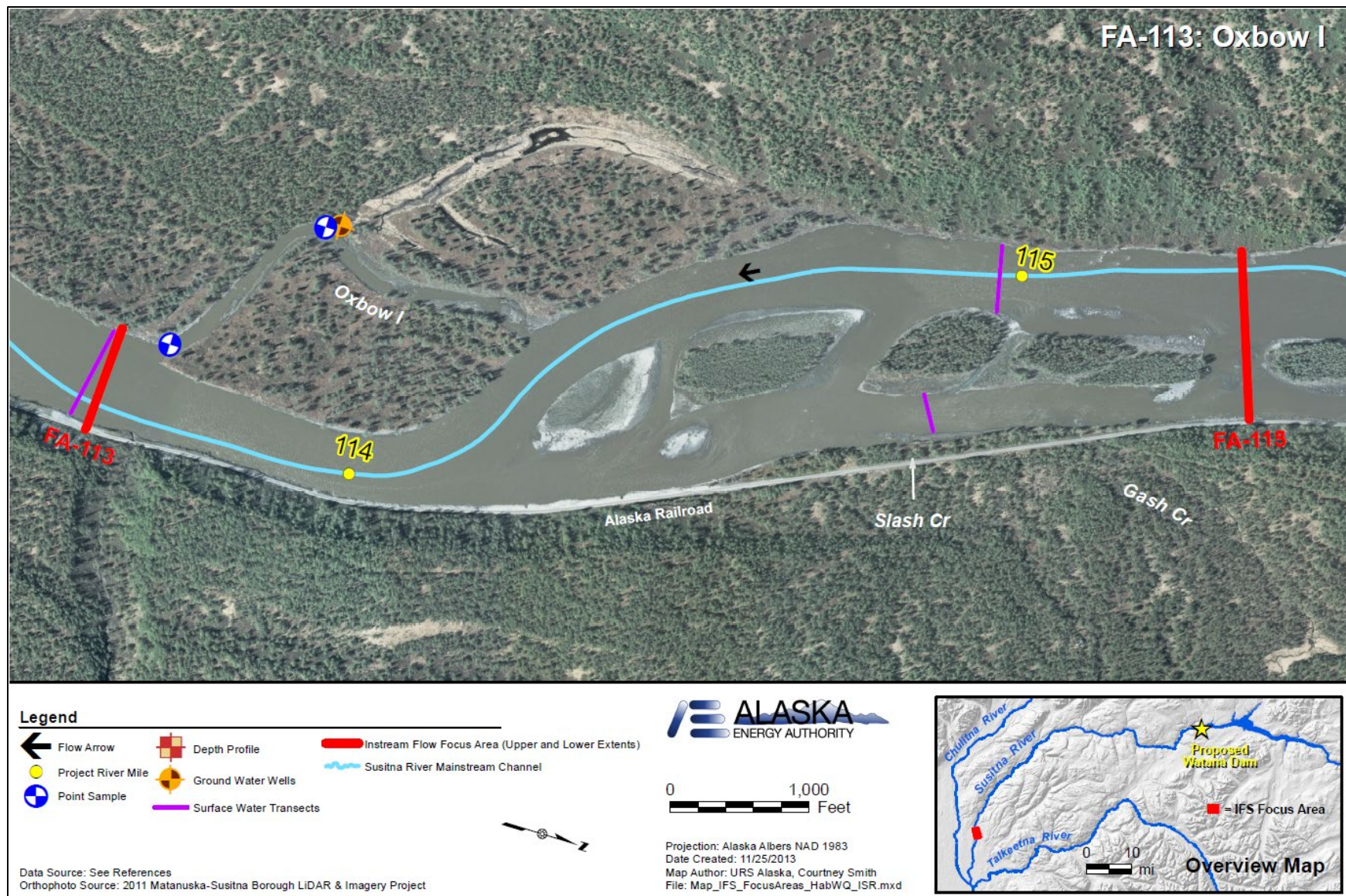


Figure F-3. Focus Area 113: Oxbow 1

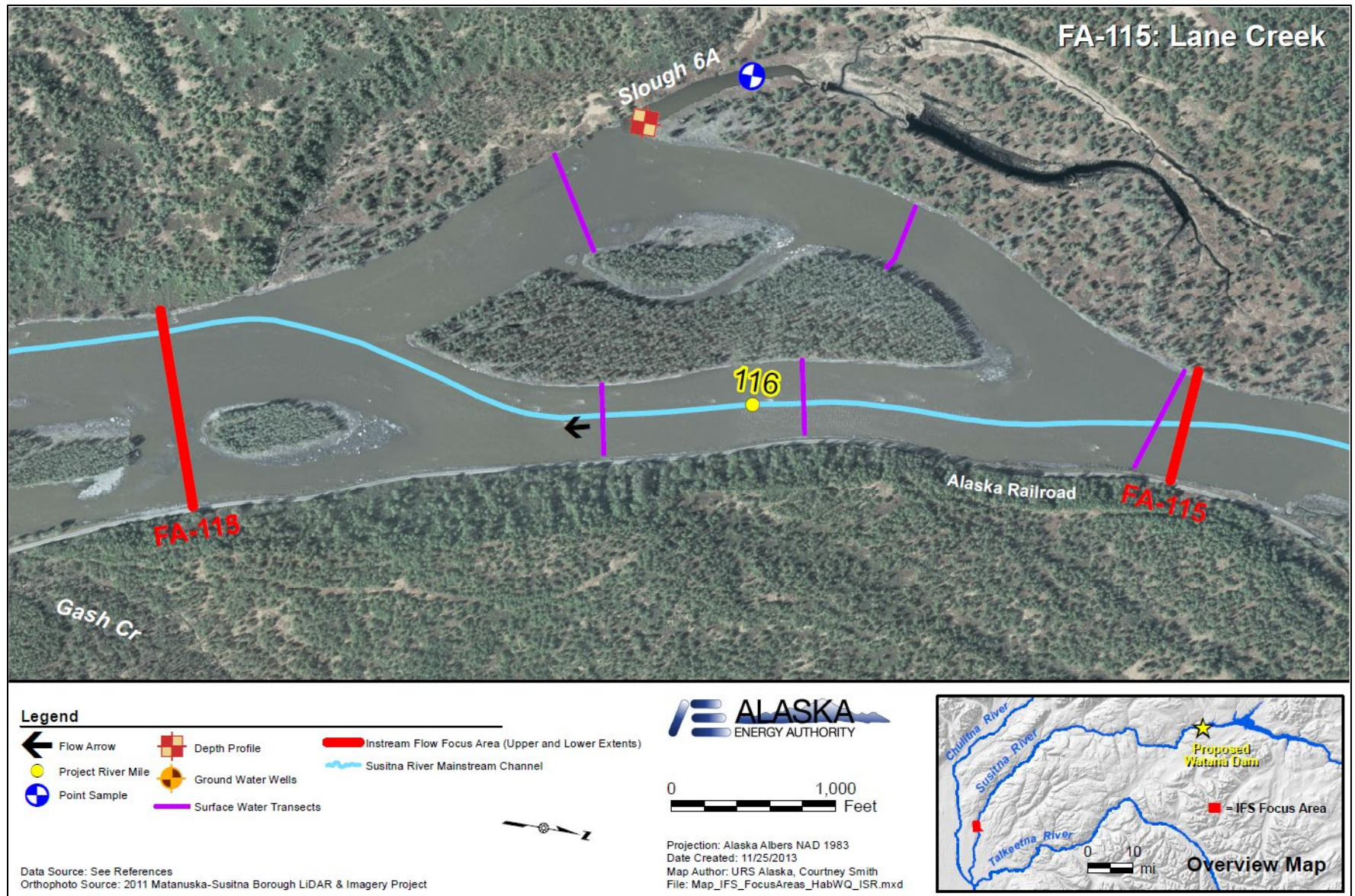


Figure F-4. Focus Area 115: Lane Creek

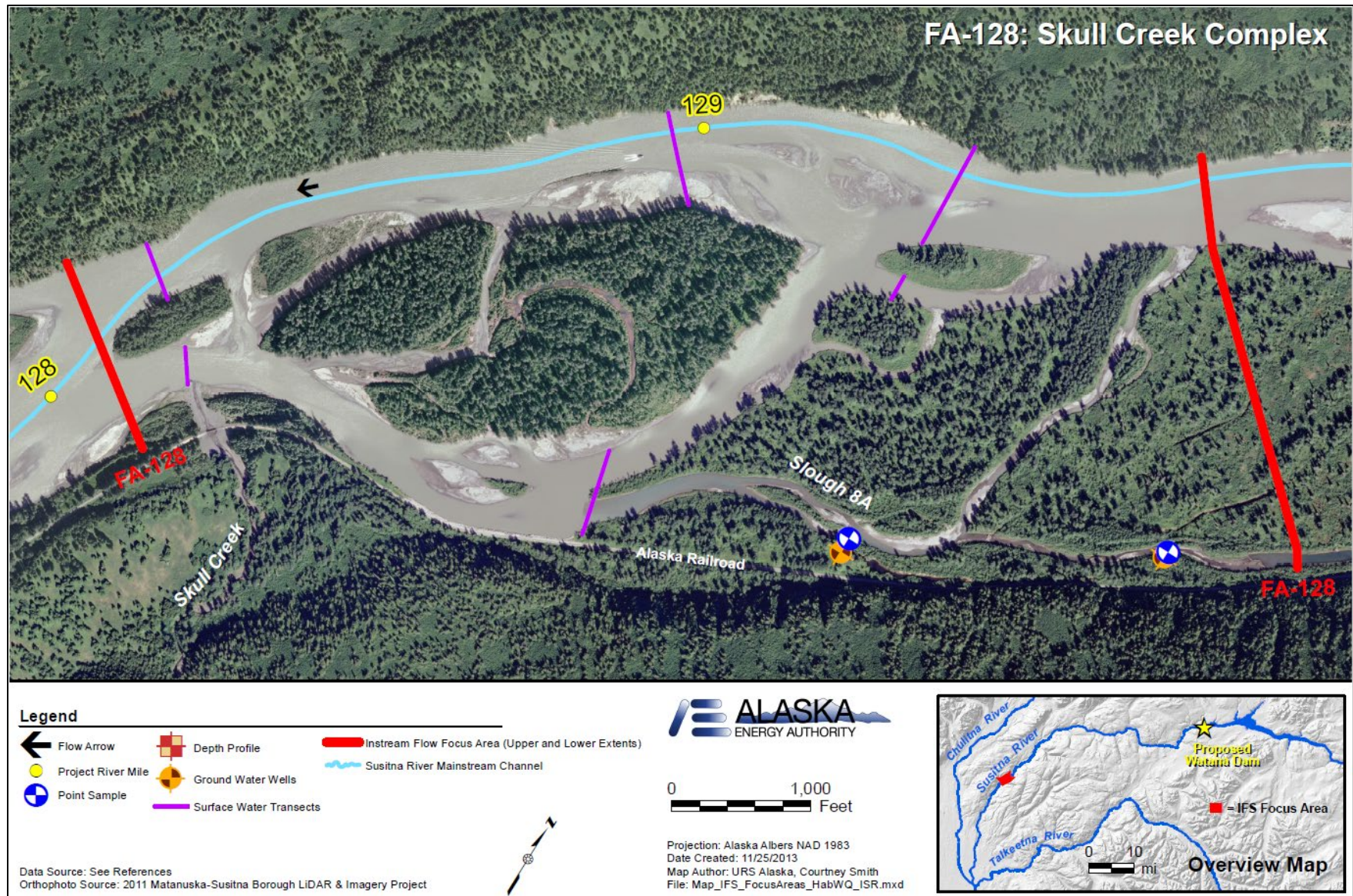


Figure F-5. Focus Area 128: Skull Creek Complex

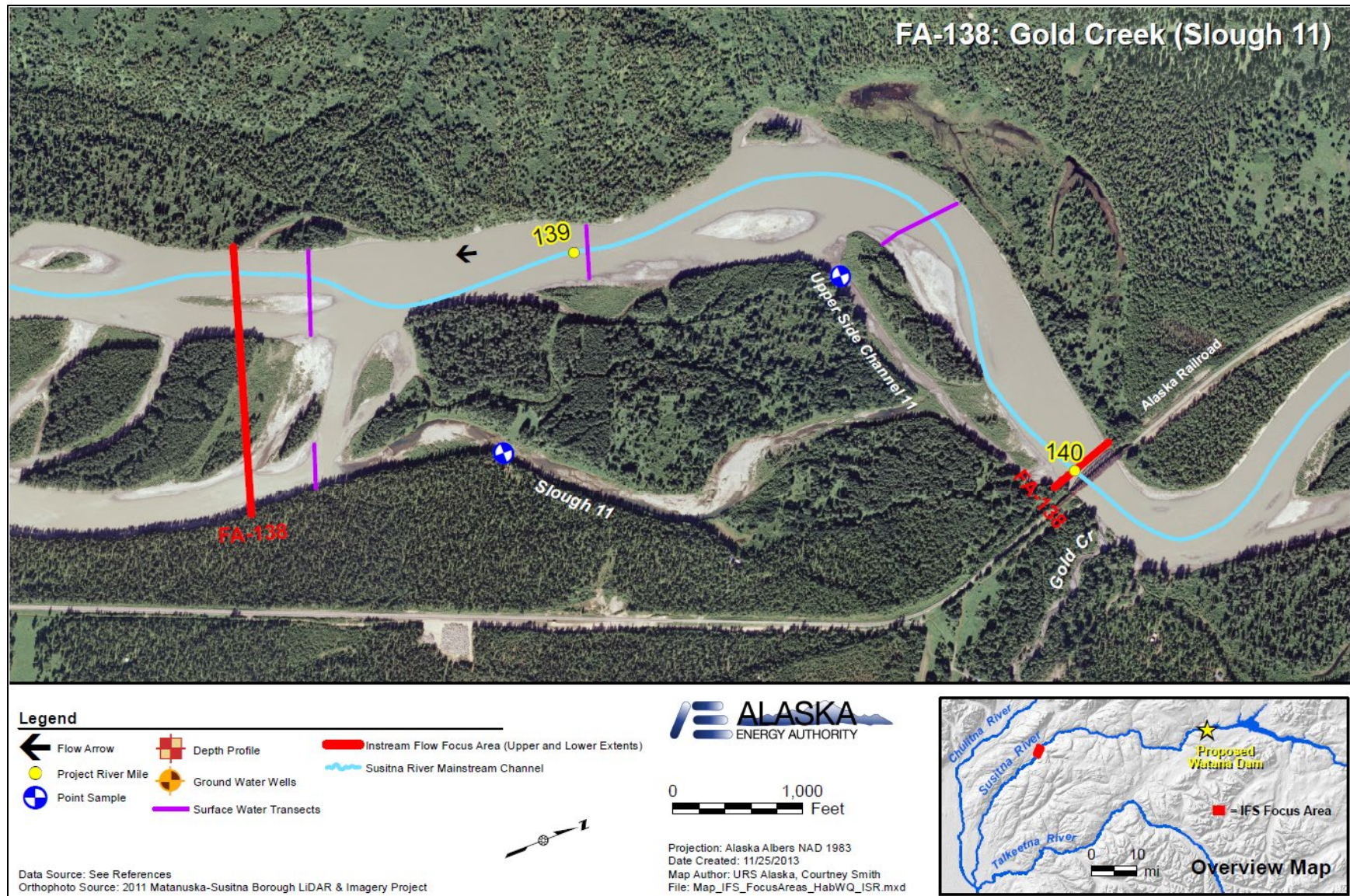


Figure F-6. Focus Area 138: Gold Creek (Slough 11)

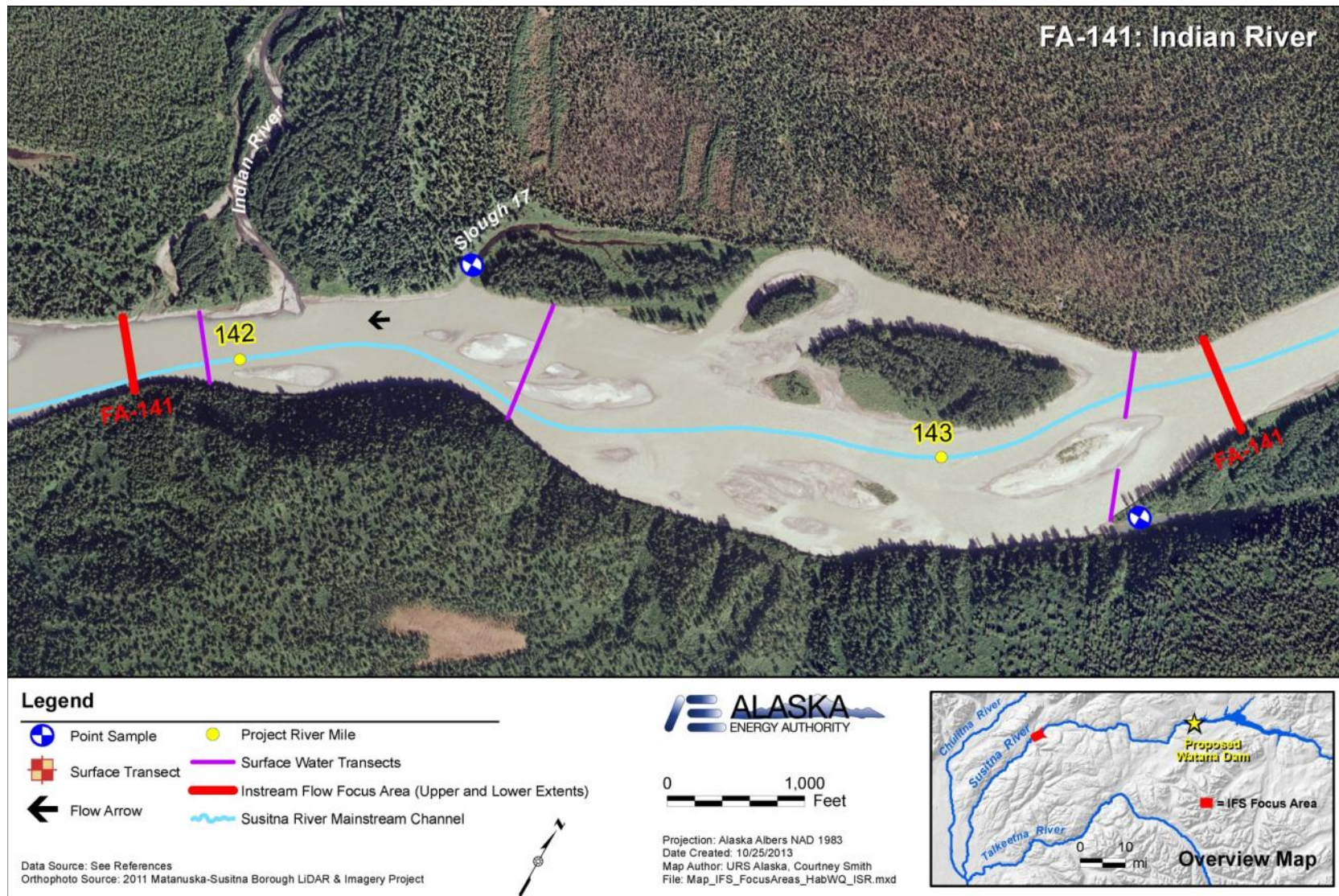


Figure F-7. Focus Area 141: Indian River

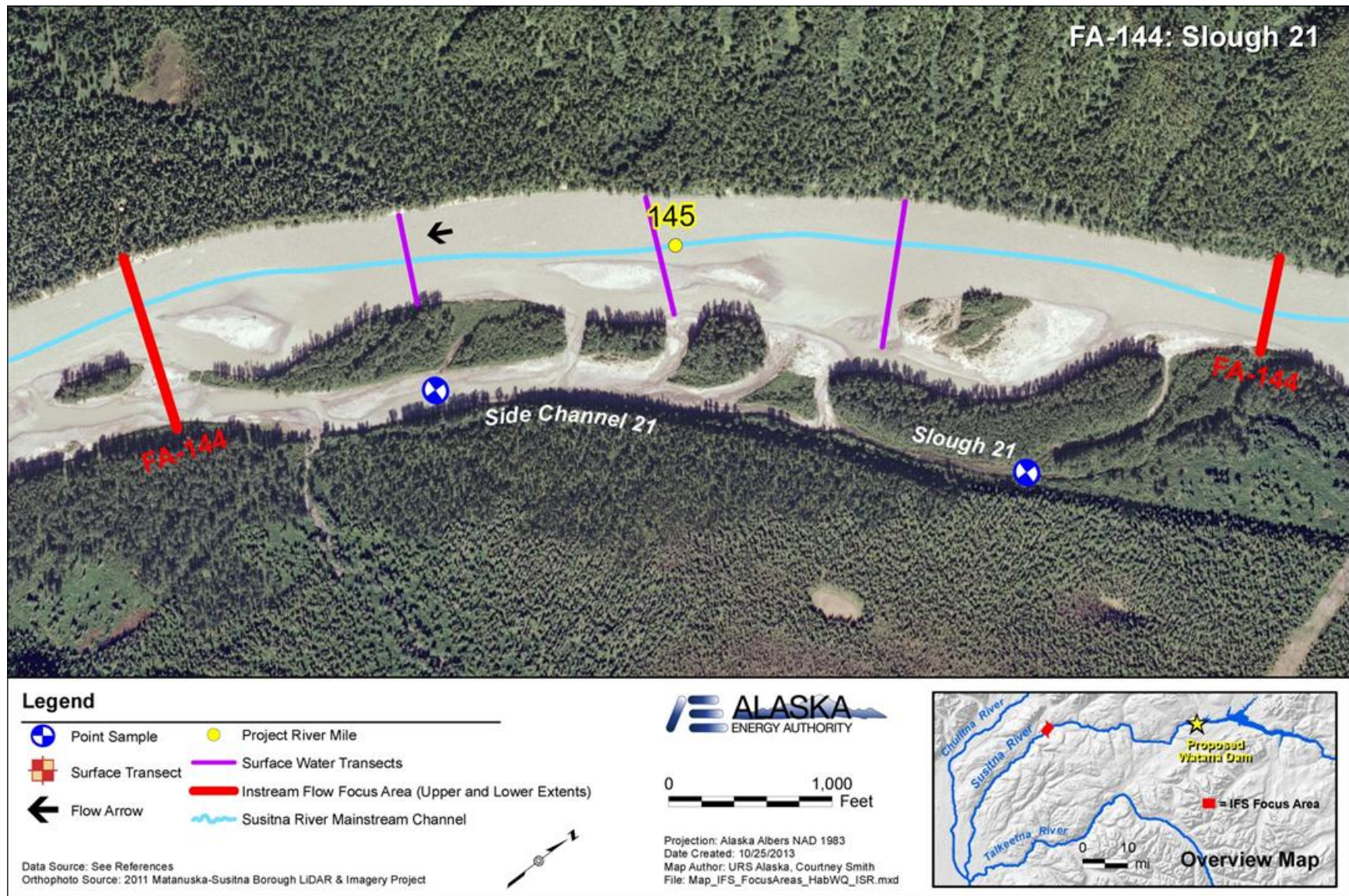


Figure F-8. Focus Area 144: Slough 21

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Baseline Water Quality Study (5.5)

Appendix G
Focus Area Water Quality Data

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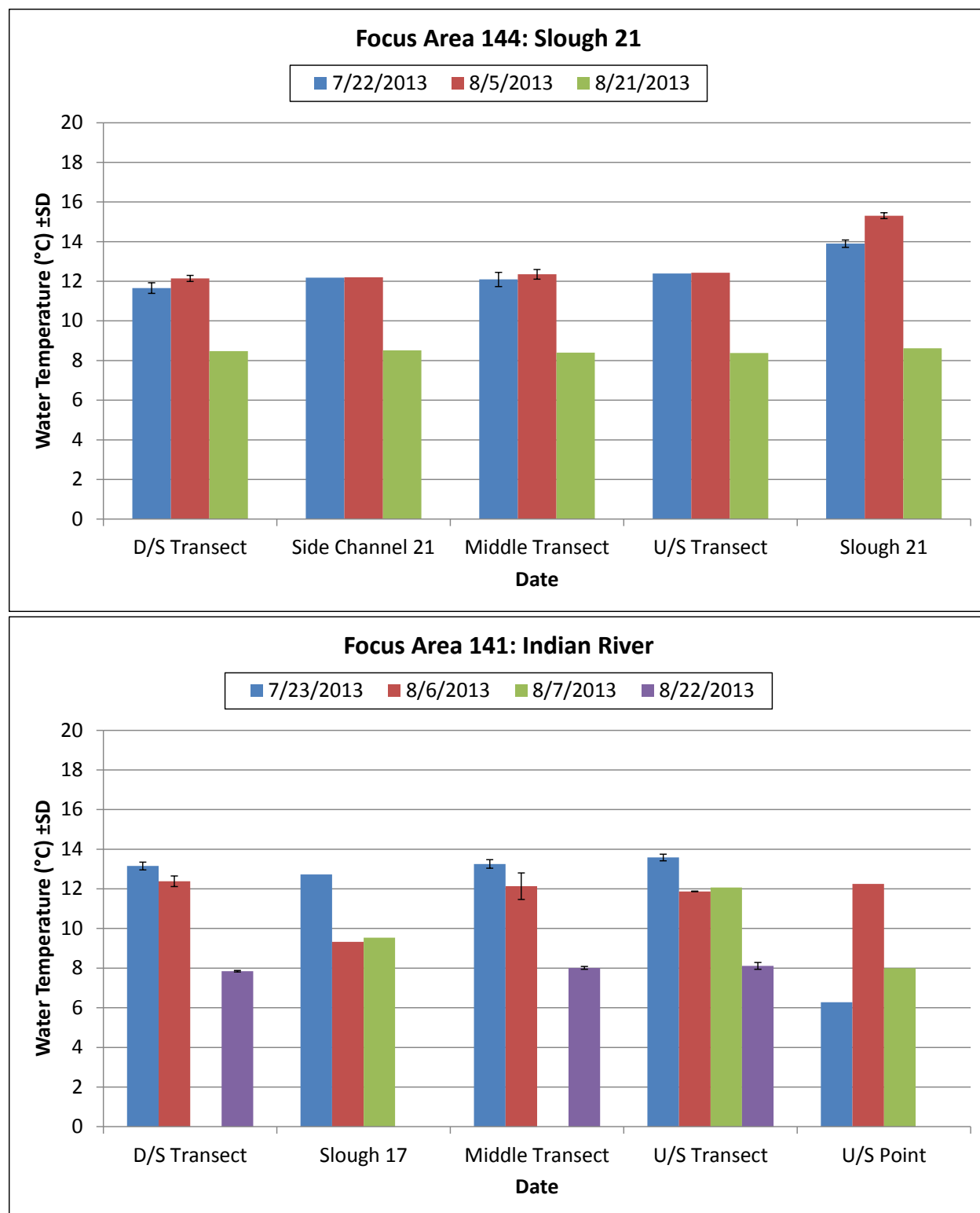


Figure F-1. Temperature for the Focus Areas on the Susitna River, 2013.

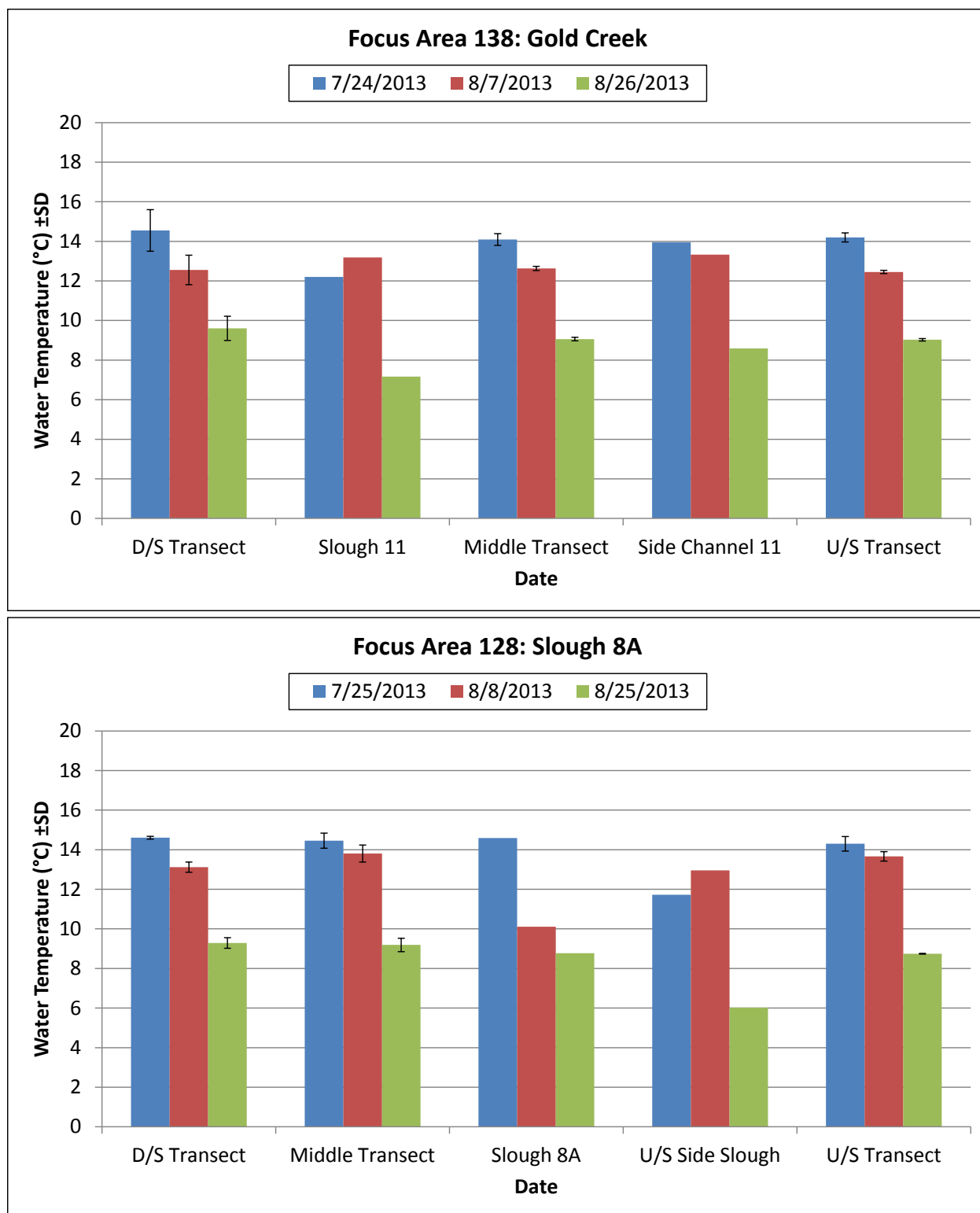


Figure F-1. Temperature for the Focus Areas on the Susitna River, 2013 (cont'd).

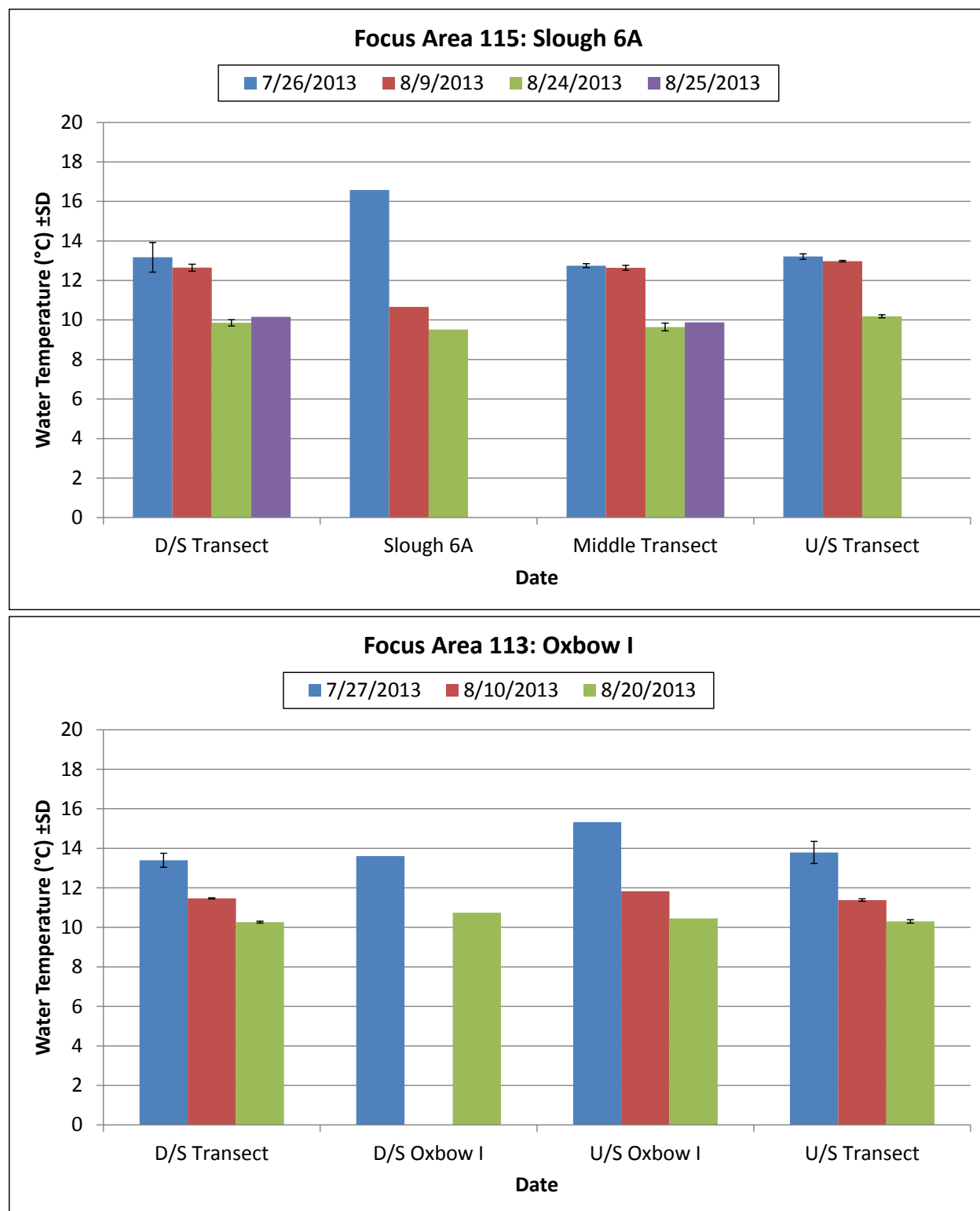


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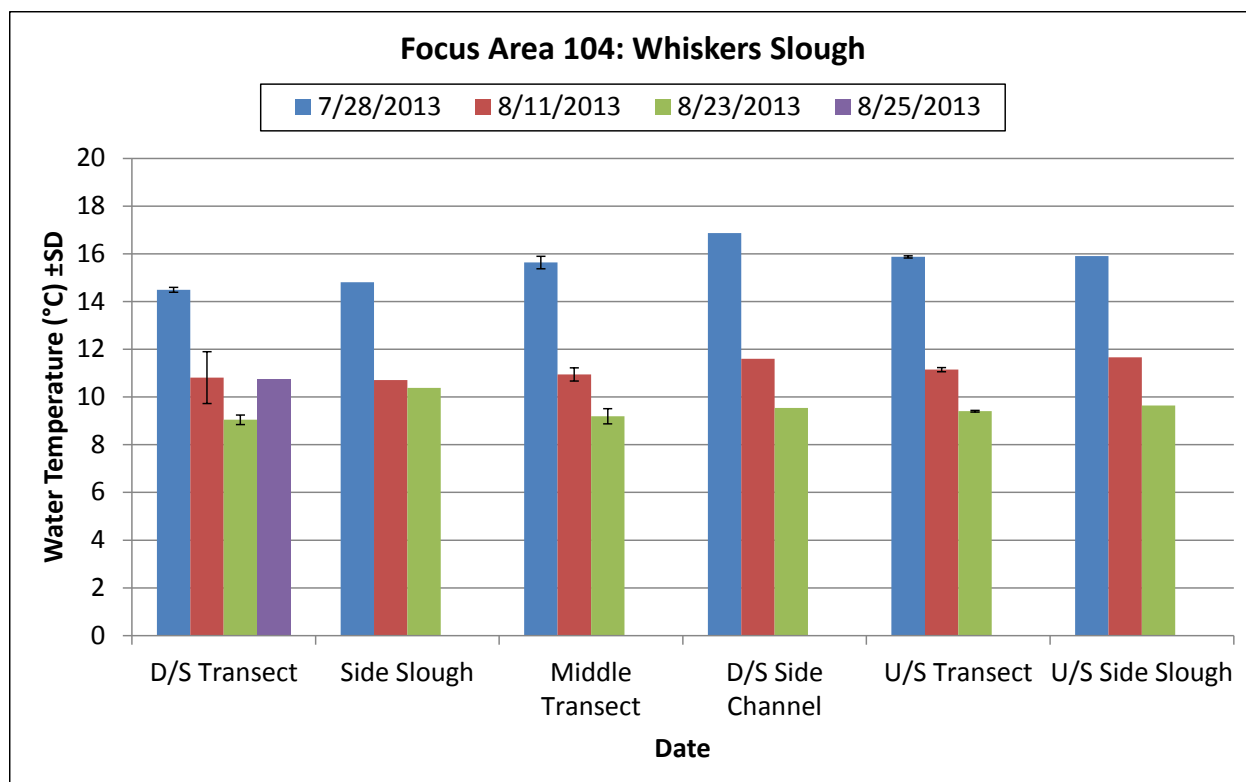


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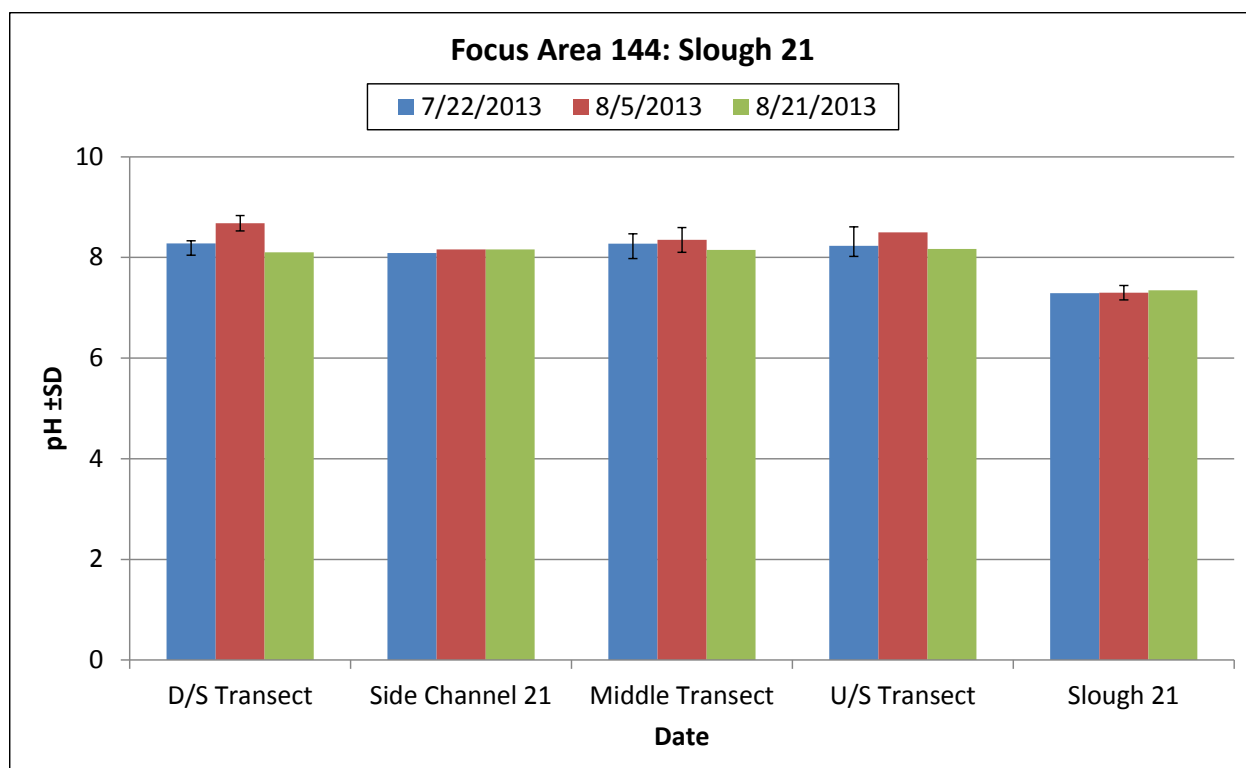


Figure F-2. pH for the Focus Areas on the Susitna River, 2013.

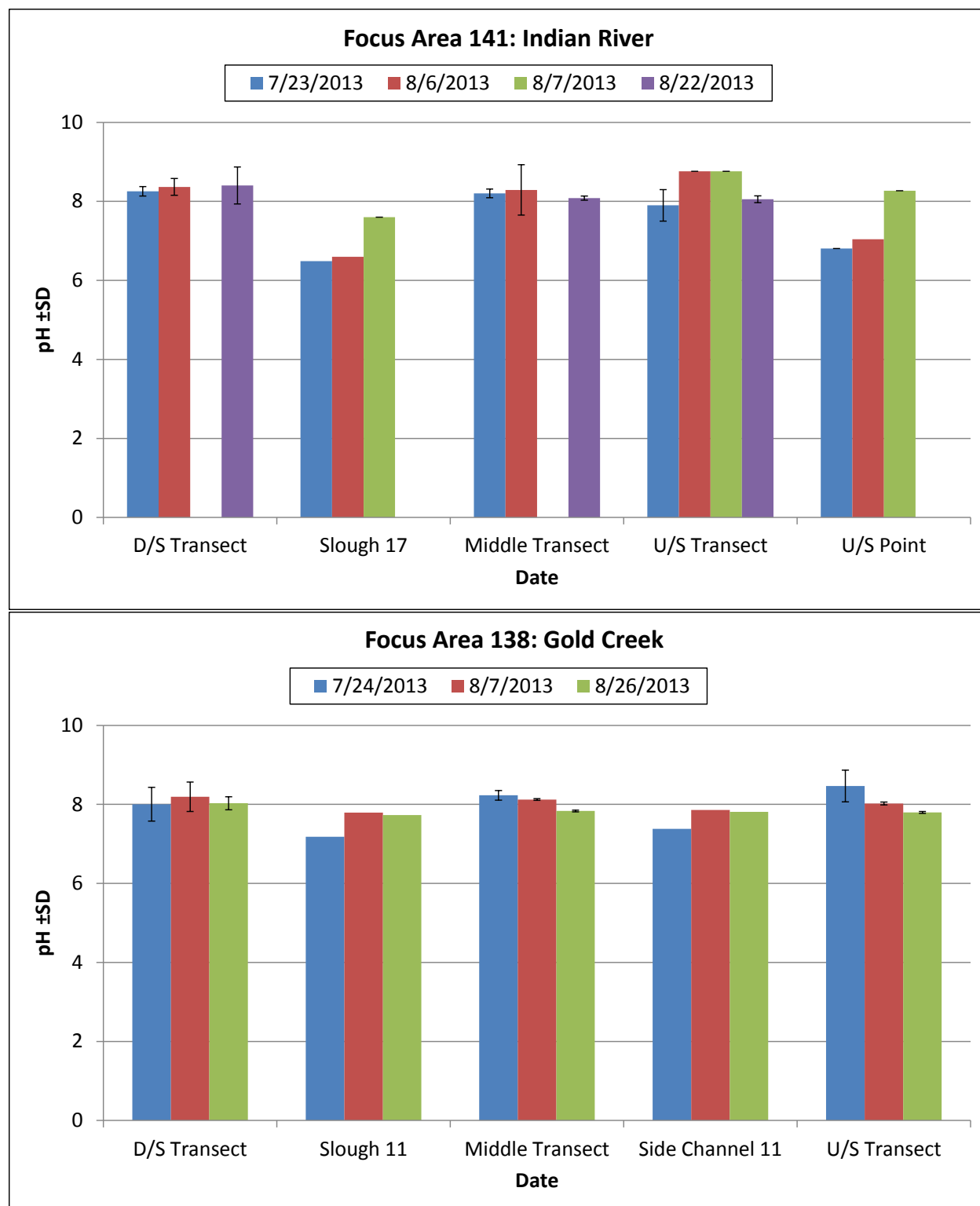


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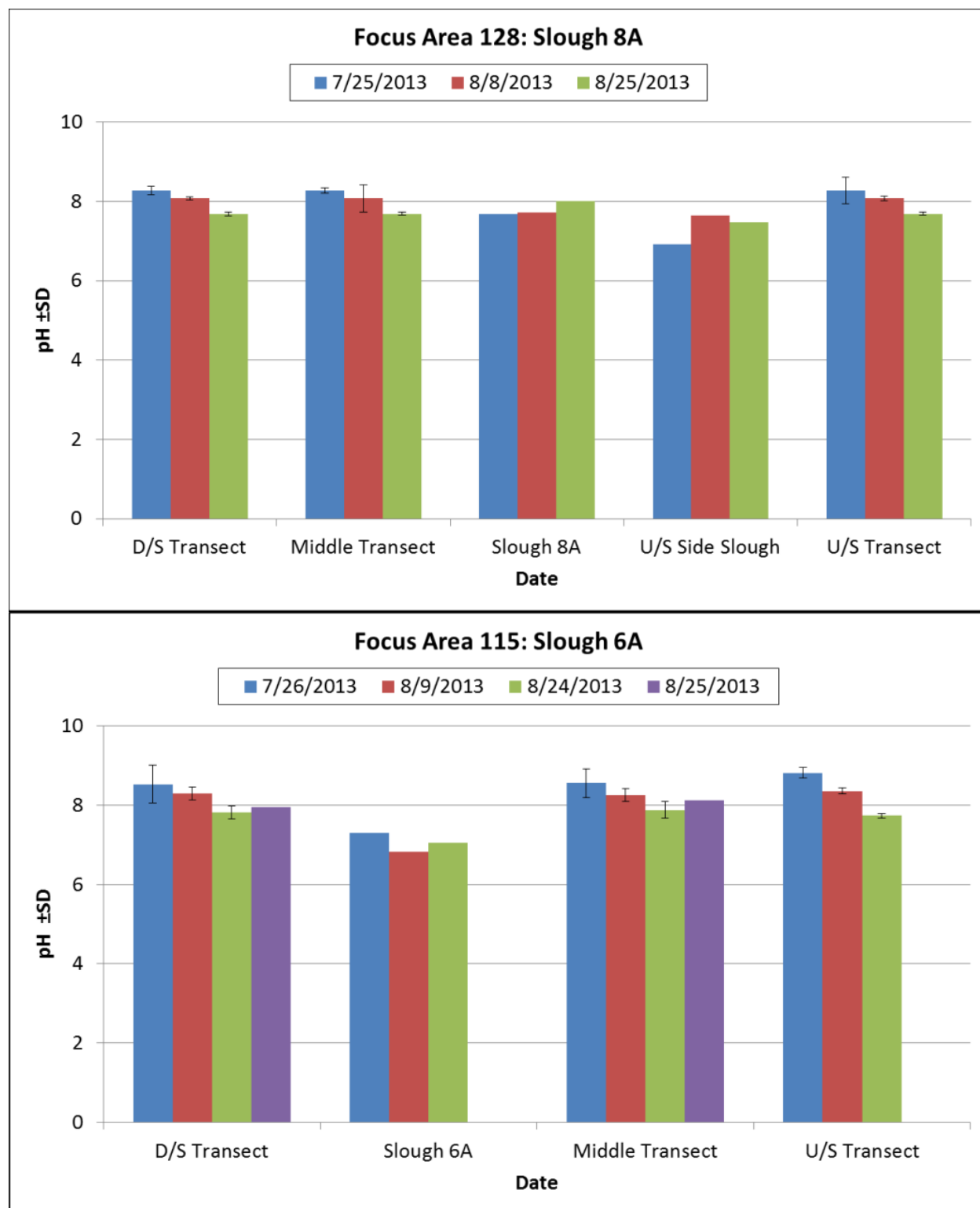


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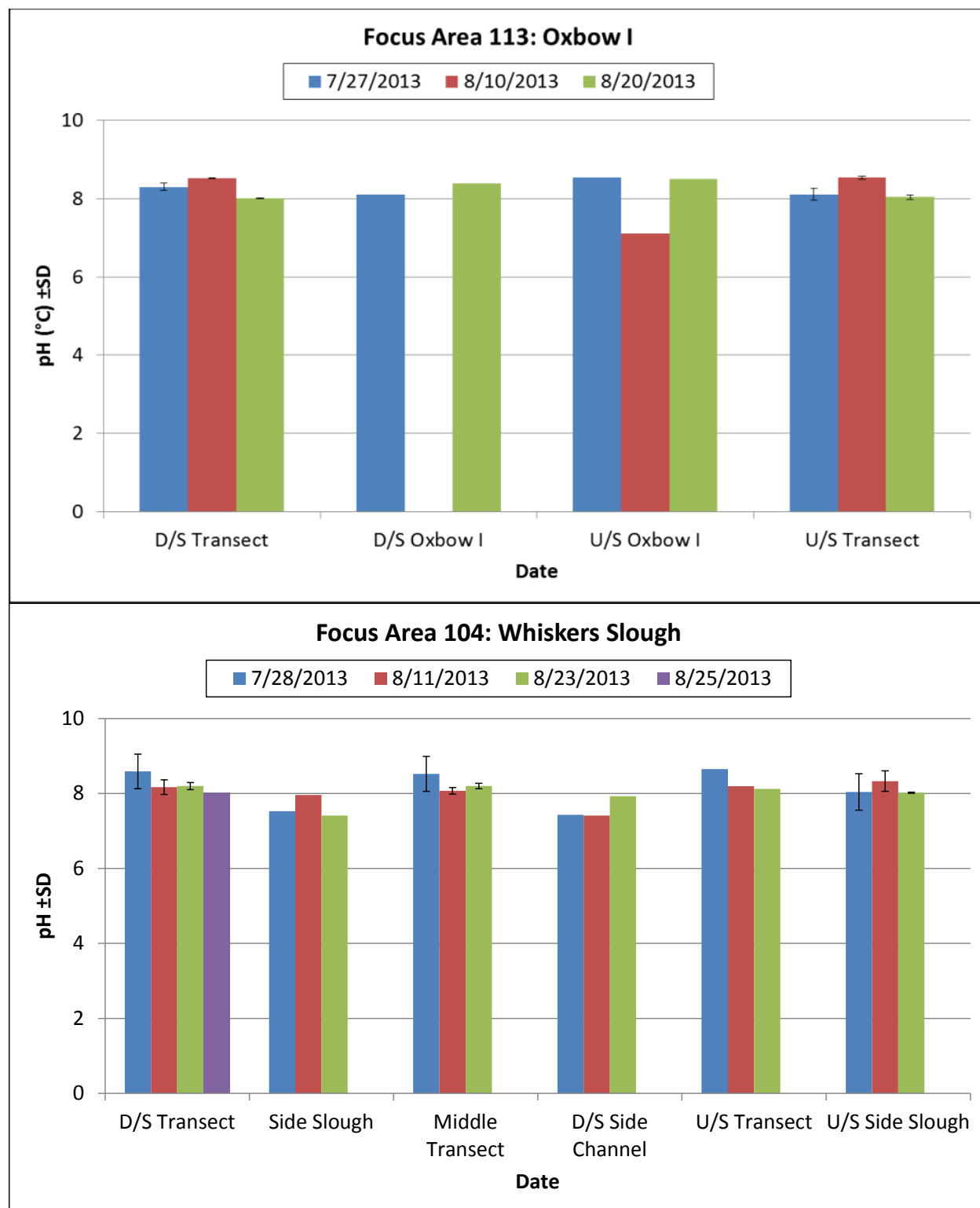


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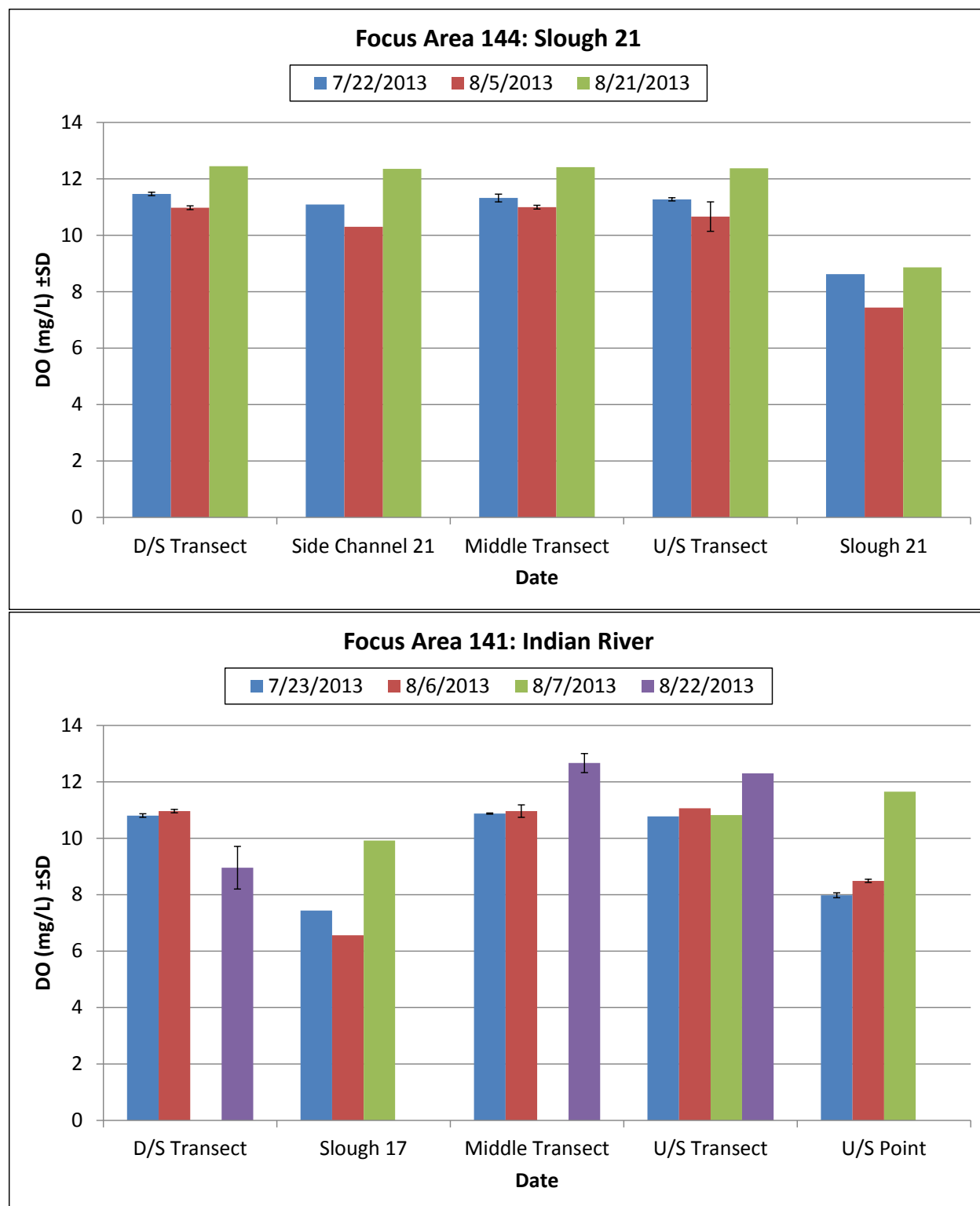


Figure F-3. Dissolved Oxygen Concentrations for the Focus Areas on the Susitna River, 2013.

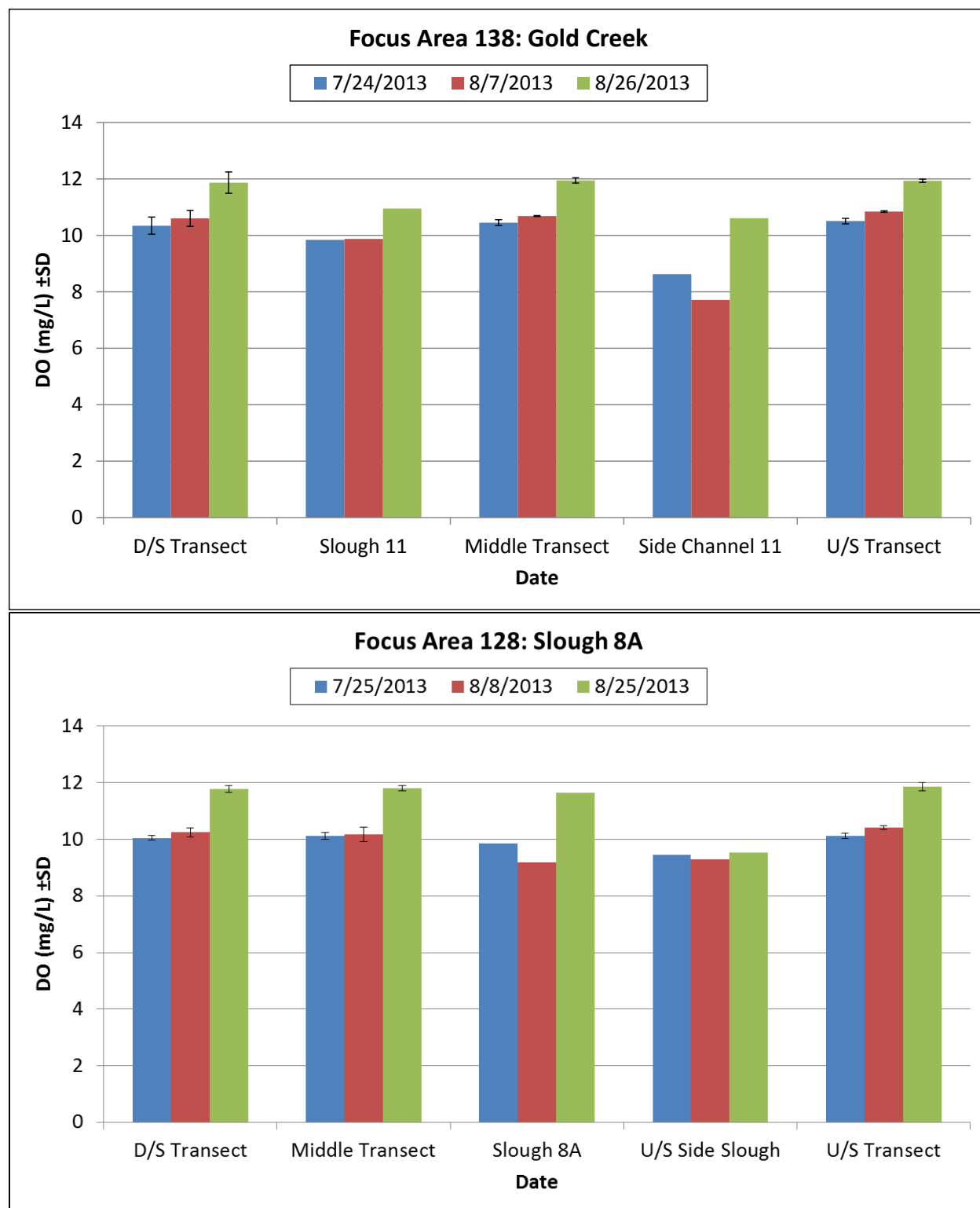


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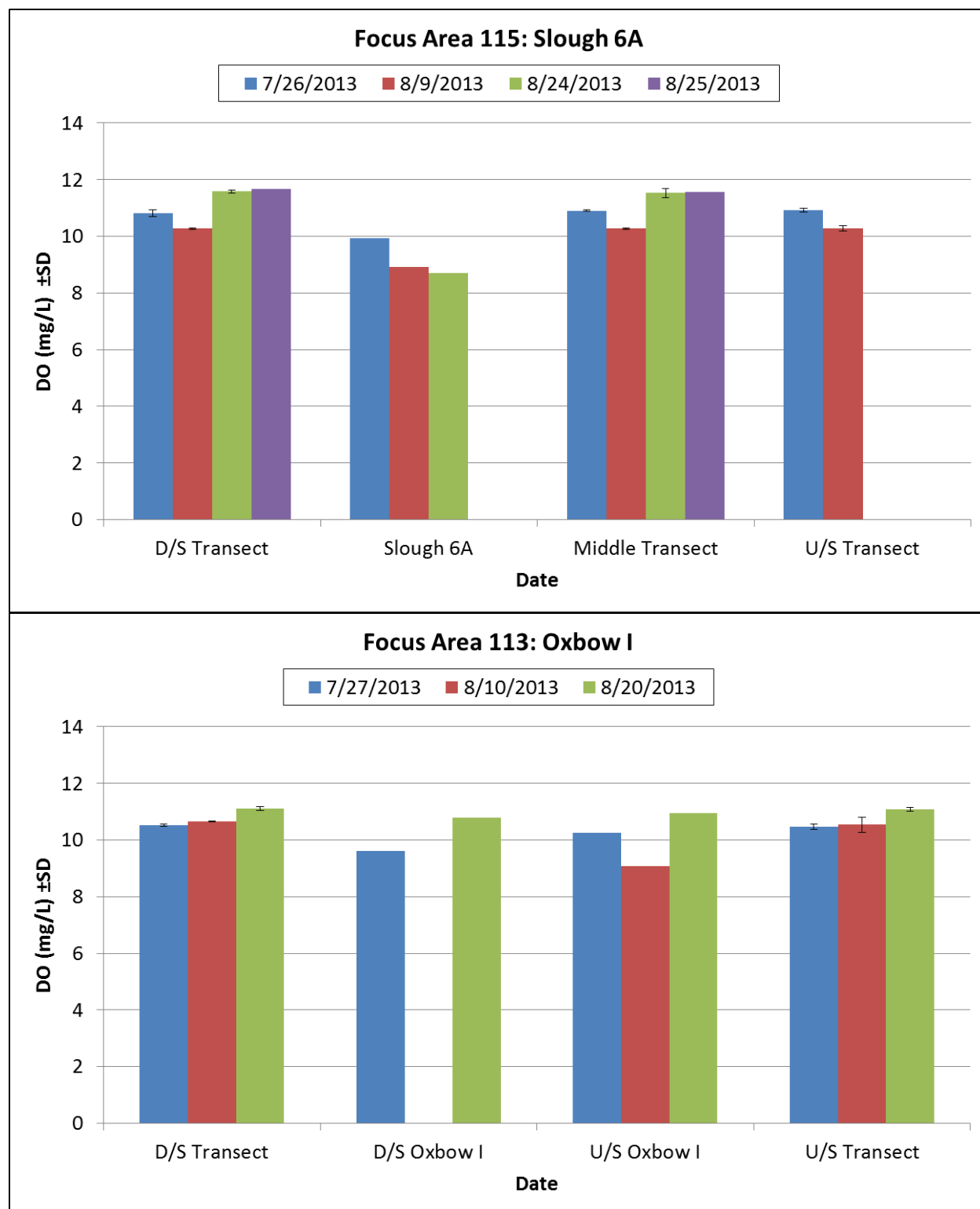


Figure F-3. Dissolved Oxygen Concentrations for the Focus Areas on the Susitna River, 2013 (cont'd).

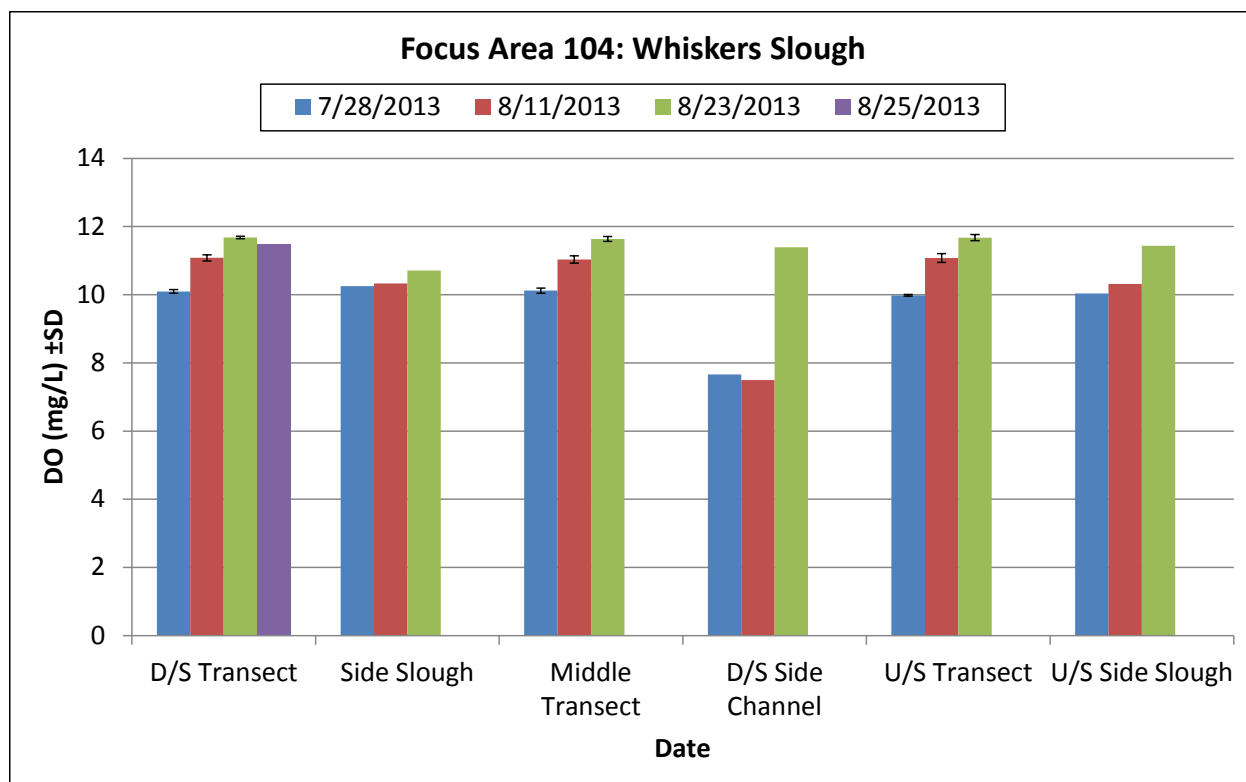


Figure F-3. Dissolved Oxygen Concentrations for the Focus Areas on the Susitna River, 2013 (cont'd).

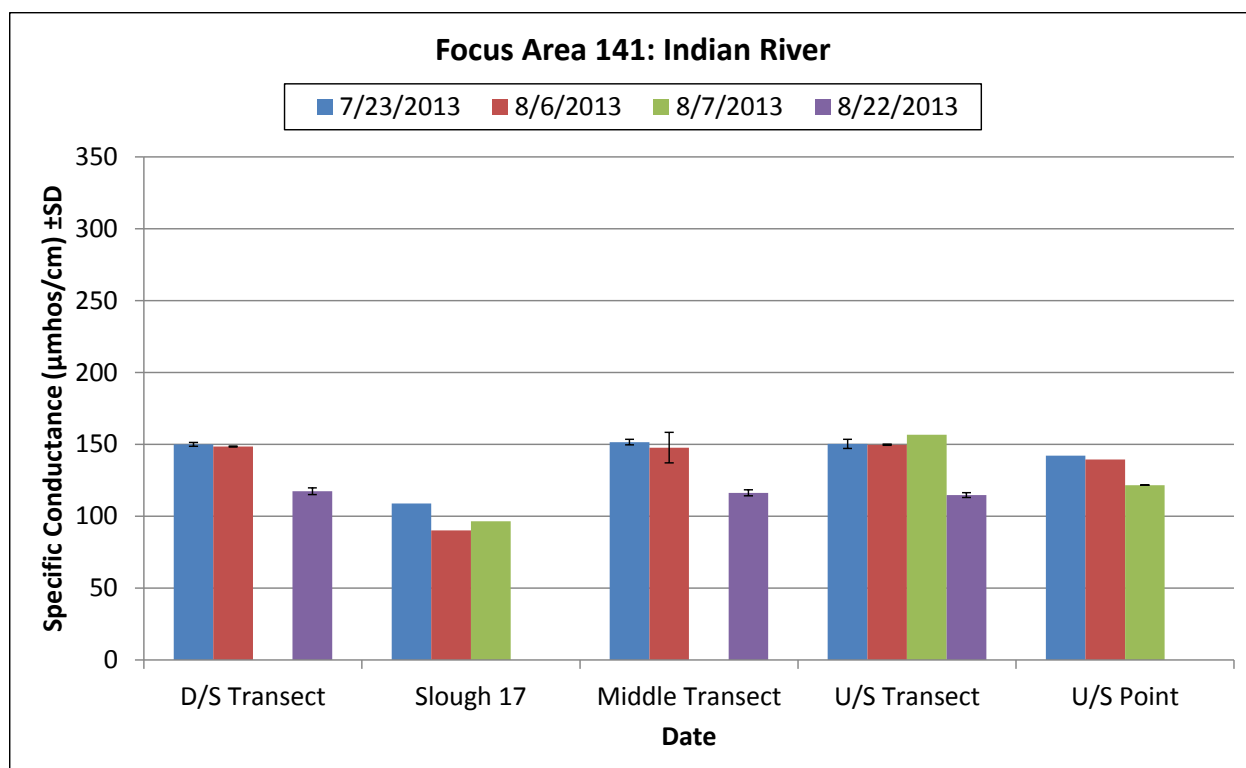


Figure F-4. Conductivity for the Focus Areas on the Susitna River, 2013.

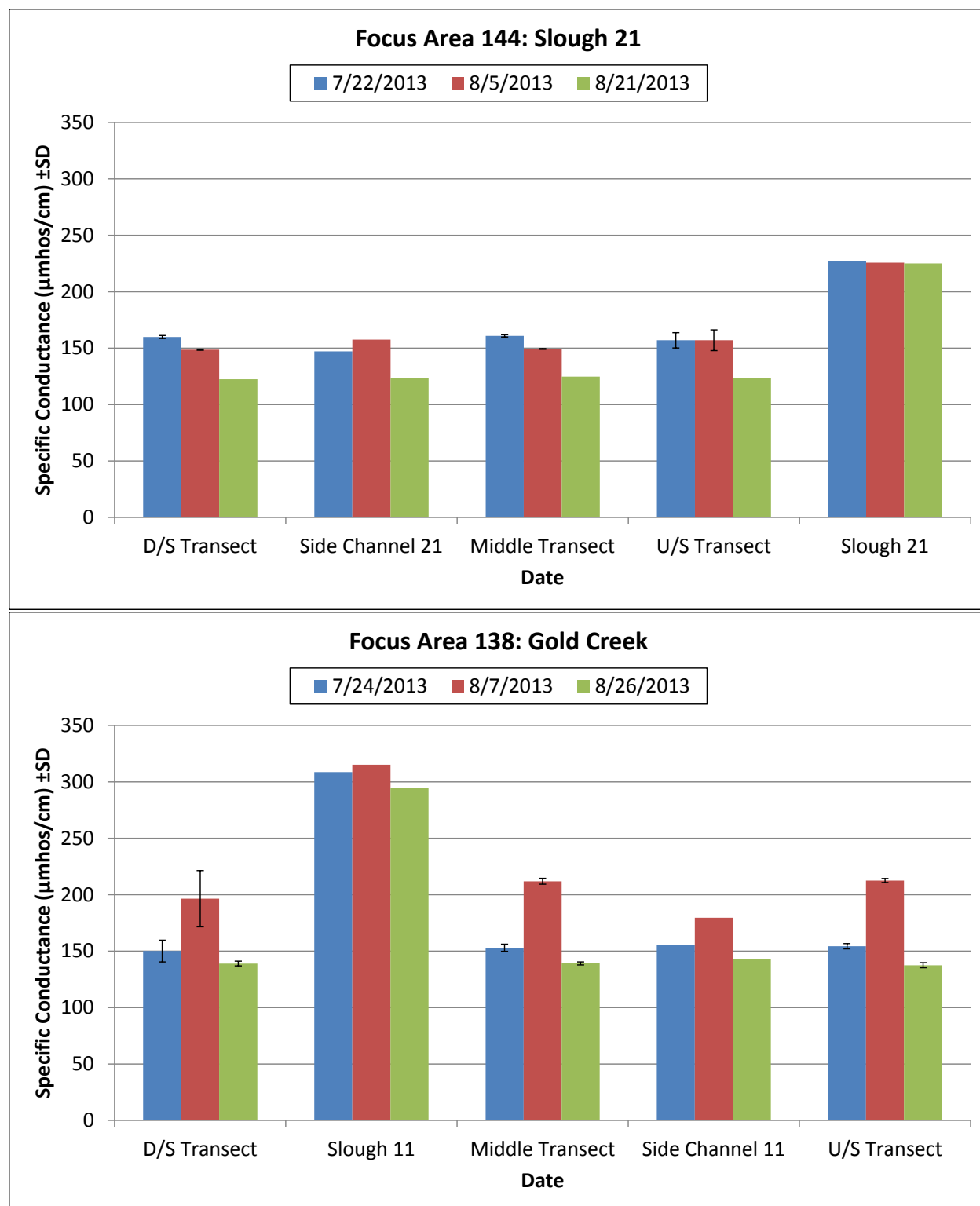


Figure F-4. Conductivity for the Focus Areas on the Susitna River, 2013 (cont'd).

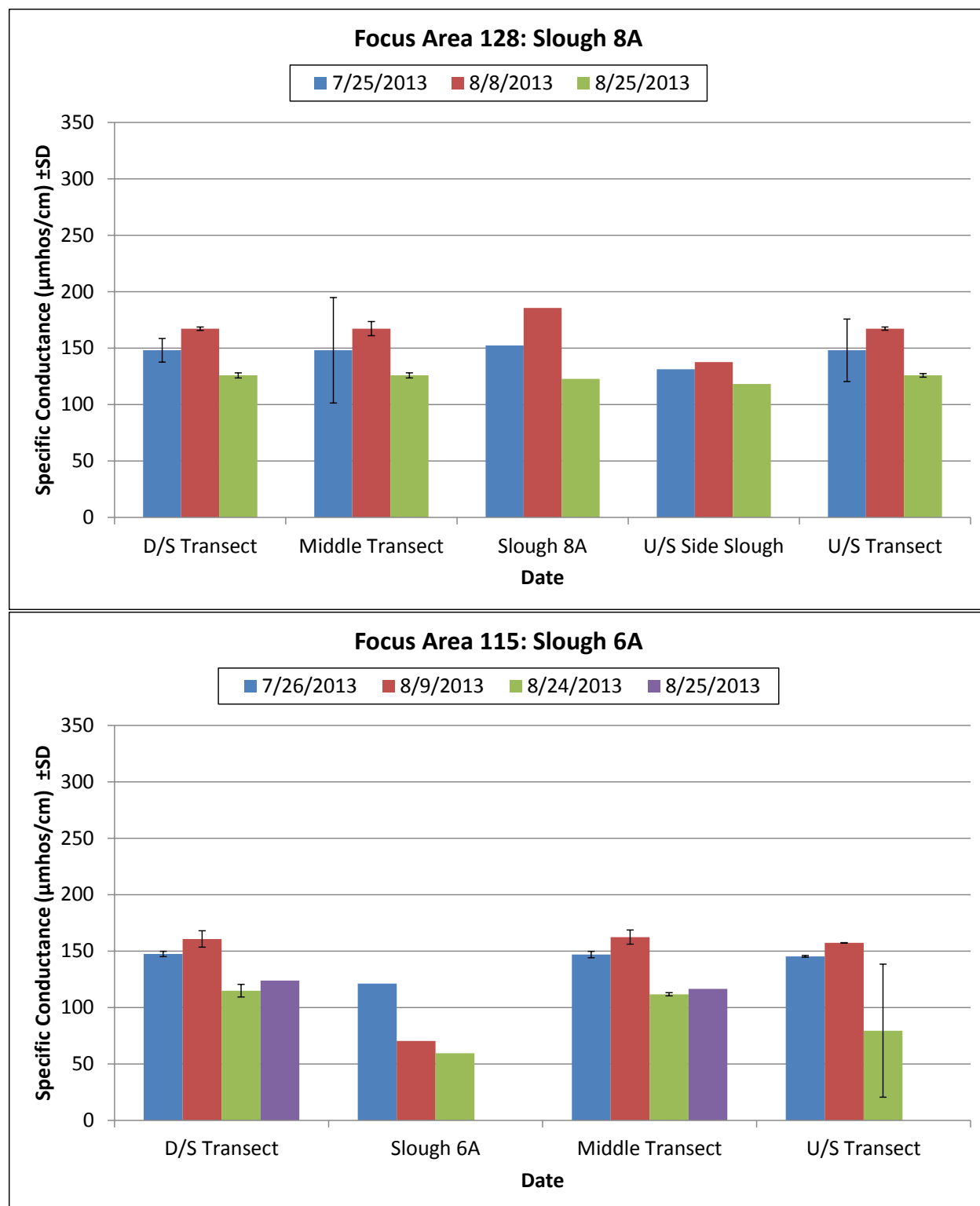


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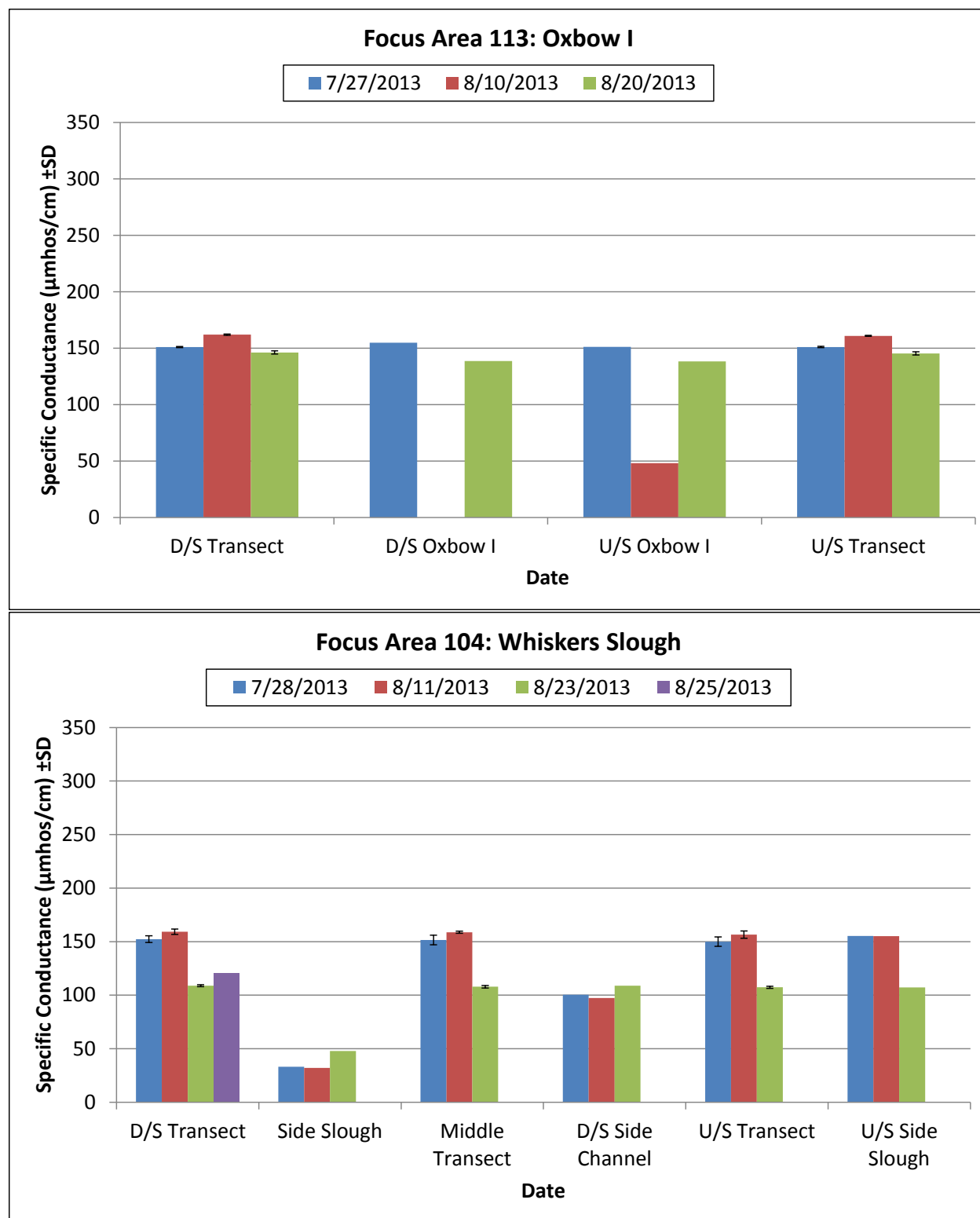


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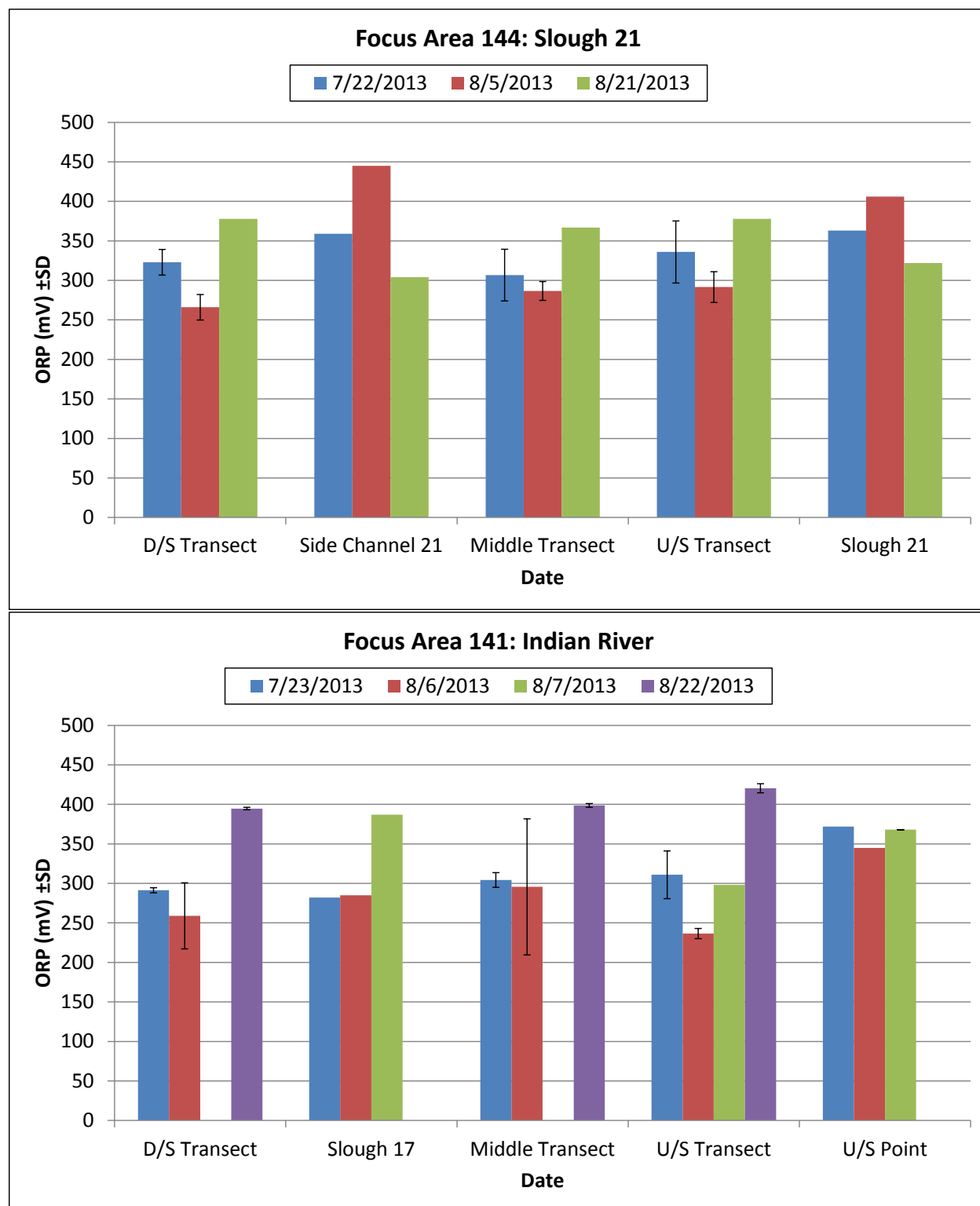


Figure F-5. Redox Potential for the Focus Areas on the Susitna River, 2013.

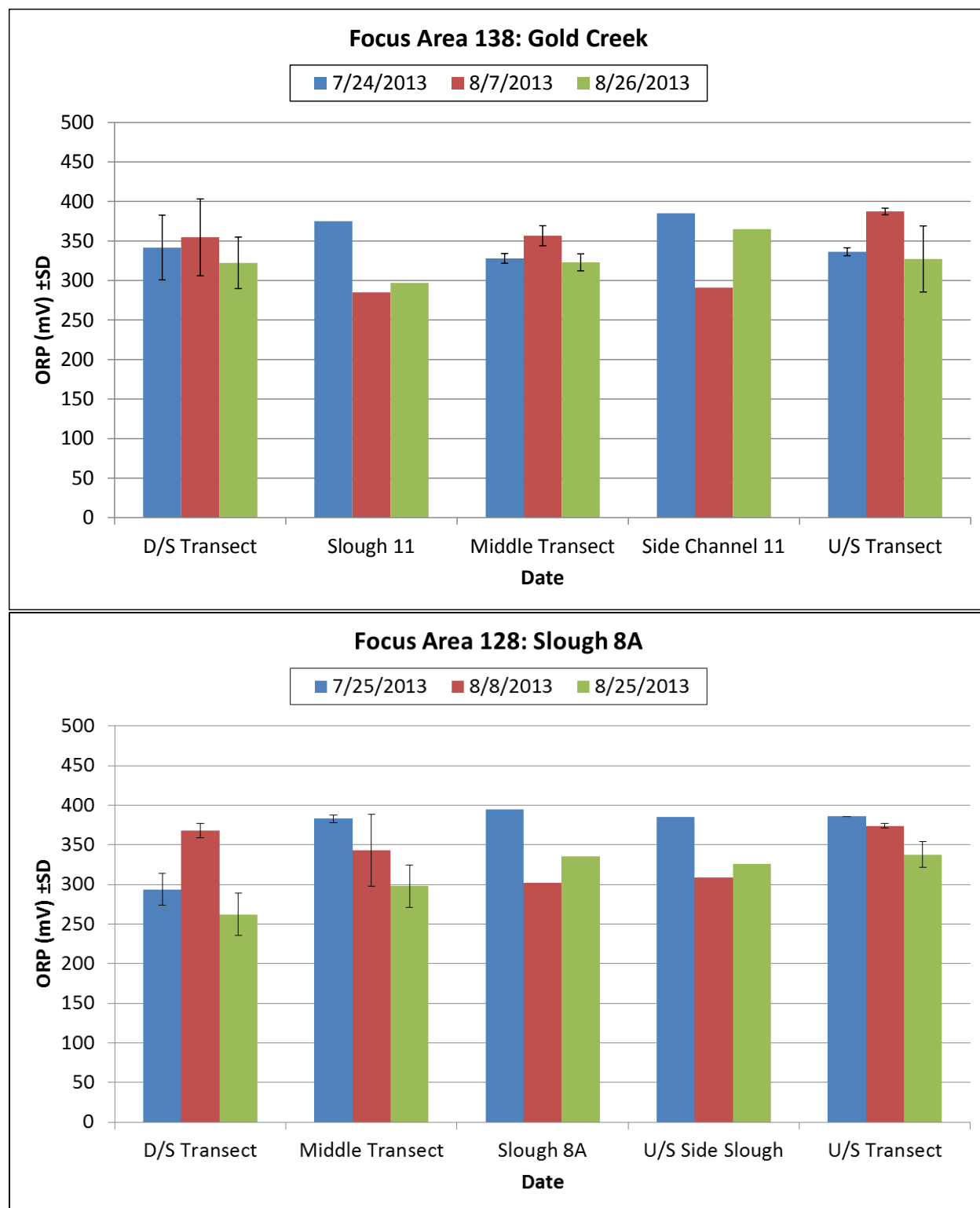


Figure F-5. Redox Potential for the Focus Areas on the Susitna River, 2013 (cont'd).

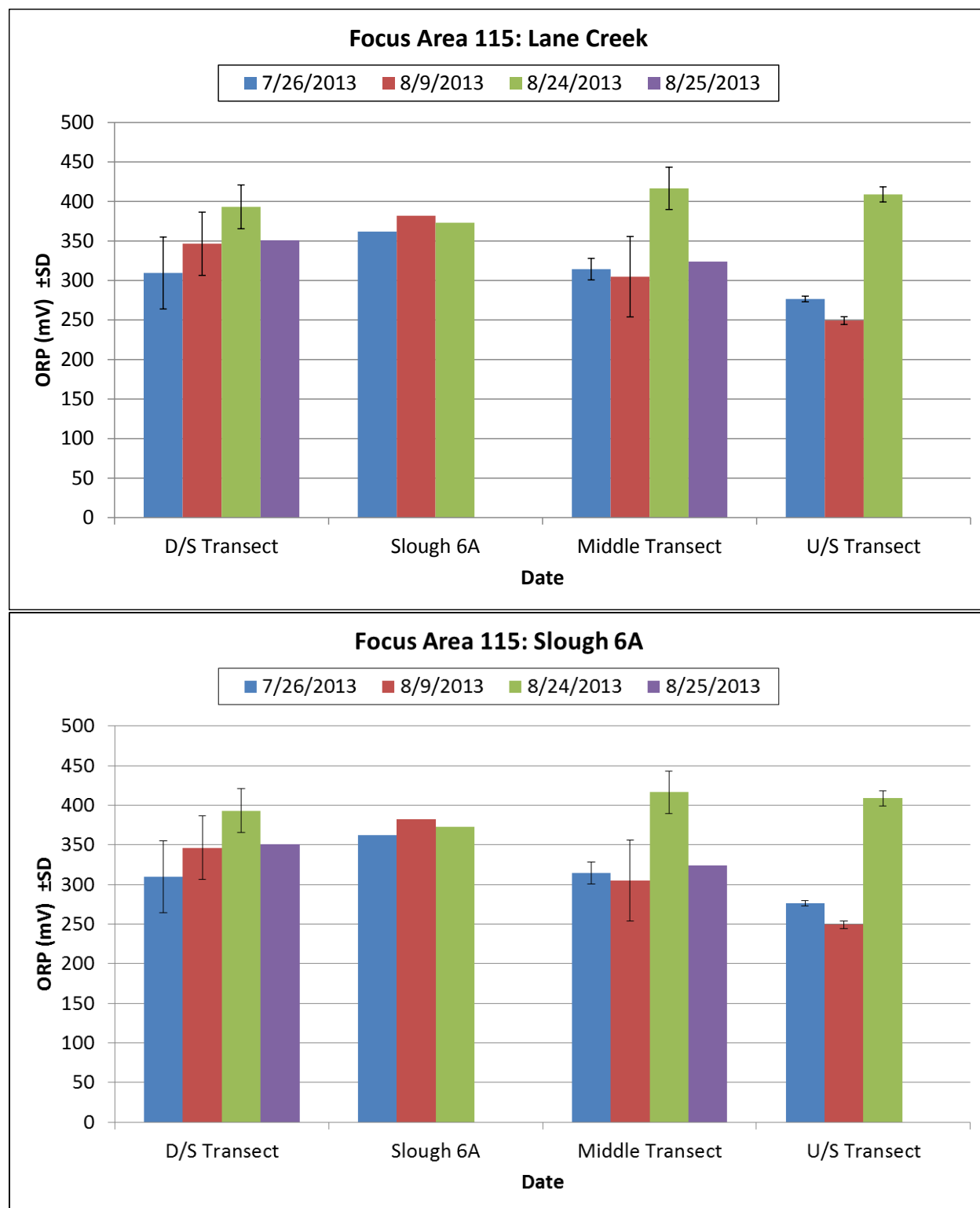


Figure F-5. Redox Potential for the Focus Areas on the Susitna River, 2013 (cont'd).

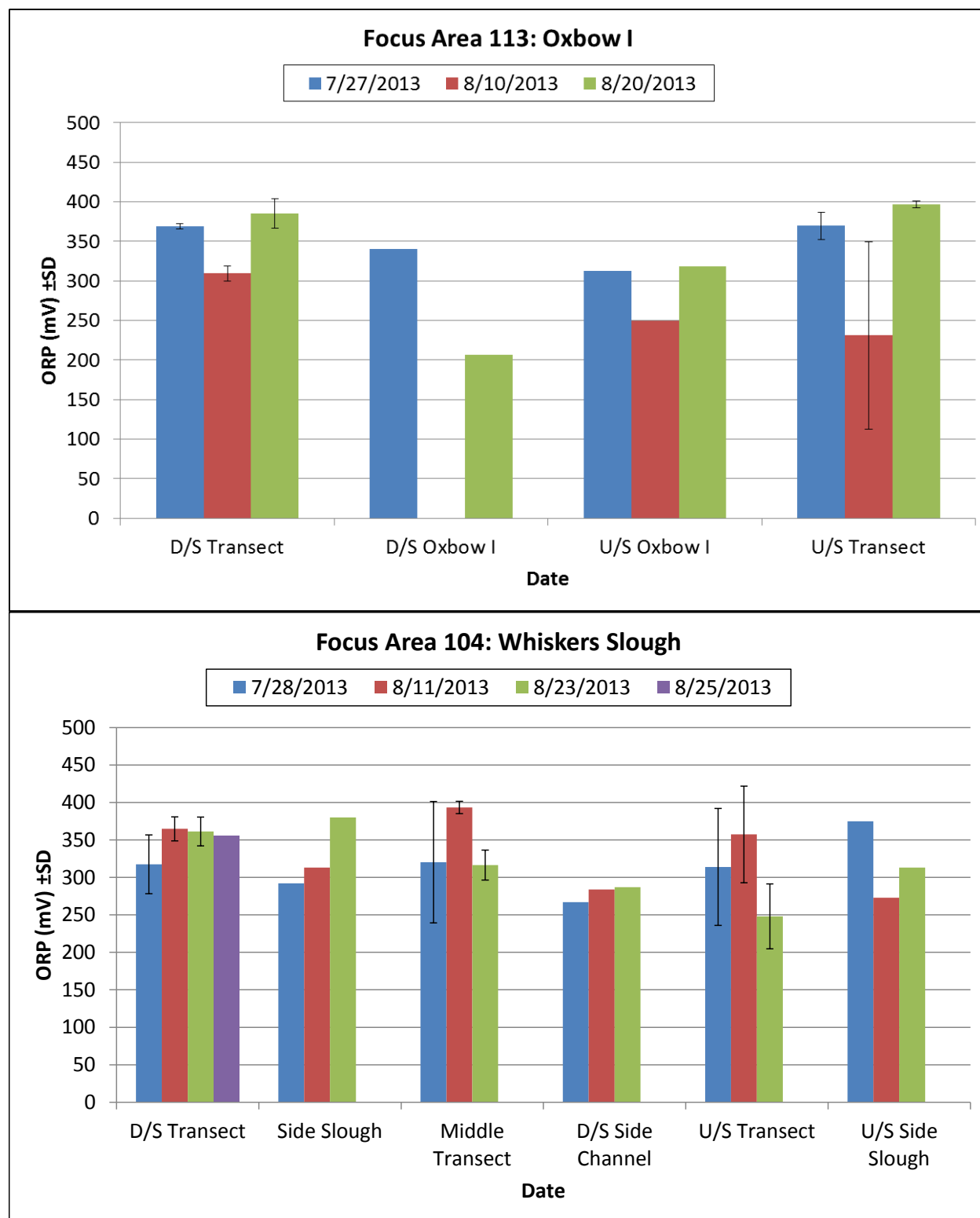


Figure F-5. Redox Potential for the Focus Areas on the Susitna River, 2013 (cont'd).

Susitna-Watana Hydroelectric Project (FERC No. 14241)

Baseline Water Quality Study (5.5)

Appendix H Focus Area Water Quality Chlorophyll Data

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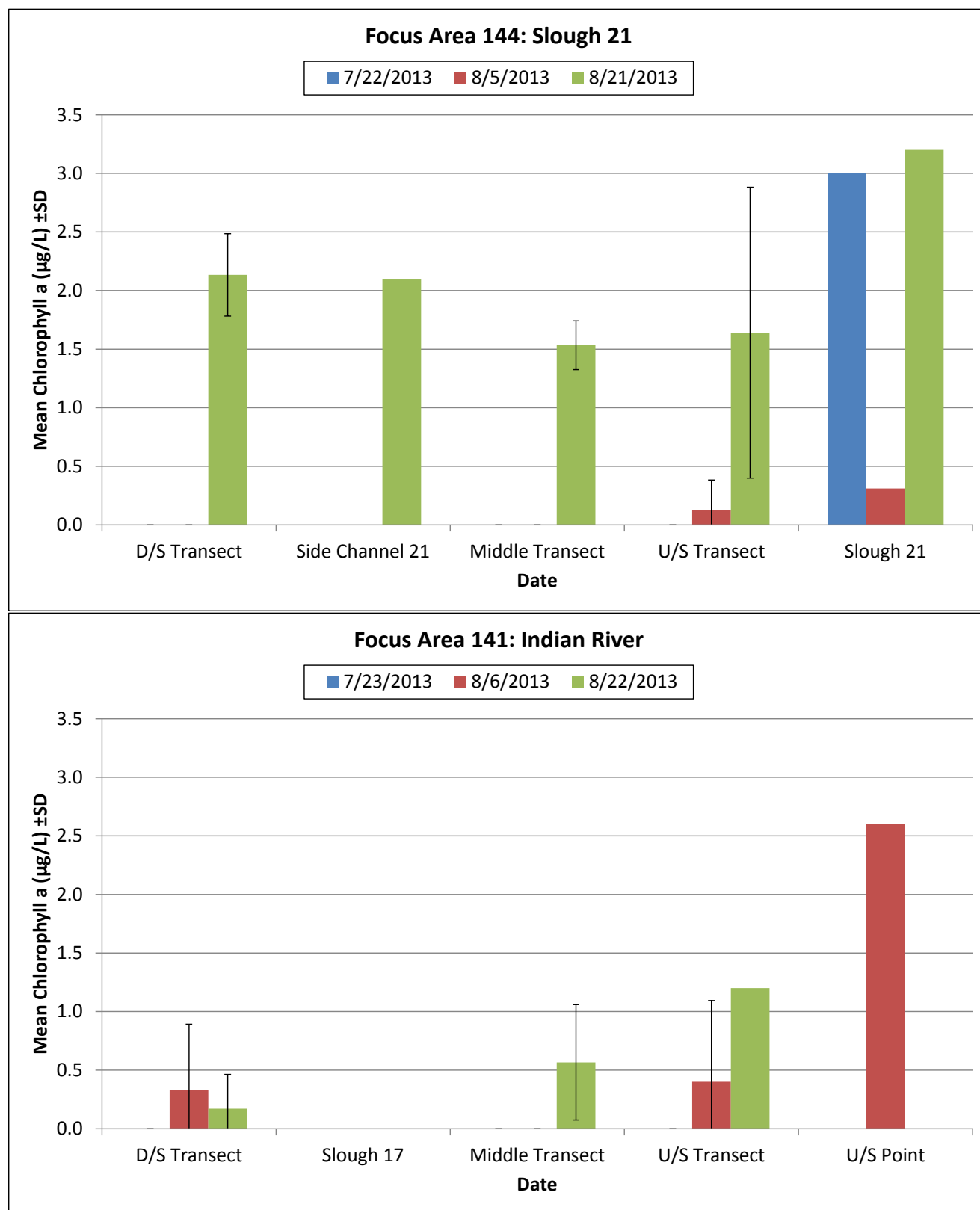


Figure H-1. Chlorophyll a Concentrations in Focus Areas in the Susitna River, 2013.

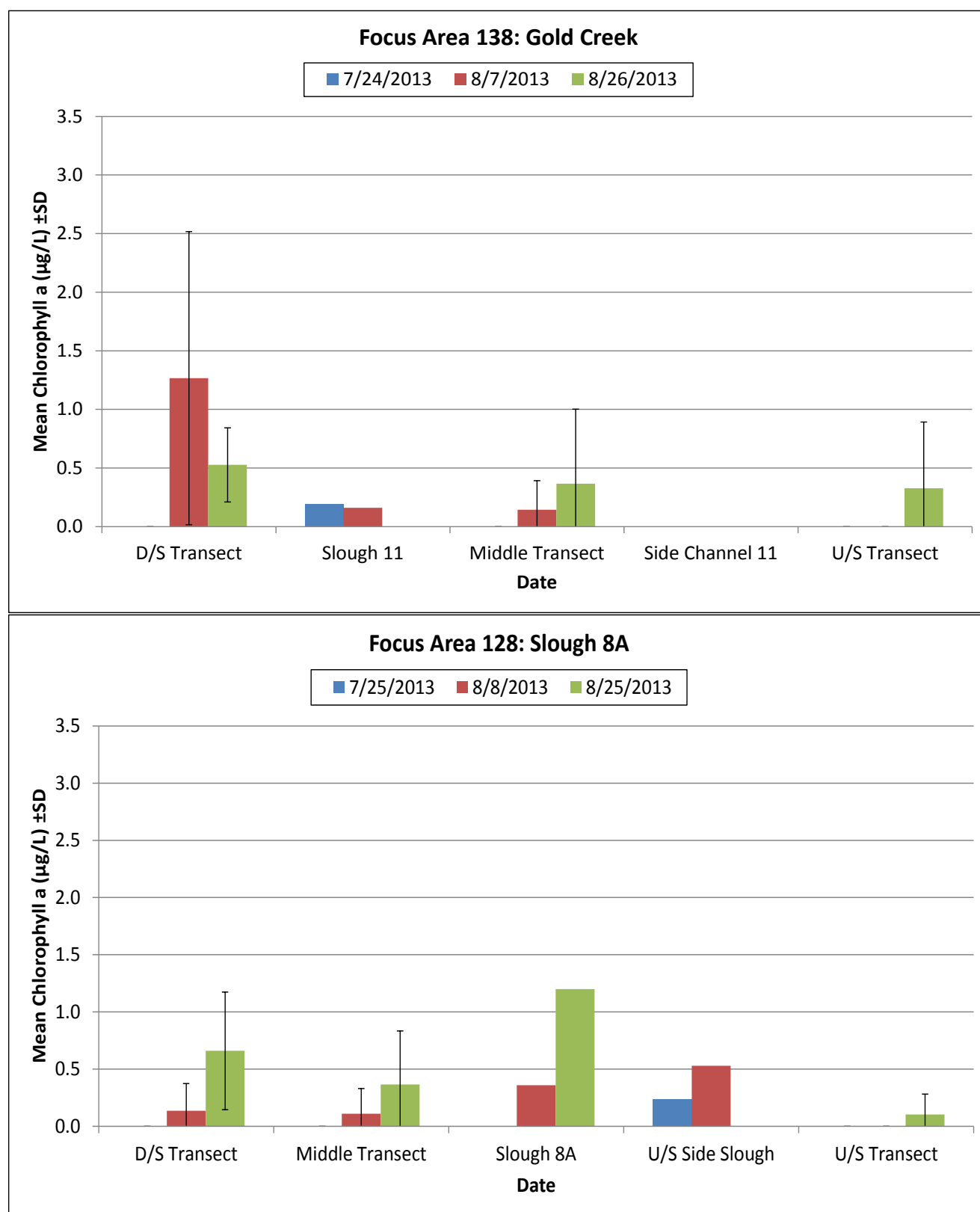


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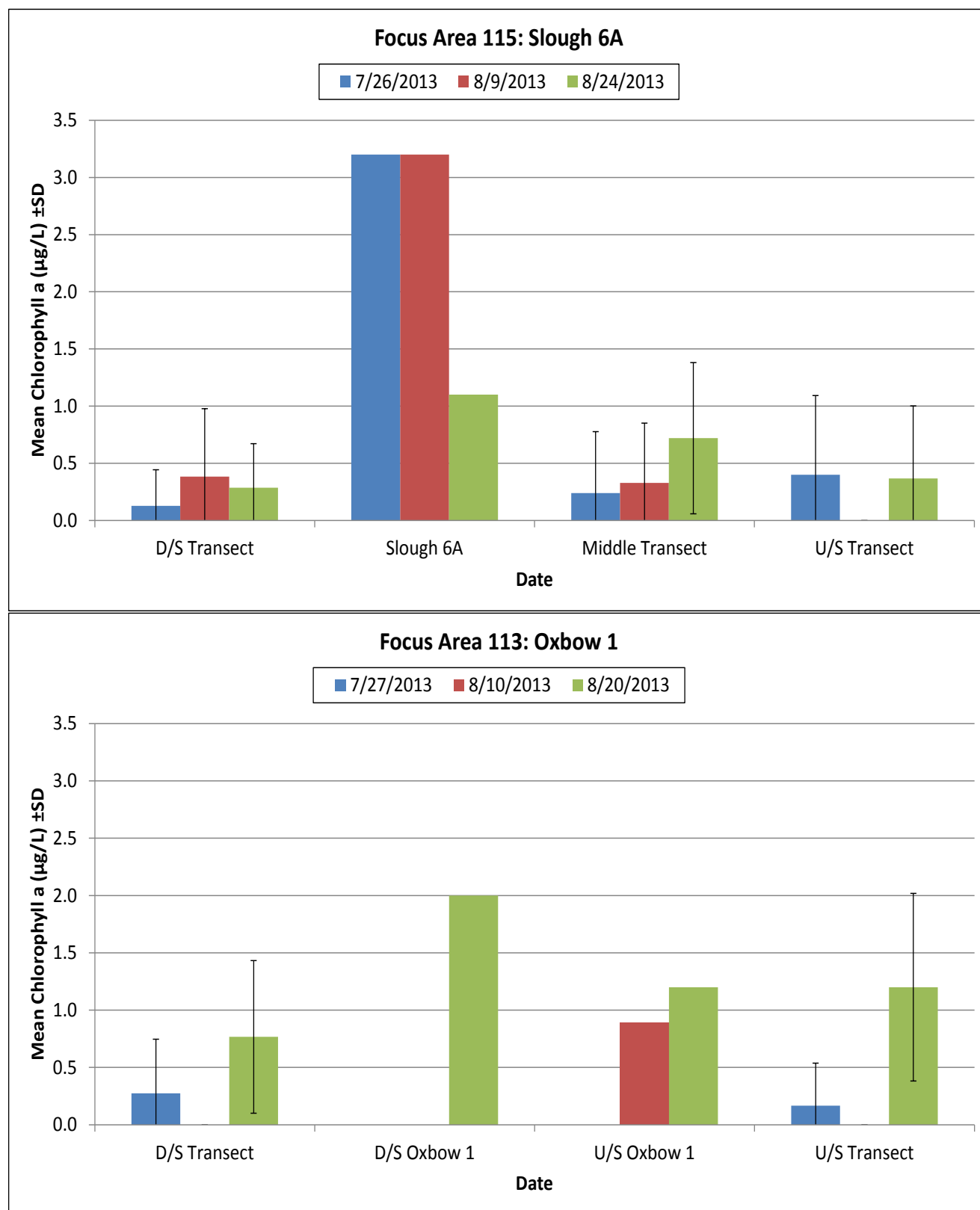


Figure H-1. Chlorophyll a Concentrations in Focus Areas in the Susitna River, 2013 (cont.).



Figure H-1. Chlorophyll a Concentrations in Focus Areas in the Susitna River, 2013 (cont.).

**Susitna-Watana Hydroelectric Project
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Baseline Water Quality Study (5.5)

**Appendix I
Interim Study Report Water Quality Photographs**

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Photo I-1. Preparing water quality parameter probe for deployment from boat.



Photo I-2. Boom and hand reel used for deployment of water quality sampling equipment.



Photo I-3. Deploying water quality probe. Probe is attached to a 60 lb. lead fish.



Photo I-4. Typical boat setup for collection of water quality samples.



Photo I-5. Collecting non-filtered water sample using peristaltic pump



Photo I-6. Collection of filtered water quality sample.



Photo I-7. Portable sampling equipment used for collection water quality samples in shallow water areas.



Photo I-8. Collecting water quality parameters in shallow slough area using backpack sampler.



Photo I-9. Determining groundwater depth in Focus Area Study well



Photo I-10. Collecting water sample from Focus Area well.