Figure 5.4-1. Example delineation of Riverine Dominated, Riverine-Upland Transitional, and Upland Dominated. (Source: SIR Study 7.5, Appendix D, presentation slide 30.)

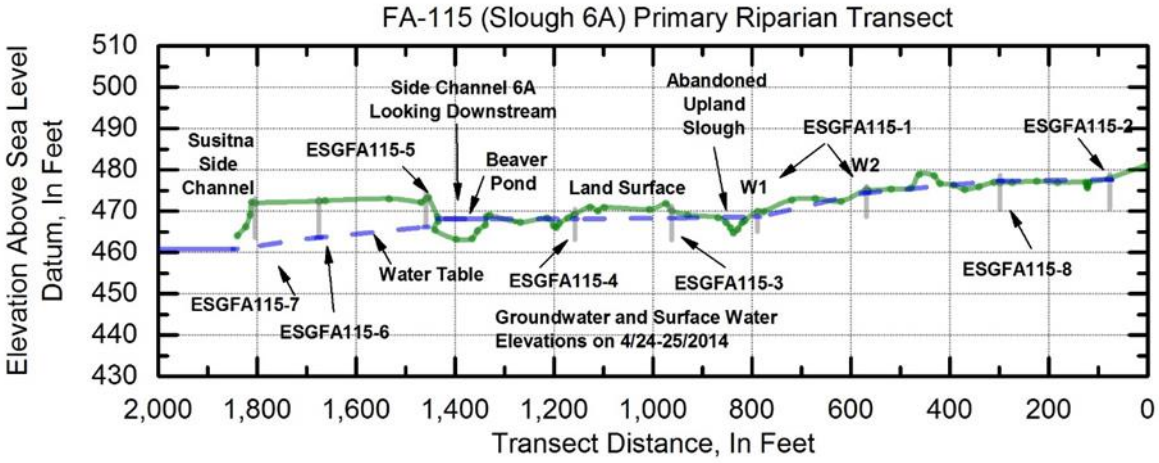

Figure 5.5-1. Primary riparian cross section at FA-115 (Slough 6A) showing location of groundwater wells, surface-water measurement locations, and the measured water levels on April 24-25, 2014, with inferred water table. (Source: GWS and R2 2014a - Figure 22.)

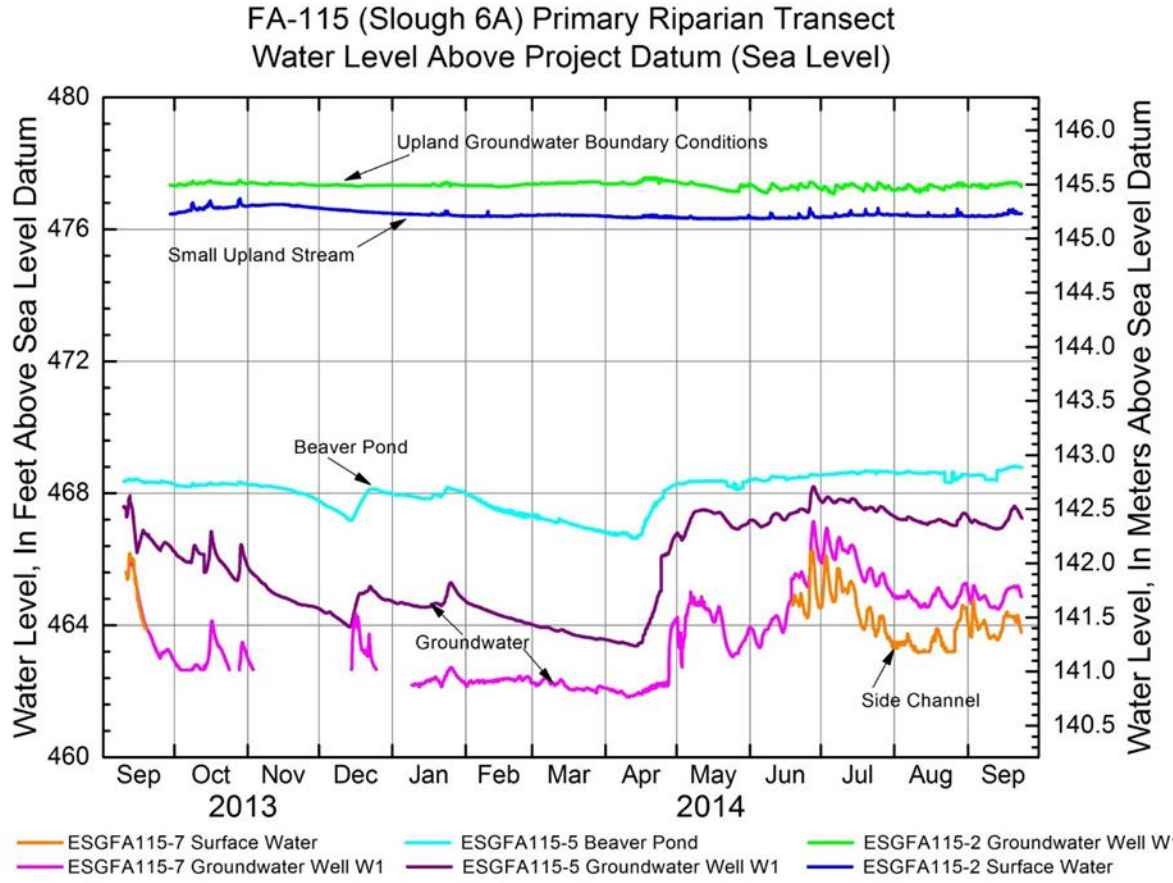

Figure 5.5-2. Groundwater elevations and surface-water levels for selected stations in FA-115 (Slough 6A) representing upland groundwater conditions and lower groundwater wells affected by riverine processes. (Source: GWS and R2 2014a - Figure 23.)

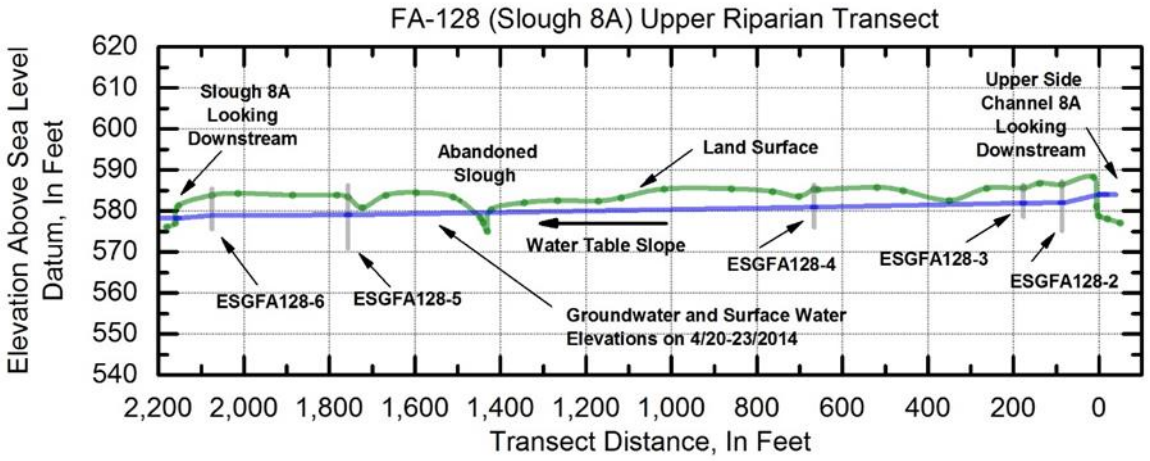

Figure 5.5-3. Cross-section profile of the Upper Riparian Transect in FA-128 (Slough 8A) showing the land surface profile, location of groundwater wells and surface water measuring points on Upper Side Channel 8A and Slough 8A. Water levels are shown for the April 20-23, 2014. Water levels in Upper Side Channel 8A are ice affected. (Source: GWS and R2 2014a - Figure 26.)

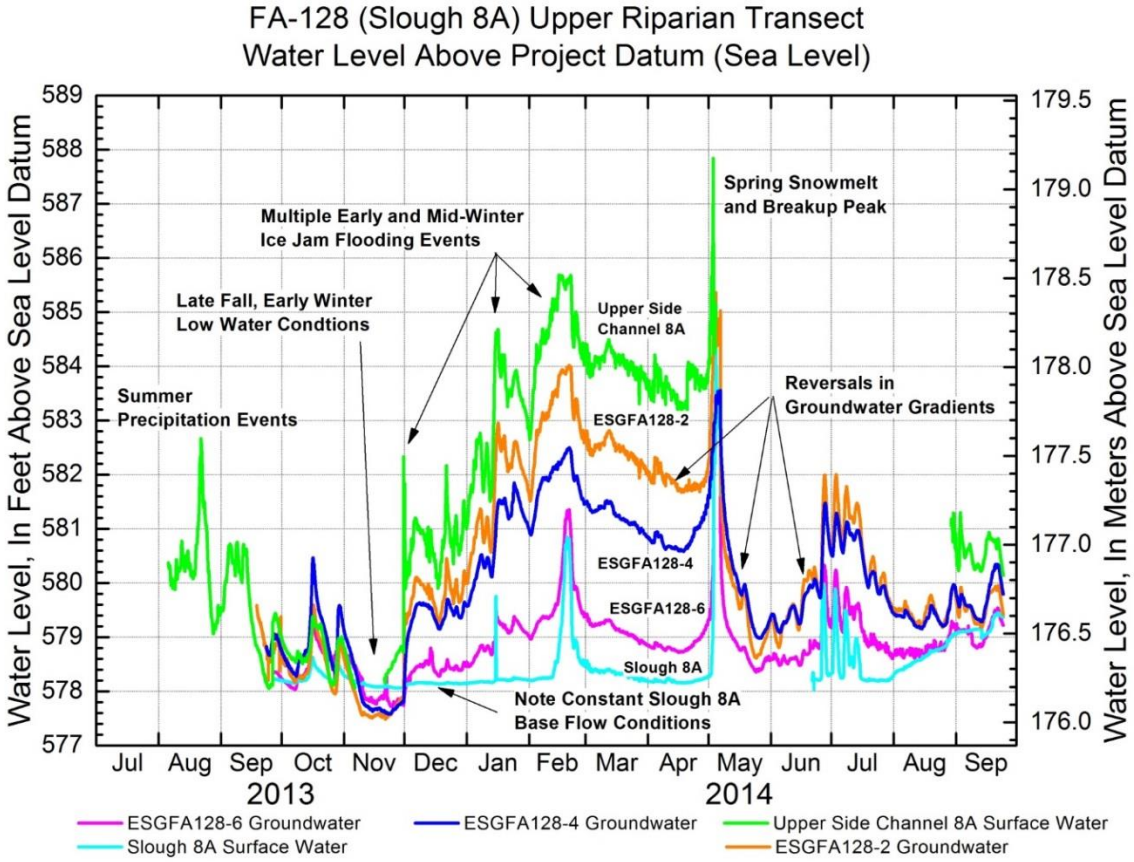

Figure 5.5-4. Water level data for Upper Side Channel 8A, Slough 8A, and groundwater wells between the two surface-water features on the Upper Riparian Transect in FA-128 (Slough 8A). (Source: GWS and R2 2014a - Figure 27.)

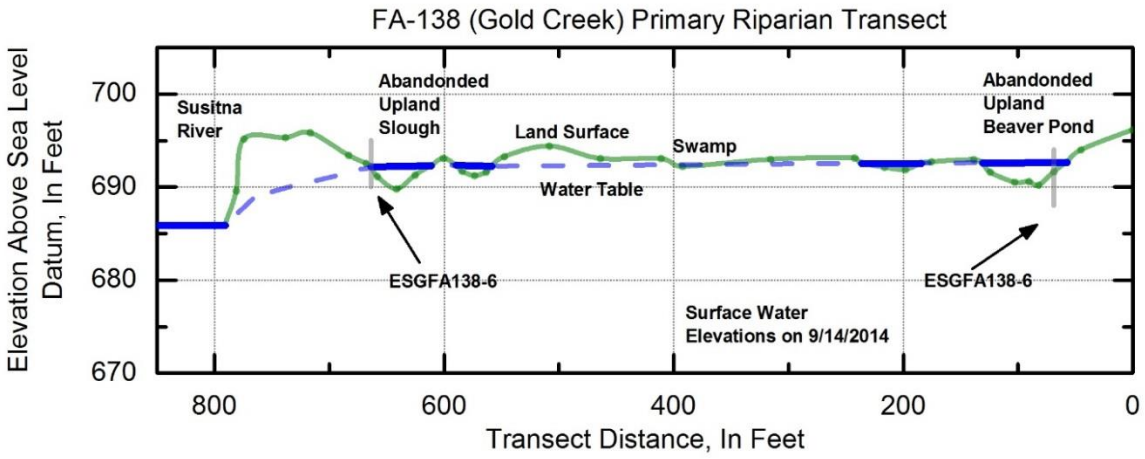

Figure 5.5-5. Primary riparian cross section at FA-138 (Gold Creek) showing locations of surface-water measurement locations, and typical upland features that indicate shallow groundwater conditions. Water levels are shown for the cross-section survey date of 9/14/2014. (Source: GWS and R2 2014a - Figure 24.)

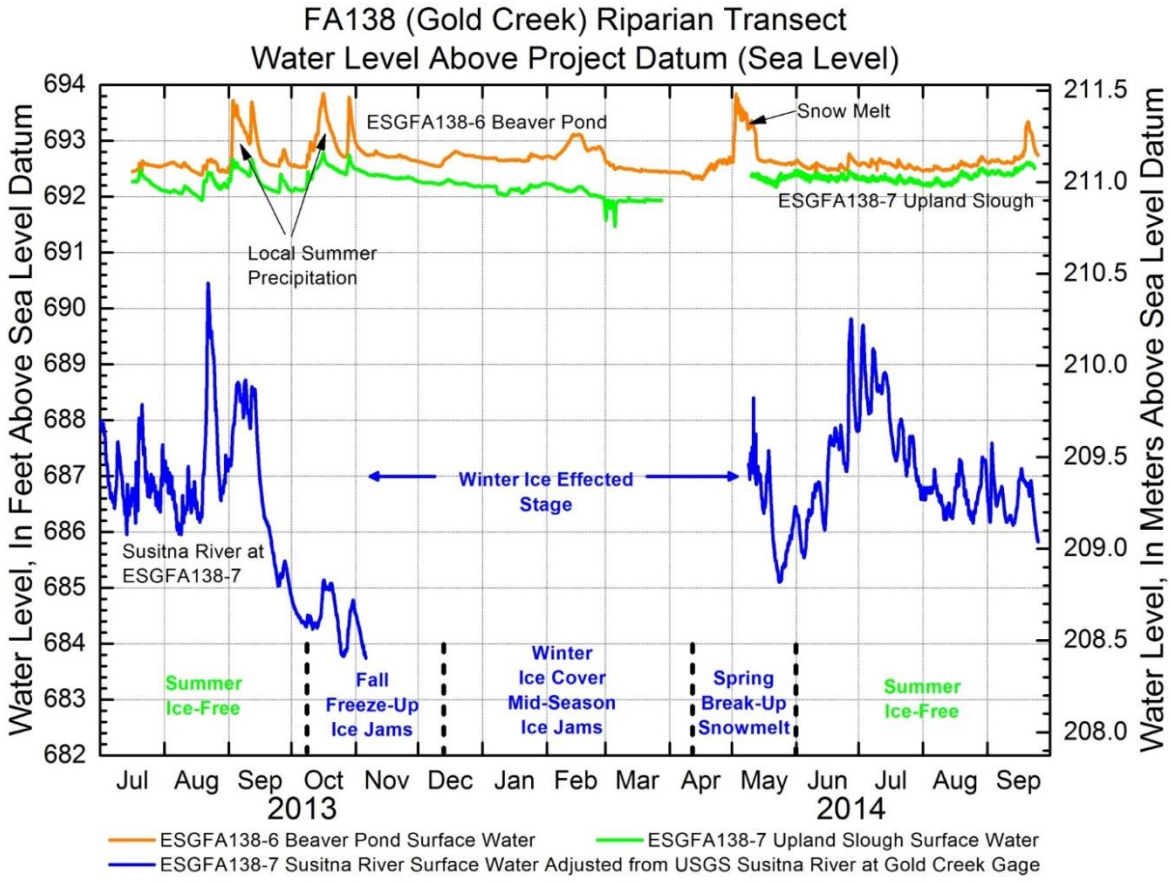

Figure 5.5-6. Surface-water levels for stations in the FA-138 (Gold Creek) riparian transect. Major hydrologic periods are indicated to show how the variation in water levels relate to the climate and hydrologic processes relevant to these periods. (Source: GWS and R2 2014a - Figure 25.)

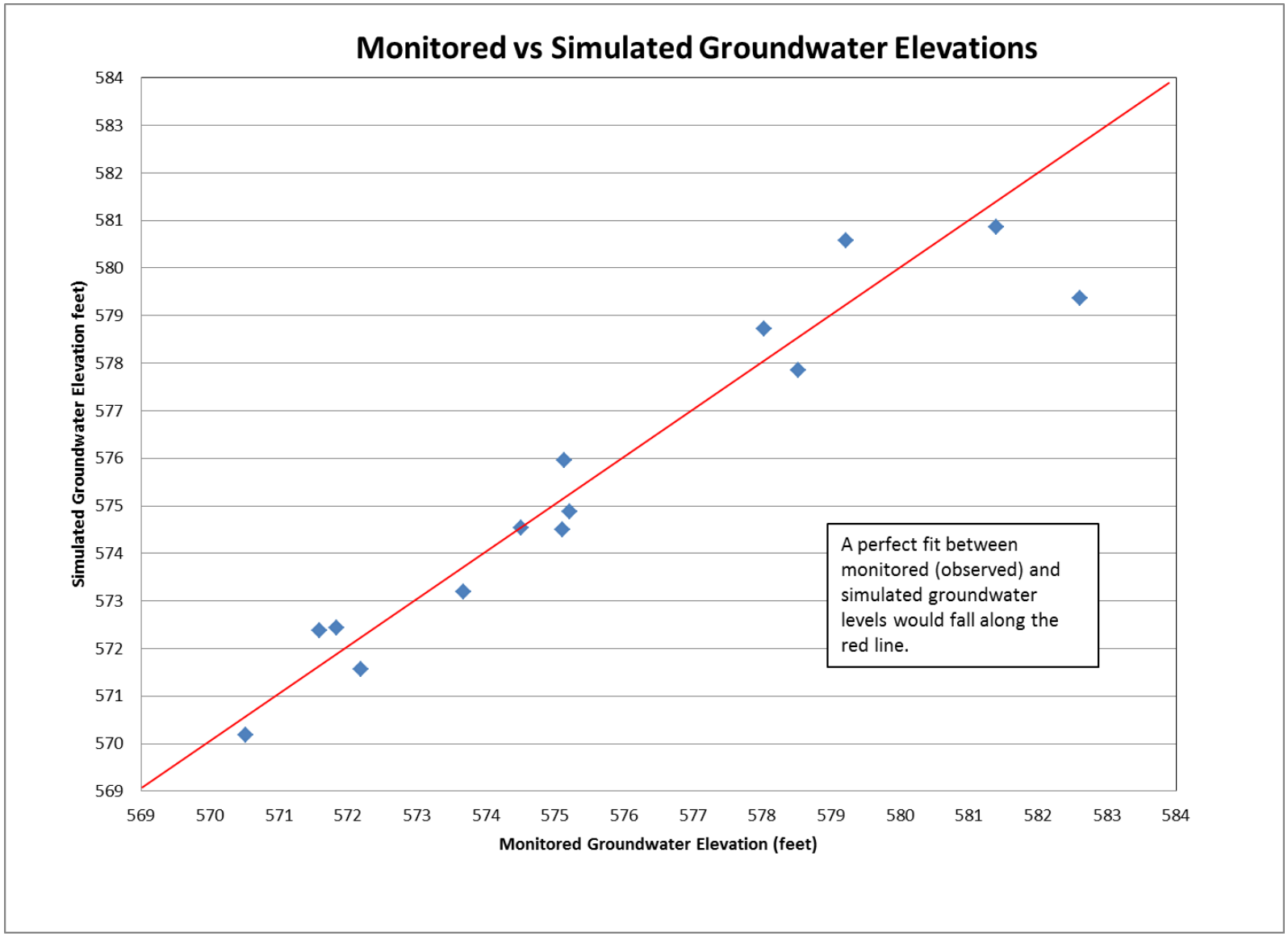

Figure 5.5-7. Monitored versus Simulated Steady State Groundwater Elevations. (Source: SIR Study 7.5, Appendix B, Figure 5-1.)

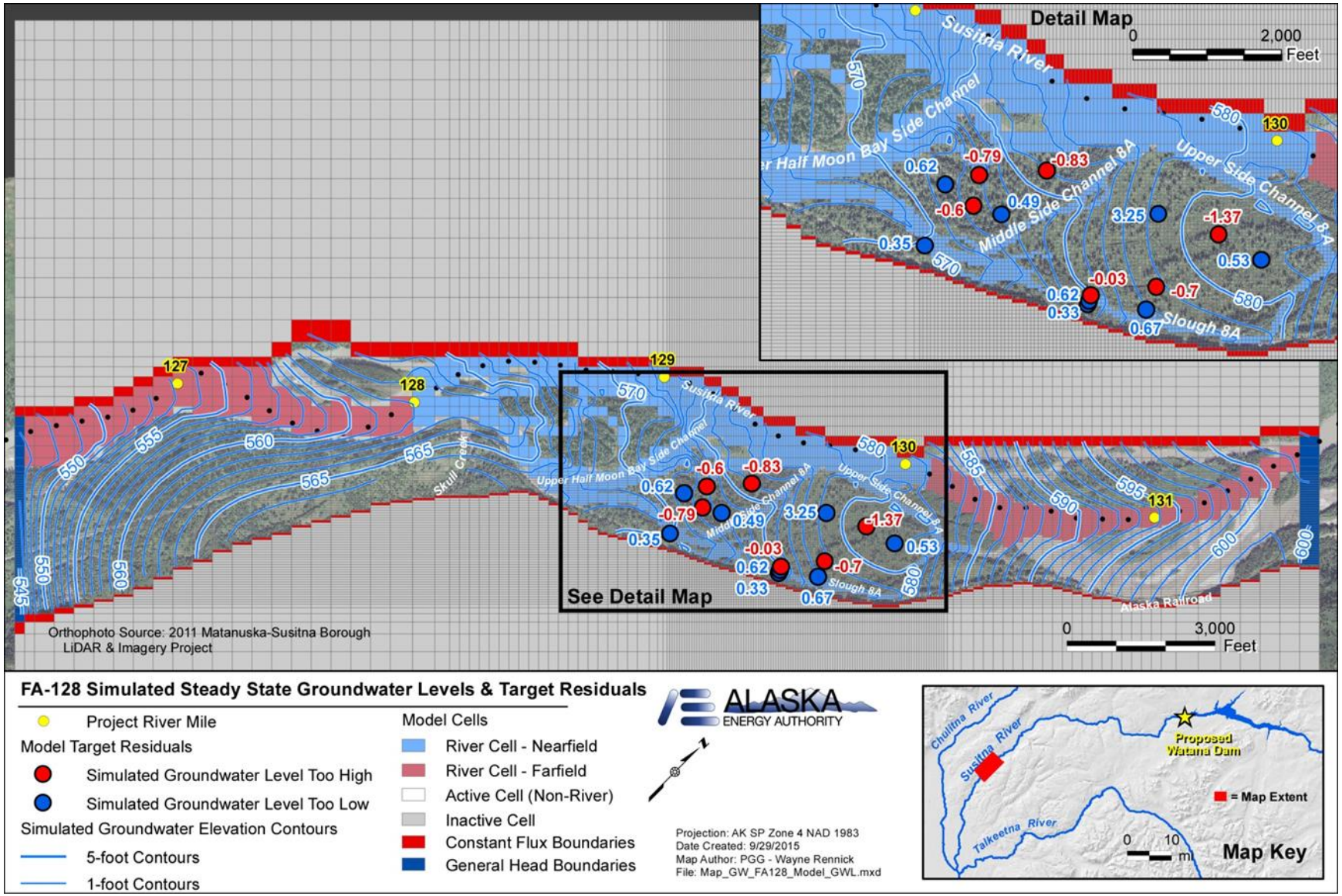

Figure 5.5-8. Simulated Steady Stage Groundwater Elevations and Model Target Residuals in FA-128 Area. (Source: SIR Study 7.5, Appendix B, Figure 5-2.)

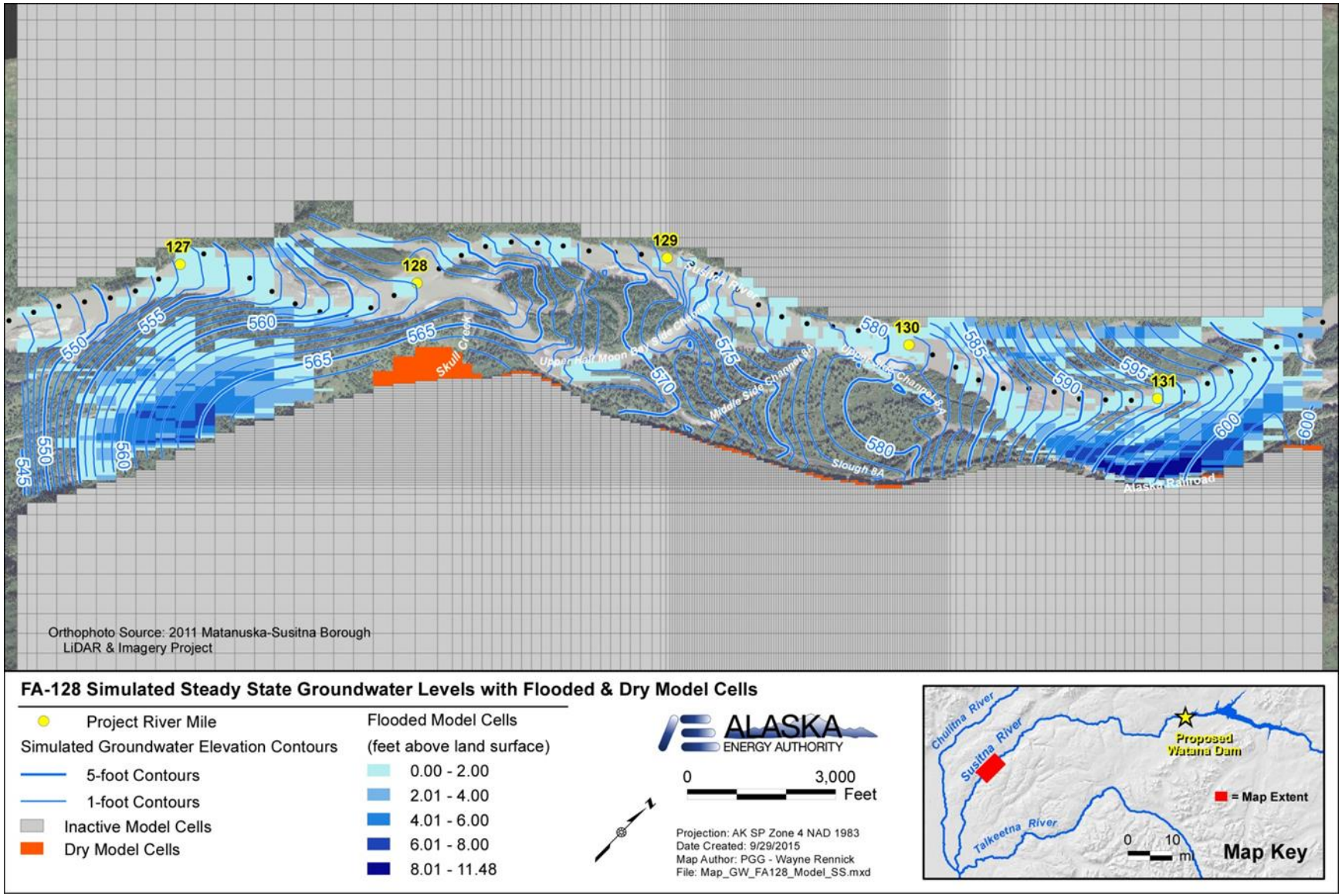

Figure 5.5-9. Simulated Steady Stage Groundwater Elevations with Flooded and Dry Model Cells Shown. (Source: SIR Study 7.5, Appendix B, Figure 5-3.)

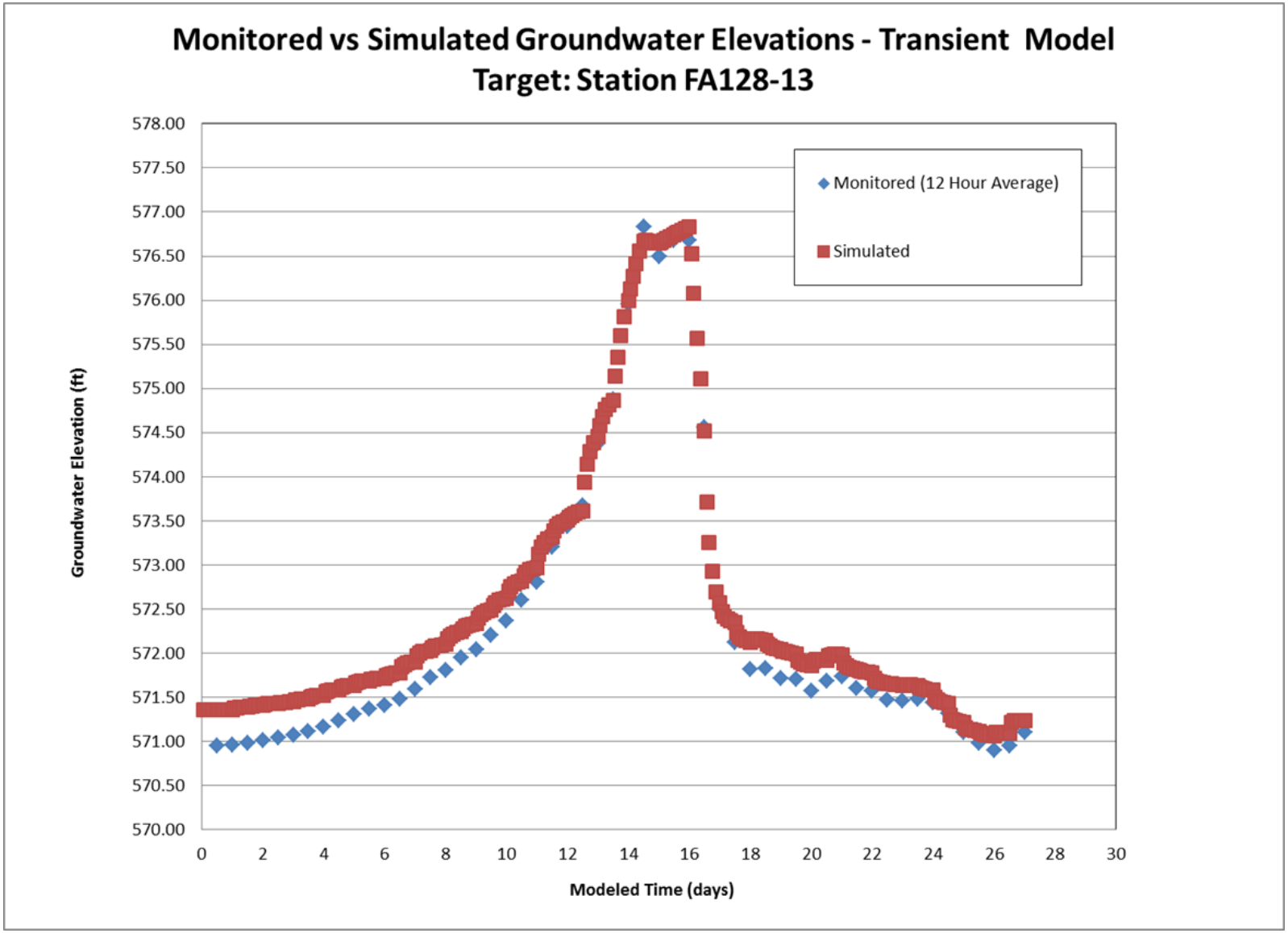

Figure 5.5-10. Monitored versus Simulated Steady State Groundwater Elevations (Station 128-13). (Source: SIR Study 7.5, Appendix B, Figure 5-4.)

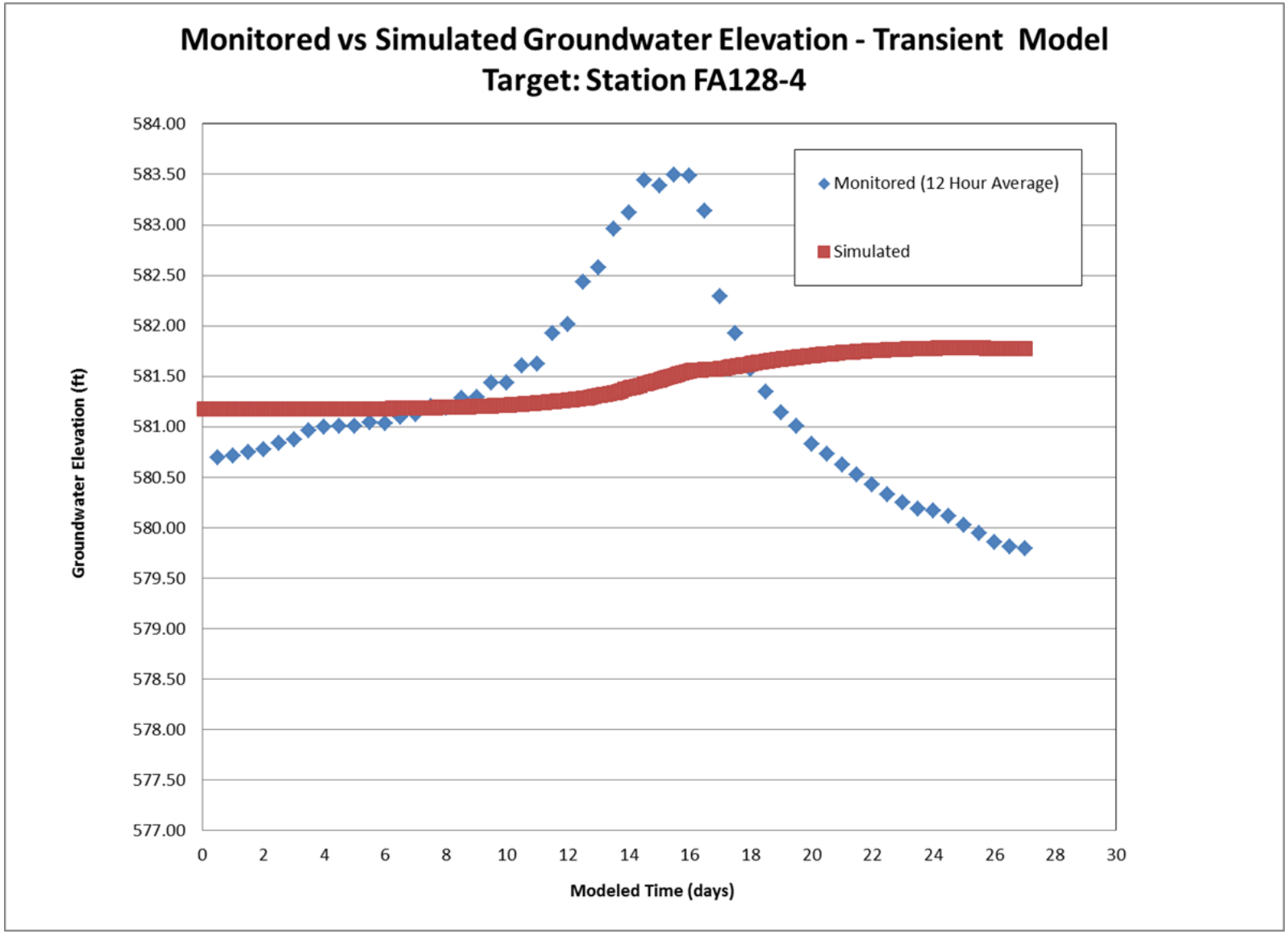

Figure 5.5-11. Monitored versus Simulated Steady State Groundwater Elevations (Station 128-4). (Source: SIR Study 7.5, Appendix B, Figure 5-5.)

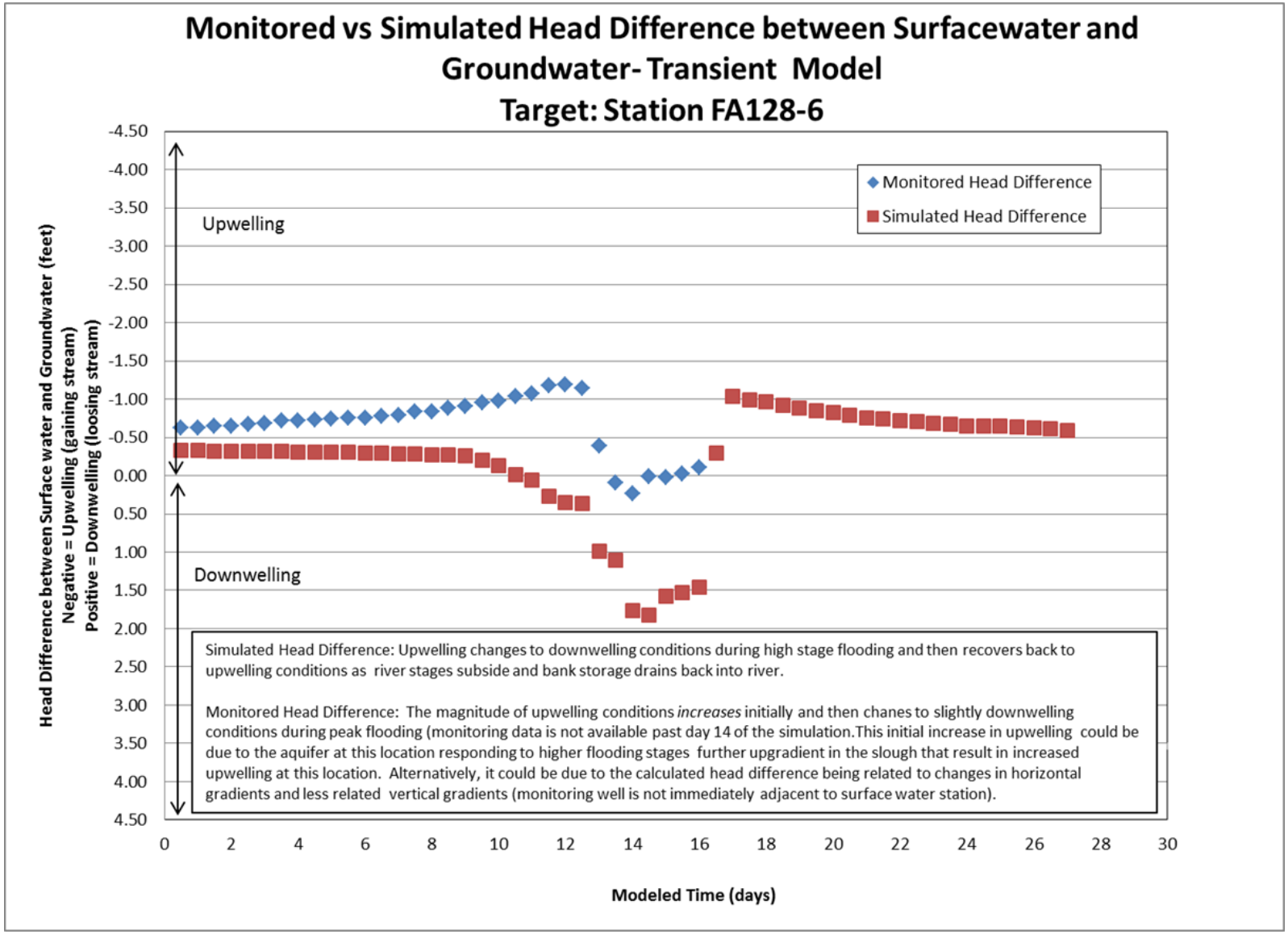

Figure 5.5-12. Monitored versus Simulated Transient Head Difference between Surface water and Groundwater at Target Station 128-6. (Source: SIR Study 7.5, Appendix B, Figure 5-6.)

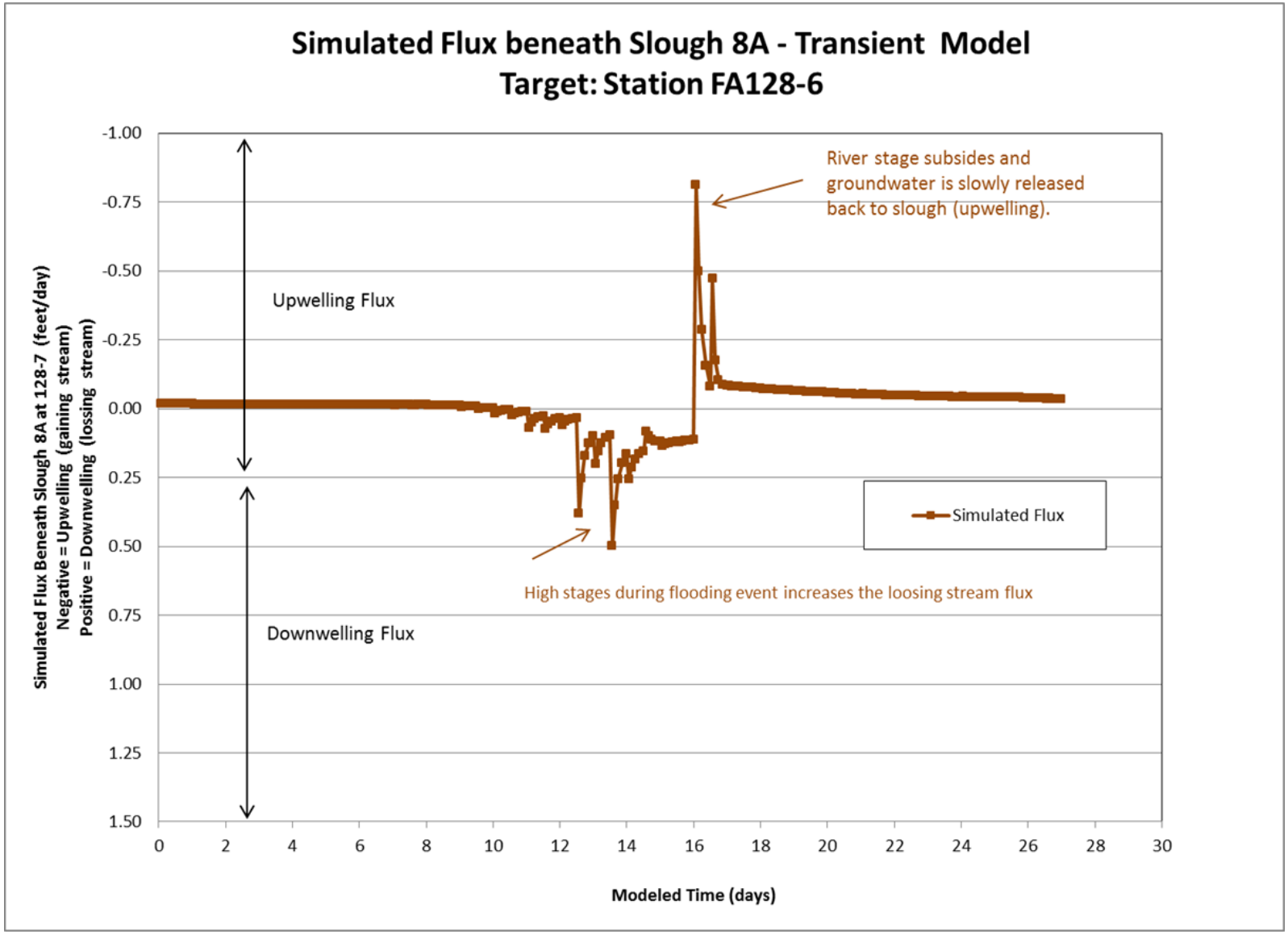

Figure 5.5-13. Monitored versus Simulated Transient Flux beneath Slough 8A at Target Station 128-6. (Source: SIR Study 7.5, Appendix B, Figure 5-10.)

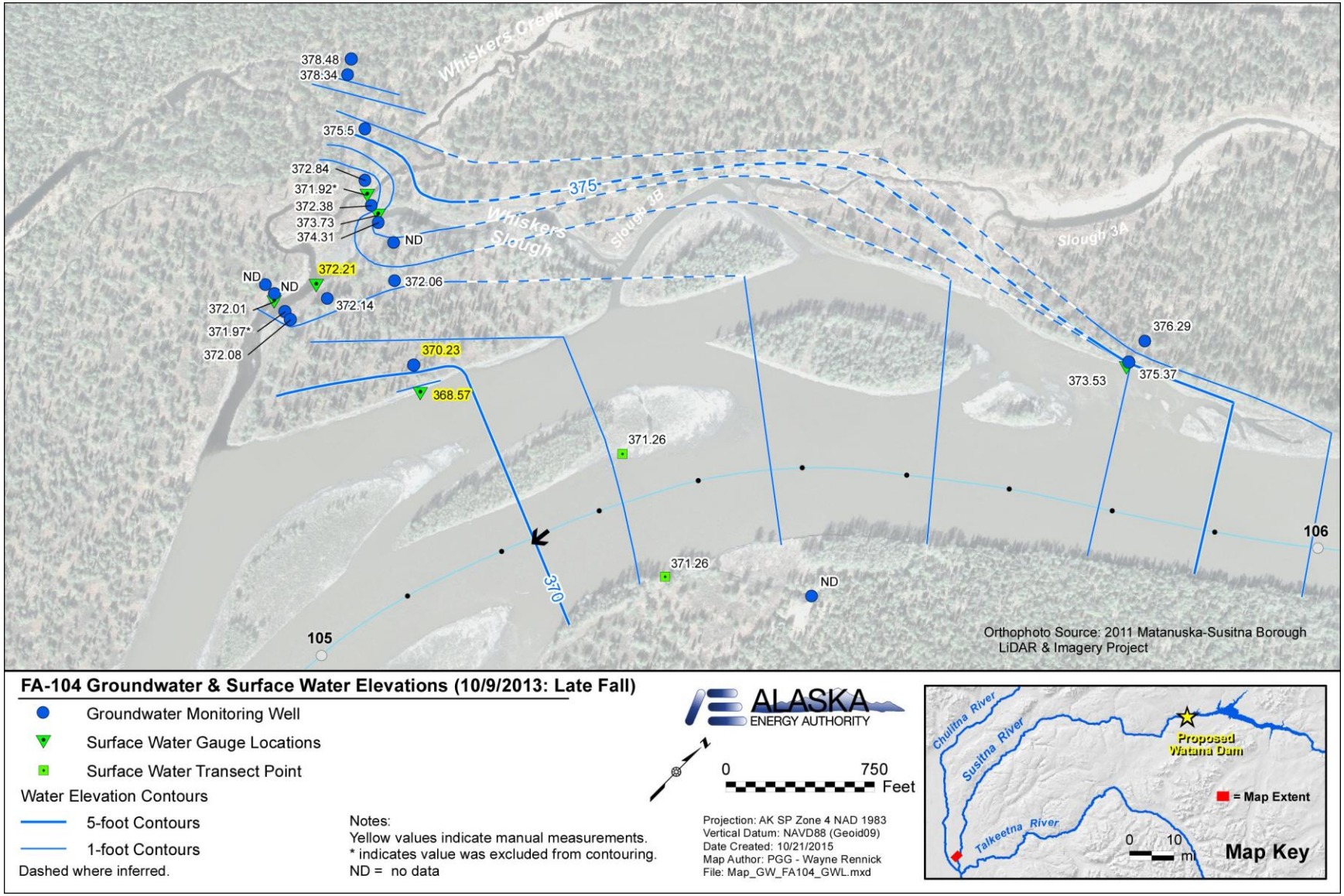

Figure 5.5-14. FA-104 (Whiskers Slough), showing water-level elevation contours for Late Fall – October 9, 2013, Susitna River. (Source: SIR Study 7.5, Appendix A, Figure 5.1-3.)

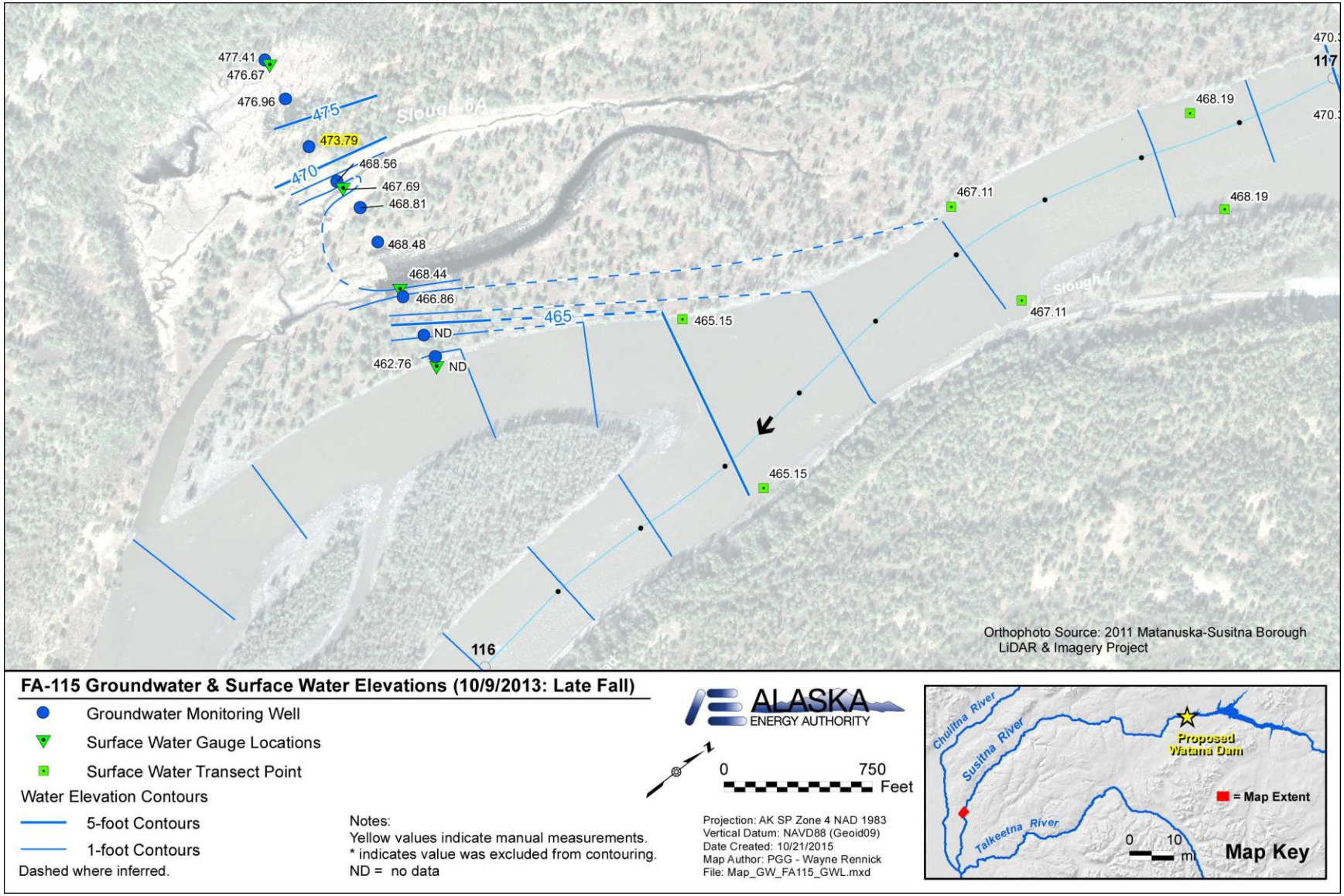

Figure 5.5-15. FA-115 (Slough 6A), showing water-level elevation contours for Late Fall – October 9, 2013, Susitna River. (Source: SIR Study 7.5, Appendix A, Figure 5.2-2.)

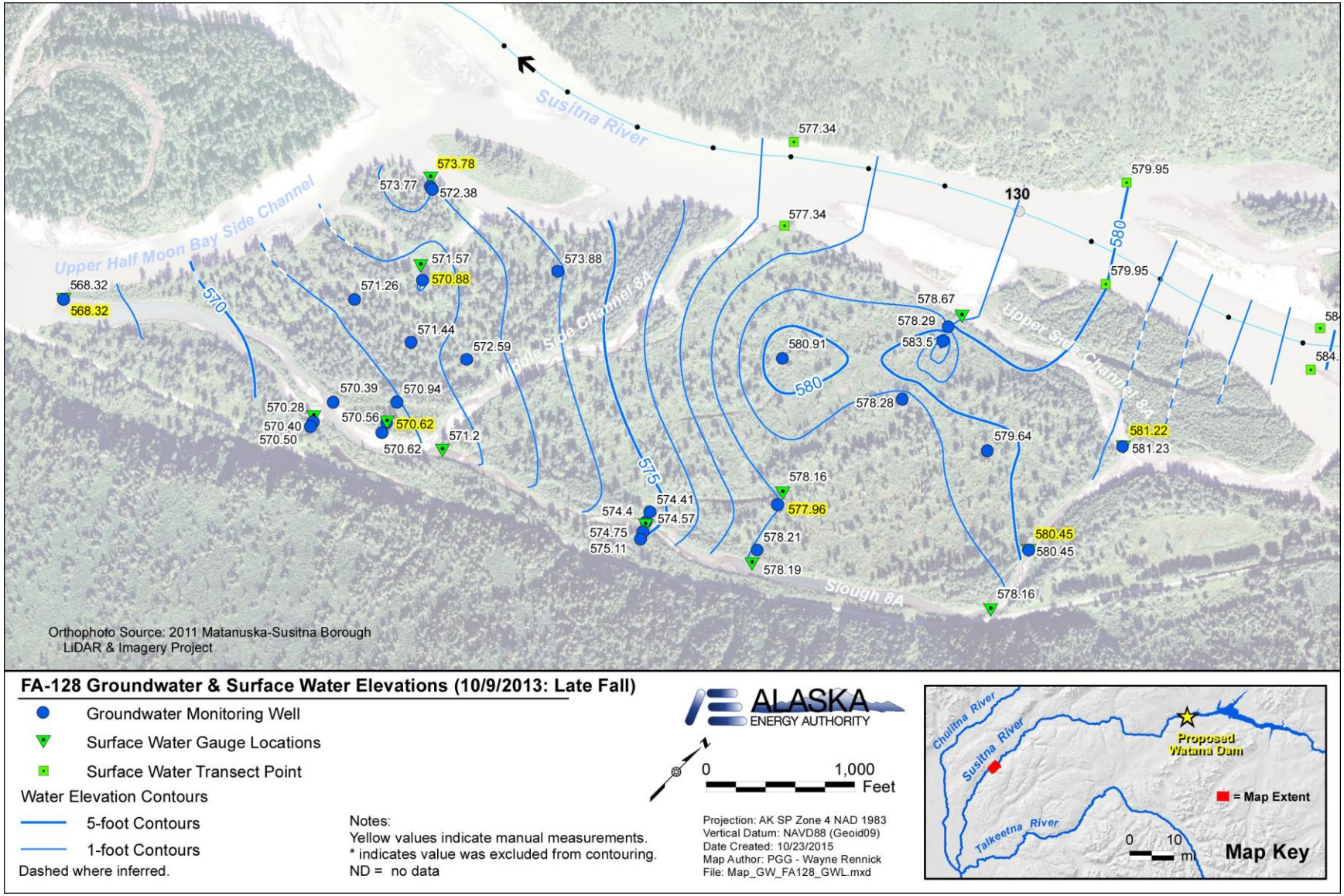

Figure 5.5-16. FA-128 (Slough 8A), showing water-level elevation contours for Late Fall – October 9, 2013, Susitna River. (Source: SIR Study 7.5, Appendix A, Figure 5.3-3.)

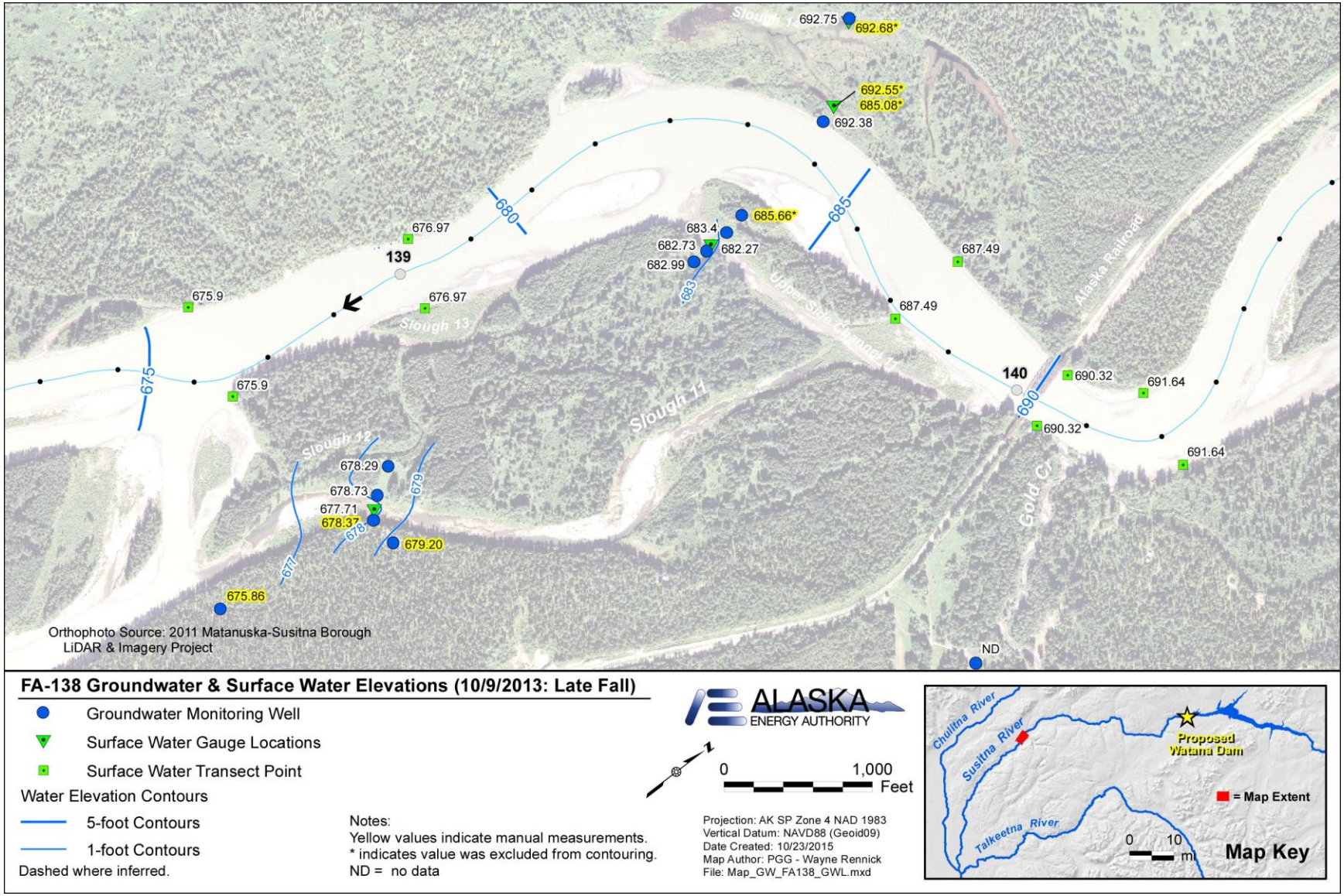

Figure 5.5-17. FA-138 (Gold Creek), showing water-level elevation contours for Late Fall – October 9, 2014, Susitna River. (Source: SIR Study 7.5, Appendix A, Figure 5.4-2.)

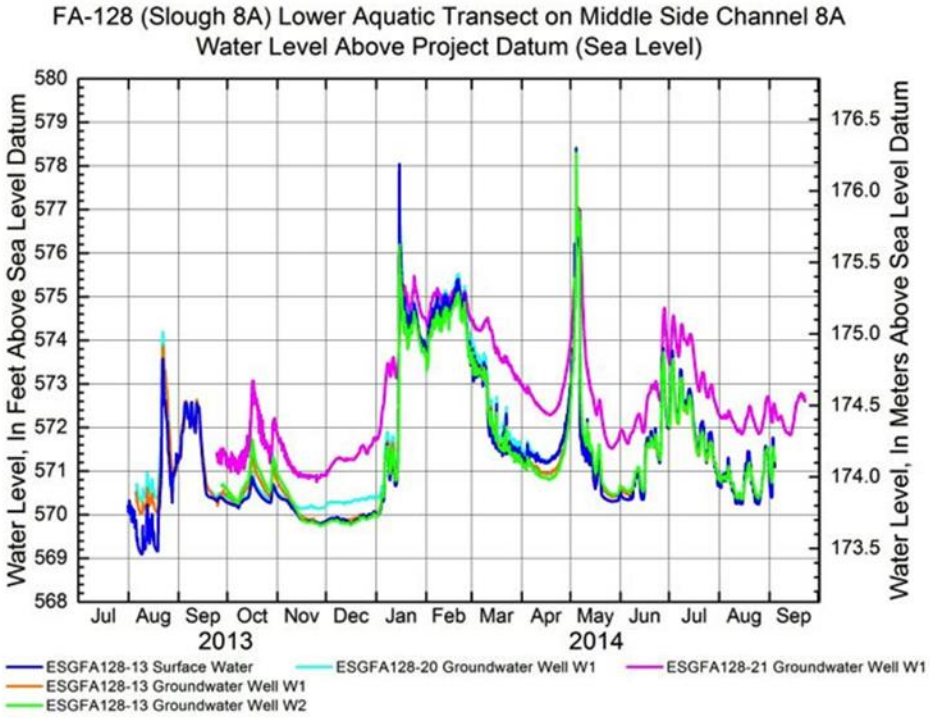

Figure 5.6-1. Groundwater Station ESGFA128-13 groundwater levels in wells adjacent to Middle Side Channel 8A and surface-water stage in Middle Side Channel 8A, and groundwater levels from wells at ESGFA128-20 and ESGFA128-21. (Source: GWS and R2 2014b - Figure 4.1-14.)

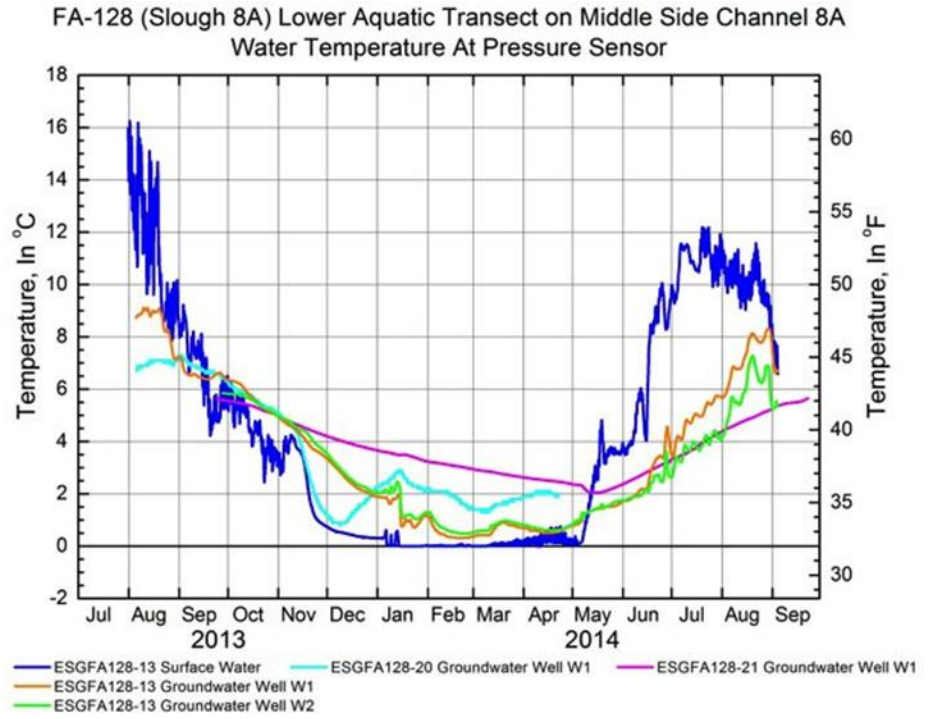

Figure 5.6-2. Groundwater Station ESGFA128-13 groundwater temperature in wells adjacent to Middle Side Channel 8A and surface-water temperature in Middle Side Channel 8A, and groundwater temperature from wells at ESGFA128-20 and ESGFA128-21. (Source: GWS and R2 2014b - Figure 4.1-15.)

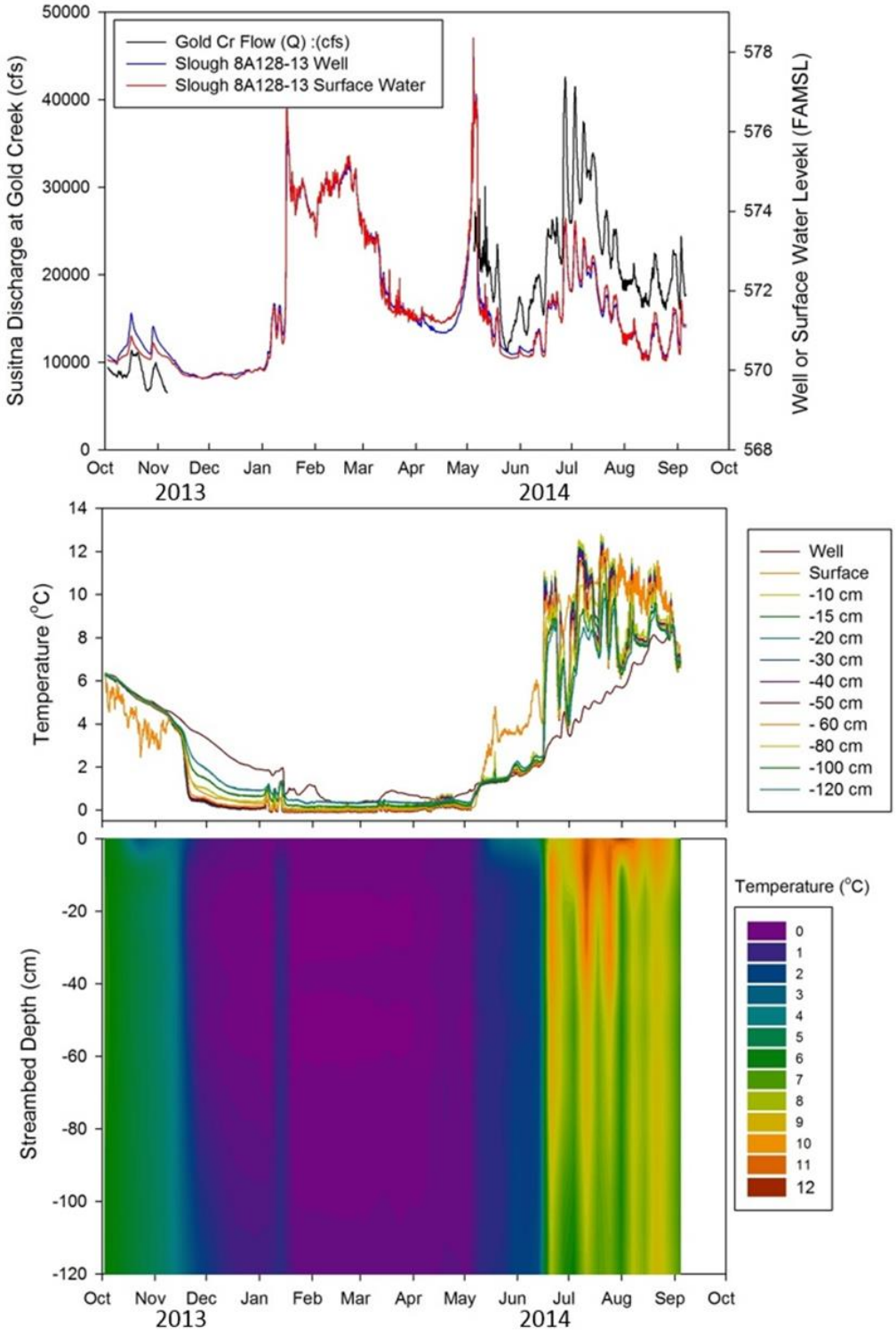

Figure 5.6-3. Downwelling example in Middle Side Channel 8A in FA-128 (Slough 8A) showing groundwater and surface-water levels, stream-bed temperatures, and thermal profile of the stream bed conditions through the major hydrologic periods. (Source: GWS and R2 2014b - Figure 4.3-32.)

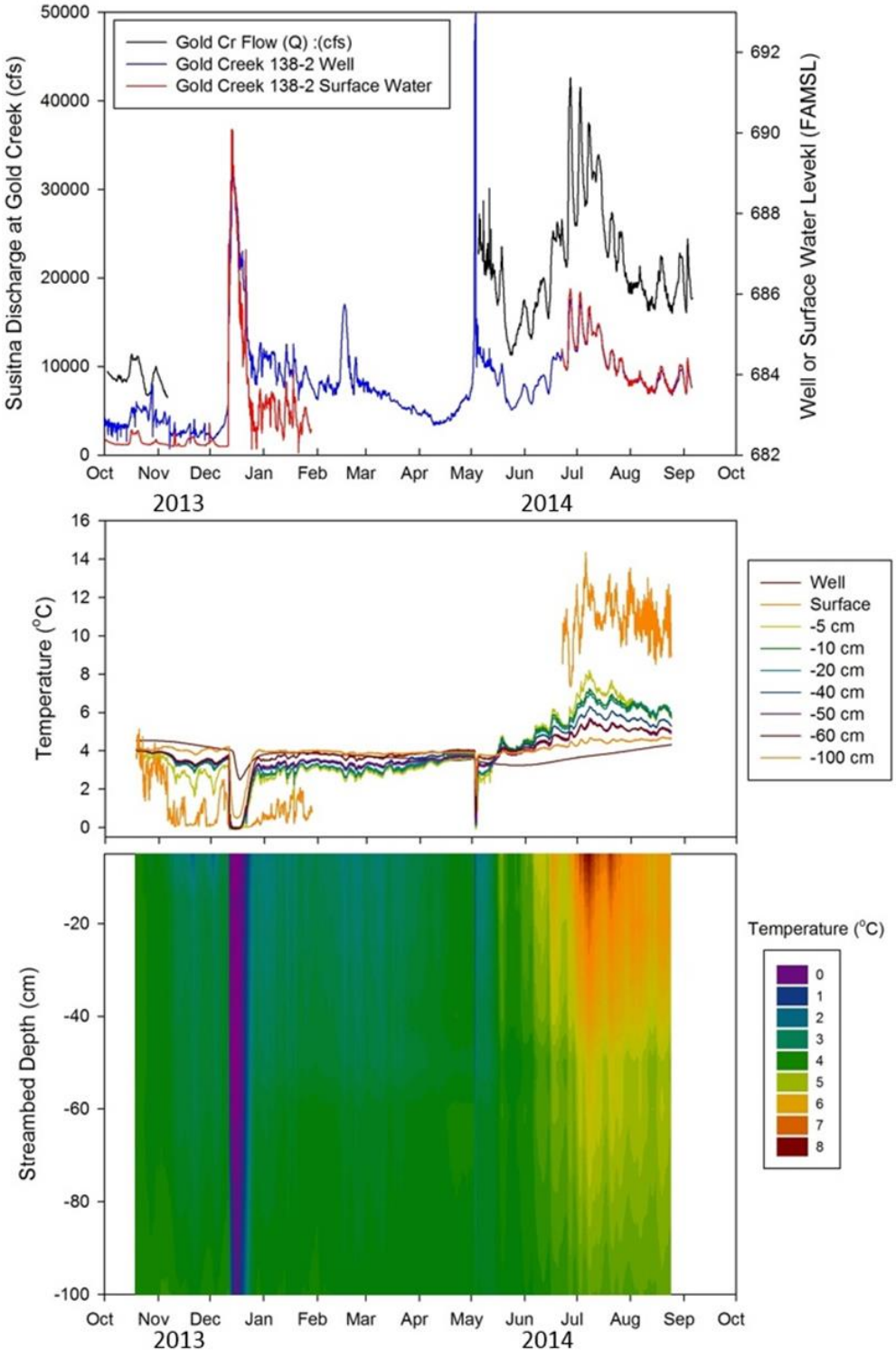

Figure 5.6-4. Upwelling example in Upper Side Channel 11 in FA-138 (Gold Creek) showing groundwater and surface-water levels, stream-bed temperatures, and thermal profile of the stream bed conditions through the major hydrologic periods. (Source: GWS and R2 2014b - Figure 4.3-33.)

APPENDIX A: PRELIMINARY WATER TABLE CONTOUR MAPS FOR FOCUS AREAS FA-104, FA-115, FA-128, AND FA-138

APPENDIX B: PRELIMINARY MODFLOW THREE DIMENSIONAL GROUNDWATER MODEL FOR FOCUS AREA FA-128 (SLOUGH 8A)

APPENDIX C: SUMMARY REVIEW OF SUSITNA RIVER HYDROGEOLOGIC STUDIES CONDUCTED IN THE 1980S AND OTHER NON-PROJECT RELATED STUDIES WITH RELEVANCE TO PROPOSED SUSITNA-WATANA DAM PROJECT

APPENDIX D: DECEMBER 5, 2014 TECHNICAL TEAM MEETING NOTES AND PRESENTATION