

Appendix E

Dominant Process Indicator and Reach Summary Data Sheets

Content:

- Main Stem Reach Data
- Tributary Reach Data

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Appendix E: North Salt Creek Mainstem Reach Data

Reach Name	NSR005	NSR010	NSR015	NSR020	NSR025	NSR030	NSR035
Channel Length	3183	7207	7388	12655	6052	7550	9456
Valley Length	2861	7137	7372	12606	5912	7177	9356
Reach Sinuosity	1.11255	1.00981	1.00217	1.00389	1.02368	1.05197	1.01069
Dominant Process	Planform Adjustment	Widening	Widening	Widening	Widening	Planform Adjustment	Widening
Indicators of Dynamic Equilibrium							
No persistent scour or erosion features	-	-	-	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-	-	-	-
Gradually sloping banks	-	-	-	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-	-	-	-
Vegetated consolidated bars	-	-	-	-	-	-	-
Consolidated bed material	-	-	-	-	-	-	-
Imbricated rock bed material	-	-	-	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-	-	-	-
Indicators of Incision							
V" or "U" shaped channel cross section	-	-	-	-	-	-	-
Persistent scouring on both banks toe to mid slope	-	-	-	-	-	-	-
Wedge failures along both banks	-	-	-	-	-	-	-
Steep near vertical banks	-	-	-	-	-	-	-
Perched bankfull floodplain or abandoned terraces	-	-	-	-	-	-	-
Knickpoints and knickzones occurring in channel profile	-	-	-	-	-	-	-
Steep bed slope	-	-	-	-	-	-	-
Scoured bed material	-	-	-	-	-	-	-
Consolidated bed material incision	-	-	-	-	-	-	-
Frequent large woody debris jams	-	-	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-	-	-	-
Undercut or perched infrastructure	-	-	-	-	-	-	-
Indicators of Widening							
Wide "U" shaped channel cross section	-	TRUE	TRUE	TRUE	TRUE	-	TRUE
Increase in cross sectional area	-	TRUE	TRUE	TRUE	TRUE	-	TRUE
Increase in channel width and decrease in bank height from upstream	-	-	-	-	-	-	-
Scouring or bank failures along both banks	-	TRUE	TRUE	TRUE	TRUE	-	TRUE
Persistent scouring on both banks mid to upper slope	-	-	-	-	-	-	-
Residual failure material at bank toes	-	TRUE	TRUE	TRUE	TRUE	-	TRUE
Unconsolidated depositional bed material widening	-	TRUE	TRUE	TRUE	TRUE	-	TRUE
Depositional center bars	-	-	TRUE	TRUE	TRUE	-	TRUE
Unconsolidated depositional sediment bars	-	TRUE	TRUE	TRUE	TRUE	-	TRUE
Reinforced knickpoints and knickzones	-	-	-	-	-	-	-
Large woody debris jams	-	-	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	TRUE	TRUE	TRUE	TRUE	-	TRUE
Numerous surfing or overhanging trees	-	TRUE	TRUE	TRUE	TRUE	-	TRUE
Indicators of Plan Form Adjustment							
Cutbanks with active scour lines opposite of advancing bar formations	TRUE	TRUE	-	-	-	TRUE	TRUE
Circular failures along alternating banks or at the outside of banks	TRUE	TRUE	-	-	-	TRUE	TRUE
Alternating pattern of scour and deposition	TRUE	TRUE	-	-	-	TRUE	TRUE
Bar formations are consolidated with an unconsolidated leading edge	TRUE	TRUE	-	-	-	TRUE	TRUE
Bar material unsorted with fines downstream	TRUE	TRUE	-	-	-	TRUE	TRUE
Bar is irregularly shaped and more than 1 3 across the channel	TRUE	TRUE	-	-	-	TRUE	TRUE
Poorly sorted bed material	TRUE	TRUE	-	-	-	TRUE	TRUE
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	-	planform lower third only, not present at widening	not incising. Lots of fresh falls	-	-	-	-

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS005R005	NS005R010	NS010R005	NS010R010	NS010R015	NS010R020
Channel Length	360	5224	5471	4237	5263	2878
Valley Length	353	5190	5355	4226	4869	2418
Reach Sinuosity	1.01983	1.00655	1.02166	1.0026	1.08092	1.19024
Dominant Process	Incision	Managed Swale	Incision	Incision	Incision	Incision
Indicators of Dynamic Equilibrium						
No persistent scour or erosion features	-	-	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-	-	-
Gradually sloping banks	-	-	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-	-	-
Vegetated consolidated bars	-	-	-	-	-	-
Consolidated bed material	-	-	-	-	-	-
Imbricated rock bed material	-	-	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-	-	-
Indicators of Incision						
V" or "U" shaped channel cross section	TRUE	-	TRUE	TRUE	TRUE	TRUE
Persistent scouring on both banks toe to mid slope	TRUE	-	TRUE	TRUE	TRUE	TRUE
Wedge failures along both banks	TRUE	-	TRUE	TRUE	TRUE	TRUE
Steep near vertical banks	TRUE	-	TRUE	TRUE	TRUE	TRUE
Perched bankfull floodplain or abandoned terraces	TRUE	-	-	-	-	TRUE
Knickpoints and knickzones occurring in channel profile	TRUE	-	TRUE	TRUE	TRUE	TRUE
Steep bed slope	-	-	TRUE	TRUE	TRUE	TRUE
Scoured bed material	TRUE	-	TRUE	TRUE	TRUE	TRUE
Consolidated bed material Incision	-	-	TRUE	TRUE	TRUE	TRUE
Frequent large woody debris jams	-	-	TRUE	-	-	TRUE
Lower limit of woody vegetation high with exposed roots	TRUE	-	TRUE	TRUE	TRUE	TRUE
Undercut or perched infrastructure	TRUE	-	TRUE	TRUE	TRUE	-
Indicators of Widening						
Wide "U" shaped channel cross section	-	-	-	-	-	TRUE
Increase in cross sectional area	-	-	-	-	-	TRUE
Increase in channel width and decrease in bank height from upstream	-	-	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-	-	TRUE
Persistent scouring on both banks mid to upper slope	-	-	-	-	-	-
Residual failure material at bank toes	-	-	-	-	-	TRUE
Unconsolidated depositional bed material widening	-	-	-	-	-	TRUE
Depositional center bars	-	-	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-	-	TRUE
Reinforced knickpoints and knickzones	-	-	-	-	-	-
Large woody debris jams	-	-	-	-	-	TRUE
Lower limit of woody vegetation high with exposed roots	-	-	-	-	-	TRUE
Numerous surfing or overhanging trees	-	-	-	-	-	TRUE
Indicators of Plan Form Adjustments						
Planform Adjustment meander advance and lateral migration	-	-	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-	-	-
Poorly sorted bed material	-	-	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	Incised to mainstem water level. Held up by drop structure at upper end of reach	managed swale, held up by drop structure.	-	-	-	signs of widening on lower end.

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS010R025	NS010R030	NS010R035	NS015R005	NS020R005	NS020R010
Channel Length	8105	3358	5541	8156	253	2291
Valley Length	4225	2655	5424	8040	253	2254
Reach Sinuosity	1.91834	1.26478	1.02157	1.01443	1	1.01642
Dominant Process	Incision	Incision	Incision	Managed Swale	Incision	Managed Swale
Indicators of Dynamic Equilibrium						
No persistent scour or erosion features	-	-	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-	-	-
Gradually sloping banks	-	-	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-	-	-
Vegetated consolidated bars	-	-	-	-	-	-
Consolidated bed material	-	-	-	-	-	-
Imbricated rock bed material	-	-	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-	-	-
Indicators of Incision						
V" or "U" shaped channel cross section	TRUE	TRUE	TRUE	-	TRUE	-
Persistent scouring on both banks toe to mid slope	TRUE	TRUE	TRUE	-	TRUE	-
Wedge failures along both banks	TRUE	TRUE	TRUE	-	TRUE	-
Steep near vertical banks	TRUE	TRUE	TRUE	-	TRUE	-
Perched bankfull floodplain or abandoned terraces	TRUE	-	TRUE	-	-	-
Knickpoints and knickzones occurring in channel profile	TRUE	TRUE	TRUE	-	TRUE	-
Steep bed slope	TRUE	TRUE	TRUE	-	-	-
Scoured bed material	TRUE	TRUE	TRUE	-	TRUE	-
Consolidated bed material incision	TRUE	TRUE	TRUE	-	-	-
Frequent large woody debris jams	TRUE	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	TRUE	TRUE	TRUE	-	TRUE	-
Undercut or perched infrastructure	-	TRUE	TRUE	-	TRUE	-
Indicators of Widening						
Wide "U" shaped channel cross section	-	-	-	-	-	-
Increase in cross sectional area	-	-	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-	-	-
Residual failure material at bank toes	-	-	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-	-	-
Depositional center bars	-	-	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-	-	-
Large woody debris jams	-	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-	-	-
Indicators of Plan Form Adjustments						
Planform Adjustment meander advance and lateral migration	-	-	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-	-	-
Poorly sorted bed material	-	-	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	-	-	partially managed by field crossings	-	-	managed swale

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS025R005	NS025R010	NS025R015	NS025R020	NS025R025	NS025R030
Channel Length	2632	2305	3719	1321	414	2585
Valley Length	2550	2233	3643	1210	411	2362
Reach Sinuosity	1.03216	1.03224	1.02086	1.09174	1.0073	1.09441
Dominant Process	Incision	Managed Swale	Managed Swale	Managed Swale	Managed Swale	Managed Swale
Indicators of Dynamic Equilibrium						
No persistent scour or erosion features	-	TRUE	-	-	-	-
Bankfull shelf along one or both banks	-	TRUE	-	-	-	-
Gradually sloping banks	-	TRUE	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	TRUE	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-	-	-
Vegetated consolidated bars	-	-	-	-	-	-
Consolidated bed material	-	TRUE	-	-	-	-
Imbricated rock bed material	-	-	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-	-	-
Healthy riparian corridor and canopy cover	-	TRUE	-	-	-	-
Indicators of Incision						
V" or "U" shaped channel cross section	TRUE	-	-	-	-	-
Persistent scouring on both banks toe to mid slope	TRUE	-	-	-	-	-
Wedge failures along both banks	TRUE	-	-	-	-	-
Steep near vertical banks	TRUE	-	-	-	-	-
Perched bankfull floodplain or abandoned terraces	TRUE	-	-	-	-	-
Knickpoints and knickzones occurring in channel profile	TRUE	-	-	-	-	-
Steep bed slope	TRUE	-	-	-	-	-
Scoured bed material	TRUE	-	-	-	-	-
Consolidated bed material Incision	TRUE	-	-	-	-	-
Frequent large woody debris jams	TRUE	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	TRUE	-	-	-	-	-
Undercut or perched infrastructure	-	-	-	-	-	-
Indicators of Widening						
Wide "U" shaped channel cross section	-	-	-	-	-	-
Increase in cross sectional area	-	-	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-	-	-
Residual failure material at bank toes	-	-	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-	-	-
Depositional center bars	-	-	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-	-	-
Large woody debris jams	-	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-	-	-
Indicators of Plan Form Adjustments						
Planform Adjustment meander advance and lateral migration	-	-	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-	-	-
Poorly sorted bed material	-	-	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	-	managed swale, corridor healthy prairie.	managed swale, wetlands	managed swale	lake, managed swale	-

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS025R035	NS025R040	NS030R005	NS030R010	NS030R015	NS030R020
Channel Length	1640	960	2479	3566	5146	4949
Valley Length	1613	959	2449	3469	3404	3986
Reach Sinuosity	1.01674	1.00104	1.01225	1.02796	1.51175	1.2416
Dominant Process	Early Stage Incision	Early Stage Incision	Incision	Incision	Incision	Incision
Indicators of Dynamic Equilibrium						
No persistent scour or erosion features	-	-	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-	-	-
Gradually sloping banks	-	-	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-	-	-
Vegetated consolidated bars	-	-	-	-	-	-
Consolidated bed material	-	-	-	-	-	-
Imbricated rock bed material	-	-	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-	-	-
Indicators of Incision						
V" or "U" shaped channel cross section	-	-	TRUE	TRUE	TRUE	TRUE
Persistent scouring on both banks toe to mid slope	-	-	TRUE	TRUE	TRUE	TRUE
Wedge failures along both banks	-	-	TRUE	TRUE	TRUE	TRUE
Steep near vertical banks	-	-	TRUE	TRUE	TRUE	TRUE
Perched bankfull floodplain or abandoned terraces	-	-	-	-	-	-
Knickpoints and knickzones occurring in channel profile	-	-	TRUE	TRUE	TRUE	TRUE
Steep bed slope	-	-	TRUE	TRUE	TRUE	TRUE
Scoured bed material	-	-	TRUE	TRUE	TRUE	TRUE
Consolidated bed material Incision	-	-	TRUE	TRUE	TRUE	TRUE
Frequent large woody debris jams	-	-	TRUE	TRUE	TRUE	TRUE
Lower limit of woody vegetation high with exposed roots	-	-	TRUE	TRUE	TRUE	TRUE
Undercut or perched infrastructure	-	-	TRUE	TRUE	-	-
Indicators of Widening						
Wide "U" shaped channel cross section	-	-	-	-	-	-
Increase in cross sectional area	-	-	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-	-	-
Residual failure material at bank toes	-	-	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-	-	-
Depositional center bars	-	-	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-	-	-
Large woody debris jams	-	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-	-	-
Indicators of Plan Form Adjustments						
Planform Adjustment meander advance and lateral migration	-	-	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-	-	-
Poorly sorted bed material	-	-	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	early stage incision	early stage incision	-	-	-	-

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS030R025	NS035R005	NS035R010	NS040R005	NS040R010	NS045R005
Channel Length	1759	794	5837	3842	1505	1760
Valley Length	1615	781	5718	3765	1500	1757
Reach Sinuosity	1.08916	1.01665	1.02081	1.02045	1.00333	1.00171
Dominant Process	Incision	Incision	Managed Swale	Managed Swale	Managed Swale	Managed Swale
Indicators of Dynamic Equilibrium						
No persistent scour or erosion features	-	-	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-	-	-
Gradually sloping banks	-	-	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-	-	-
Vegetated consolidated bars	-	-	-	-	-	-
Consolidated bed material	-	-	-	-	-	-
Imbricated rock bed material	-	-	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-	-	-
Indicators of Incision						
V" or "U" shaped channel cross section	TRUE	TRUE	-	-	-	-
Persistent scouring on both banks toe to mid slope	TRUE	TRUE	-	-	-	-
Wedge failures along both banks	TRUE	TRUE	-	-	-	-
Steep near vertical banks	TRUE	TRUE	-	-	-	-
Perched bankfull floodplain or abandoned terraces	-	-	-	-	-	-
Knickpoints and knickzones occurring in channel profile	TRUE	TRUE	-	-	-	-
Steep bed slope	TRUE	TRUE	-	-	-	-
Scoured bed material	TRUE	TRUE	-	-	-	-
Consolidated bed material Incision	TRUE	TRUE	-	-	-	-
Frequent large woody debris jams	TRUE	TRUE	-	-	-	-
Lower limit of woody vegetation high with exposed roots	TRUE	TRUE	-	-	-	-
Undercut or perched infrastructure	-	TRUE	-	-	-	-
Indicators of Widening						
Wide "U" shaped channel cross section	-	-	-	-	-	-
Increase in cross sectional area	-	-	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-	-	-
Residual failure material at bank toes	-	-	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-	-	-
Depositional center bars	-	-	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-	-	-
Large woody debris jams	-	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-	-	-
Indicators of Plan Form Adjustments						
Planform Adjustment meander advance and lateral migration	-	-	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-	-	-
Poorly sorted bed material	-	-	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	-	-	managed swale	managed swale	early stage incision	-

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS050R005	NS050R010	NS050R015	NS050R020	NS050R025	NS055R005
Channel Length	237	1831	1847	1211	1828	4220
Valley Length	237	1823	1827	995	1819	4196
Reach Sinuosity	1	1.00439	1.01095	1.21709	1.00495	1.00572
Dominant Process	Incision	Managed Swale	Managed Swale	Managed Swale	Managed Swale	Managed Swale
Indicators of Dynamic Equilibrium						
No persistent scour or erosion features	-	-	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-	-	-
Gradually sloping banks	-	-	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-	-	-
Vegetated consolidated bars	-	-	-	-	-	-
Consolidated bed material	-	-	-	-	-	-
Imbricated rock bed material	-	-	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-	-	-
Indicators of Incision						
V" or "U" shaped channel cross section	TRUE	-	-	-	-	-
Persistent scouring on both banks toe to mid slope	TRUE	-	-	-	-	-
Wedge failures along both banks	TRUE	-	-	-	-	-
Steep near vertical banks	TRUE	-	-	-	-	-
Perched bankfull floodplain or abandoned terraces	-	-	-	-	-	-
Knickpoints and knickzones occurring in channel profile	TRUE	-	-	-	-	-
Steep bed slope	TRUE	-	-	-	-	-
Scoured bed material	TRUE	-	-	-	-	-
Consolidated bed material Incision	TRUE	-	-	-	-	-
Frequent large woody debris jams	-	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	TRUE	-	-	-	-	-
Undercut or perched infrastructure	-	-	-	-	-	-
Indicators of Widening						
Wide "U" shaped channel cross section	-	-	-	-	-	-
Increase in cross sectional area	-	-	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-	-	-
Residual failure material at bank toes	-	-	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-	-	-
Depositional center bars	-	-	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-	-	-
Large woody debris jams	-	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-	-	-
Indicators of Plan Form Adjustments						
Planform Adjustment meander advance and lateral migration	-	-	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-	-	-
Poorly sorted bed material	-	-	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	-	-	managed swale	-	managed swale	managed swale

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS060R005	NS065R005	NS070R005	NS070R010
Channel Length	1263	3044	3104	1871
Valley Length	1263	3027	2808	1808
Reach Sinuosity	1	1.00562	1.10541	1.03485
Dominant Process	Managed Swale	Managed Swale	Incision	Managed Swale
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	-	-	TRUE	-
Persistent scouring on both banks toe to mid slope	-	-	TRUE	-
Wedge failures along both banks	-	-	TRUE	-
Steep near vertical banks	-	-	TRUE	-
Perched bankfull floodplain or abandoned terraces	-	-	-	-
Knickpoints and knickzones occurring in channel profile	-	-	TRUE	-
Steep bed slope	-	-	TRUE	-
Scoured bed material	-	-	TRUE	-
Consolidated bed material incision	-	-	TRUE	-
Frequent large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	TRUE	-
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	managed swale	managed swale	-	managed swale

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS070R015	NS070R020	NS070R025	NS070R030
Channel Length	2400	653	841	871
Valley Length	2150	612	821	843
Reach Sinuosity	1.11628	1.06699	1.02436	1.03321
Dominant Process	Managed Swale	Widening	Early Stage Incision	Managed Swale
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	TRUE	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	TRUE	-
Well established woody vegetation on healed failure surfaces	-	-	TRUE	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	TRUE	-
Healthy riparian corridor and canopy cover	-	-	TRUE	-
Indicators of Incision				
V" or "U" shaped channel cross section	-	TRUE	TRUE	-
Persistent scouring on both banks toe to mid slope	-	TRUE	TRUE	-
Wedge failures along both banks	-	TRUE	-	-
Steep near vertical banks	-	TRUE	-	-
Perched bankfull floodplain or abandoned terraces	-	TRUE	-	-
Knickpoints and knickzones occurring in channel profile	-	TRUE	TRUE	-
Steep bed slope	-	-	-	-
Scoured bed material	-	TRUE	TRUE	-
Consolidated bed material incision	-	-	TRUE	-
Frequent large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	TRUE	-	-
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	TRUE	-	-
Increase in cross sectional area	-	TRUE	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	TRUE	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	TRUE	-	-
Unconsolidated depositional bed material widening	-	TRUE	-	-
Depositional center bars	-	TRUE	-	-
Unconsolidated depositional sediment bars	-	TRUE	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	TRUE	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	managed swale	-	early stage incision	managed swale

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS075R005	NS075R010	NS075R015	NS075R020
Channel Length	3501	4265	902	1106
Valley Length	3490	4258	900	1102
Reach Sinuosity	1.00315	1.00164	1.00222	1.00363
Dominant Process	Incision	Managed Swale	Managed Swale	Incision
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	TRUE	-	-	TRUE
Persistent scouring on both banks toe to mid slope	TRUE	-	-	TRUE
Wedge failures along both banks	TRUE	-	-	TRUE
Steep near vertical banks	TRUE	-	-	TRUE
Perched bankfull floodplain or abandoned terraces	-	-	-	-
Knickpoints and knickzones occurring in channel profile	TRUE	-	-	-
Steep bed slope	TRUE	-	-	-
Scoured bed material	TRUE	-	-	TRUE
Consolidated bed material Incision	TRUE	-	-	TRUE
Frequent large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	TRUE	-	-	TRUE
Undercut or perched infrastructure	TRUE	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	-	managed swale	-	-

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS080R005	NS080R010	NS085R005	NS090R005
Channel Length	1157	2780	5459	2589
Valley Length	1157	2778	5459	2583
Reach Sinuosity	1	1.00072	1	1.00232
Dominant Process	Early Stage Incision	Managed Swale	Managed Swale	Managed Swale
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	TRUE	-	-
Gradually sloping banks	-	TRUE	-	-
Herbaceous vegetation growing at or near the water surface	-	TRUE	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	TRUE	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	TRUE	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	-	TRUE	-	-
Persistent scouring on both banks toe to mid slope	-	TRUE	-	-
Wedge failures along both banks	-	TRUE	-	-
Steep near vertical banks	-	-	-	-
Perched bankfull floodplain or abandoned terraces	-	-	-	-
Knickpoints and knickzones occurring in channel profile	-	TRUE	-	-
Steep bed slope	-	TRUE	-	-
Scoured bed material	-	TRUE	-	-
Consolidated bed material incision	-	TRUE	-	-
Frequent large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	early stage incision	managed swale, held up by structures	managed swale	managed swale

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS090R010	NS090R015	NS095R005	NS110R005
Channel Length	821	1820	2659	5110
Valley Length	821	1818	2645	5103
Reach Sinuosity	1	1.0011	1.00529	1.00137
Dominant Process	Managed Swale	Incision	Managed Swale	Managed Swale
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	TRUE	-	-
Gradually sloping banks	-	TRUE	-	-
Herbaceous vegetation growing at or near the water surface	-	TRUE	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	TRUE	-	-
Consolidated bed material	-	TRUE	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	TRUE	-	-
Healthy riparian corridor and canopy cover	-	TRUE	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	-	TRUE	-	-
Persistent scouring on both banks toe to mid slope	-	TRUE	-	-
Wedge failures along both banks	-	TRUE	-	-
Steep near vertical banks	-	TRUE	-	-
Perched bankfull floodplain or abandoned terraces	-	-	-	-
Knickpoints and knickzones occurring in channel profile	-	TRUE	-	-
Steep bed slope	-	TRUE	-	-
Scoured bed material	-	TRUE	-	-
Consolidated bed material incision	-	TRUE	-	-
Frequent large woody debris jams	-	TRUE	-	-
Lower limit of woody vegetation high with exposed roots	-	TRUE	-	-
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	-	-	managed swale, slight signs of early stage incision	managed swale

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS110R010	NS110R015	NS110R020	NS115R005
Channel Length	2281	531	1203	1438
Valley Length	2266	530	1196	1432
Reach Sinuosity	1.00662	1.00189	1.00585	1.00419
Dominant Process	Incision	Early Stage Incision	Managed Swale	Managed Swale
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	TRUE	-	-	-
Persistent scouring on both banks toe to mid slope	TRUE	-	-	-
Wedge failures along both banks	TRUE	-	-	-
Steep near vertical banks	TRUE	-	-	-
Perched bankfull floodplain or abandoned terraces	TRUE	-	-	-
Knickpoints and knickzones occurring in channel profile	TRUE	-	-	-
Steep bed slope	TRUE	-	-	-
Scoured bed material	TRUE	-	-	-
Consolidated bed material Incision	TRUE	-	-	-
Frequent large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	TRUE	-	-	-
Undercut or perched infrastructure	TRUE	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1 3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	early stage incision us end	early stage incision	managed swale	-

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS125R005	NS130R005	NS135R005	NS135R010
Channel Length	1423	2331	635	173
Valley Length	1421	2278	627	173
Reach Sinuosity	1.00141	1.02327	1.01276	1
Dominant Process	Early Stage Incision	Managed Swale	Managed Swale	Managed Swale
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	-	-	-	-
Persistent scouring on both banks toe to mid slope	-	-	-	-
Wedge failures along both banks	-	-	-	-
Steep near vertical banks	-	-	-	-
Perched bankfull floodplain or abandoned terraces	-	-	-	-
Knickpoints and knickzones occurring in channel profile	-	-	-	-
Steep bed slope	-	-	-	-
Scoured bed material	-	-	-	-
Consolidated bed material incision	-	-	-	-
Frequent large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	early stage incision	managed swale	-	managed swale

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS170R005	NS180R005	NS210R005	NS210R010
Channel Length	1876	1524	733	1262
Valley Length	1744	1522	731	1218
Reach Sinuosity	1.07569	1.00131	1.00274	1.03612
Dominant Process	Managed Swale	Managed Swale	Early Stage Incision	Early Stage Incision
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	TRUE	-	-	-
Gradually sloping banks	TRUE	-	-	-
Herbaceous vegetation growing at or near the water surface	TRUE	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	TRUE	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	TRUE	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	TRUE	-	-	-
Persistent scouring on both banks toe to mid slope	TRUE	-	-	-
Wedge failures along both banks	TRUE	-	-	-
Steep near vertical banks	TRUE	-	-	-
Perched bankfull floodplain or abandoned terraces	TRUE	-	-	-
Knickpoints and knickzones occurring in channel profile	TRUE	-	-	-
Steep bed slope	TRUE	-	-	-
Scoured bed material	TRUE	-	-	-
Consolidated bed material incision	TRUE	-	-	-
Frequent large woody debris jams	TRUE	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	early stage incision	managed swale	early stage incision	early stage incision

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS210R015	NS230R005	NS230R005	NS230R010
Channel Length	2965	1213	1213	3413
Valley Length	2934	1207	1213	3359
Reach Sinuosity	1.01057	1.00497	1	1.01608
Dominant Process	Managed Swale	Early Stage Incision	Early Stage Incision	Managed Swale
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	-	-	-	-
Persistent scouring on both banks toe to mid slope	-	-	-	-
Wedge failures along both banks	-	-	-	-
Steep near vertical banks	-	-	-	-
Perched bankfull floodplain or abandoned terraces	-	-	-	-
Knickpoints and knickzones occurring in channel profile	-	-	-	-
Steep bed slope	-	-	-	-
Scoured bed material	-	-	-	-
Consolidated bed material incision	-	-	-	-
Frequent large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	managed swale	early stage incision	-	managed swale

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS270R005	NS310R005	NS330R005	NS330R010
Channel Length	1470	1417	1572	1545
Valley Length	1469	1218	1465	1438
Reach Sinuosity	1.00068	1.16338	1.07304	1.07441
Dominant Process	Managed Swale	Managed Swale	Incision	Early Stage Incision
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	-	-	TRUE	-
Persistent scouring on both banks toe to mid slope	-	-	TRUE	-
Wedge failures along both banks	-	-	TRUE	-
Steep near vertical banks	-	-	TRUE	-
Perched bankfull floodplain or abandoned terraces	-	-	TRUE	-
Knickpoints and knickzones occurring in channel profile	-	-	TRUE	-
Steep bed slope	-	-	TRUE	-
Scoured bed material	-	-	TRUE	-
Consolidated bed material incision	-	-	TRUE	-
Frequent large woody debris jams	-	-	TRUE	-
Lower limit of woody vegetation high with exposed roots	-	-	TRUE	-
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	managed swale	-	-	early stage incision

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS410R005	NS410R010	NS430R005	NS430R010
Channel Length	3798	830	645	725
Valley Length	3726	824	610	708
Reach Sinuosity	1.01932	1.00728	1.05738	1.02401
Dominant Process	Managed Swale	Managed Swale	Early Stage Incision	Early Stage Incision
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	TRUE	-	TRUE	TRUE
Persistent scouring on both banks toe to mid slope	TRUE	-	TRUE	TRUE
Wedge failures along both banks	TRUE	-	TRUE	TRUE
Steep near vertical banks	TRUE	-	TRUE	TRUE
Perched bankfull floodplain or abandoned terraces	TRUE	-	TRUE	TRUE
Knickpoints and knickzones occurring in channel profile	TRUE	-	TRUE	TRUE
Steep bed slope	TRUE	-	TRUE	TRUE
Scoured bed material	TRUE	-	TRUE	TRUE
Consolidated bed material incision	TRUE	-	TRUE	TRUE
Frequent large woody debris jams	-	-	TRUE	TRUE
Lower limit of woody vegetation high with exposed roots	TRUE	-	TRUE	TRUE
Undercut or perched infrastructure	TRUE	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	-	managed swale	early stage incision	early stage incision at top

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS510R005	NS530R005	NS530R010	NS530R010
Channel Length	899	2676	781	781
Valley Length	899	2628	764	781
Reach Sinuosity	1	1.01826	1.02225	1
Dominant Process	Managed Swale	Incision	Early Stage Incision	Early Stage Incision
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	-	TRUE	-	TRUE
Persistent scouring on both banks toe to mid slope	-	TRUE	-	TRUE
Wedge failures along both banks	-	TRUE	-	TRUE
Steep near vertical banks	-	TRUE	-	TRUE
Perched bankfull floodplain or abandoned terraces	-	-	-	-
Knickpoints and knickzones occurring in channel profile	-	TRUE	-	TRUE
Steep bed slope	-	TRUE	-	TRUE
Scoured bed material	-	TRUE	-	TRUE
Consolidated bed material Incision	-	TRUE	-	TRUE
Frequent large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	TRUE	-	TRUE
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1 3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	managed swale	-	early stage incision	-

Field Observations and Data Input

Appendix E: North Salt Creek Tributary Reach Data

Reach Name	NS530R015	NS630R005	NS630R010	NS730R005
Channel Length	2116	1163	1600	1068
Valley Length	2010	1154	1588	1063
Reach Sinuosity	1.05274	1.0078	1.00756	1.0047
Dominant Process	Early Stage Incision	Incision	Early Stage Incision	Early Stage Incision
Indicators of Dynamic Equilibrium				
No persistent scour or erosion features	-	-	-	-
Bankfull shelf along one or both banks	-	-	-	-
Gradually sloping banks	-	-	-	-
Herbaceous vegetation growing at or near the water surface	-	-	-	-
Well established woody vegetation on healed failure surfaces	-	-	-	-
Vegetated consolidated bars	-	-	-	-
Consolidated bed material	-	-	-	-
Imbricated rock bed material	-	-	-	-
De facto grade controls reinforcing knickpoints	-	-	-	-
Healthy riparian corridor and canopy cover	-	-	-	-
Indicators of Incision				
V" or "U" shaped channel cross section	-	TRUE	TRUE	TRUE
Persistent scouring on both banks toe to mid slope	-	TRUE	TRUE	TRUE
Wedge failures along both banks	-	TRUE	TRUE	TRUE
Steep near vertical banks	-	TRUE	TRUE	TRUE
Perched bankfull floodplain or abandoned terraces	-	-	TRUE	TRUE
Knickpoints and knickzones occurring in channel profile	-	TRUE	TRUE	TRUE
Steep bed slope	-	TRUE	TRUE	TRUE
Scoured bed material	-	TRUE	TRUE	TRUE
Consolidated bed material incision	-	TRUE	TRUE	TRUE
Frequent large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	TRUE	TRUE	-
Undercut or perched infrastructure	-	-	-	-
Indicators of Widening				
Wide "U" shaped channel cross section	-	-	-	-
Increase in cross sectional area	-	-	-	-
Increase in channel width and decrease in bank height from upstream	-	-	-	-
Scouring or bank failures along both banks	-	-	-	-
Persistent scouring on both banks mid to upper slope	-	-	-	-
Residual failure material at bank toes	-	-	-	-
Unconsolidated depositional bed material widening	-	-	-	-
Depositional center bars	-	-	-	-
Unconsolidated depositional sediment bars	-	-	-	-
Reinforced knickpoints and knickzones	-	-	-	-
Large woody debris jams	-	-	-	-
Lower limit of woody vegetation high with exposed roots	-	-	-	-
Numerous surfing or overhanging trees	-	-	-	-
Indicators of Plan Form Adjustments				
Planform Adjustment meander advance and lateral migration	-	-	-	-
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-
Circular failures along alternating banks or at the outside of banks	-	-	-	-
Alternating pattern of scour and deposition	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-
Bar material unsorted with fines downstream	-	-	-	-
Bar is irregularly shaped and more than 1/3 across the channel	-	-	-	-
Poorly sorted bed material	-	-	-	-
Notes - numbers in the notes rows are data codes corresponding to the observed indicators. these codes are displayed as "TRUE" in the above indicators of dynamic equilibrium	early stage incision	-	-	2ft knick at confluence

Field Observations and Data Input