

Appendix E

Dominant Process Indicator and Reach Summary Data Sheets

Content:

- Main Stem Reach Data
- Tributary Reach Data

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Appendix E: Oak Creek Mainstem Reach Data

Reach Name	OCR005	OCR010	OCR015	OCR020	OCR025	OCR030	OCR035	OCR040
Channel Length	9588	12875	5288	5133	5792	4824	7020	12049
Valley Length	9539	12857	5263	5123	5758	4810	6397	10970
Reach Sinuosity	1.00514	1.0014	1.00475	1.00195	1.0059	1.00291	1.09739	1.09836
Dominant Process	Widening	Widening	Widening	Widening	Widening	Widening	Planform Adjustment	Planform Adjustment
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	-	-	-	-	-	-	-	-
Wedge failures along both banks	-	-	-	TRUE	-	-	-	-
Steep near vertical banks	-	-	-	-	-	-	-	-
Perched bankfull floodplain or abandoned terraces	-	-	-	-	-	-	-	-
Knickpoints and knickzones occurring in channel profile	-	-	-	TRUE	TRUE	TRUE	-	-
Steep bed slope	-	-	-	TRUE	-	-	-	-
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	-	-	-	TRUE	-	-	-	-
Indicators of Widening								
Wide "U" shaped channel cross section	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Increase in cross sectional area	TRUE	TRUE	TRUE	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	TRUE	TRUE	TRUE
Persistent scouring on both banks mid to upper slope	-	-	-	TRUE	-	-	-	-
Residual failure material at bank toes	-	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Unconsolidated depositional bed material widening	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Depositional center bars	-	TRUE	TRUE	TRUE	TRUE	TRUE	-	-
Unconsolidated depositional sediment bars	-	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Reinforced knickpoints and knickzones	TRUE	-	-	-	-	TRUE	-	-
Large woody debris jams	-	-	-	-	-	-	-	-
Lower limit of woody vegetation high with exposed roots	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Numerous surfing or overhanging trees	-	-	-	TRUE	TRUE	TRUE	TRUE	TRUE
Indicators of Plan Form Adjustments								
Planform Adjustment meander advance and lateral migration	-	-	-	-	-	TRUE	TRUE	TRUE
Cutbanks with active scour lines opposite of advancing bar formations	-	-	-	-	-	TRUE	TRUE	TRUE
Circular failures along alternating banks or at the outside of banks	-	-	-	-	-	-	TRUE	TRUE
Alternating pattern of scour and deposition	-	-	-	-	-	-	TRUE	TRUE
Bar formations are consolidated with an unconsolidated leading edge	-	-	-	-	-	-	TRUE	-
Bar material unsorted with fines downstream	-	-	-	-	-	-	TRUE	TRUE
Bar is irregularly shaped and more than 1 3 across the channel	-	-	-	-	-	-	TRUE	TRUE
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	gc stabilized reach, slowly widening.	-	-	comes out of backwater , hidden in ds reach.	-	upper transitioning to planform	widening in straight segments, planform overall.	2nd round widening

Field Observations and Data Input

Appendix E: Oak Creek Mainstem Reach Data

Reach Name	OCR045	OCR050	ECR005	ECR010	ECR015	ECR020
Channel Length	8653	6419	11852	7442	11750	7404
Valley Length	8168	5963	11496	7294	10965	7163
Reach Sinuosity	1.05938	1.07647	1.03097	1.02029	1.07159	1.03365
Dominant Process	Incision	Incision	Planform Adjustment	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	-	TRUE	TRUE	TRUE
Knickpoints and knickzones occurring in channel profile	TRUE	TRUE	-	TRUE	TRUE	TRUE
Steep bed slope	-	-	-	TRUE	TRUE	TRUE
Scoured bed material	TRUE	TRUE	-	TRUE	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	-	TRUE	TRUE	TRUE
Undercut or perched infrastructure	TRUE	TRUE	-	TRUE	-	-
Indicators of Widening						
Wide "U" shaped channel cross section	TRUE	TRUE	-	TRUE	-	TRUE
Increase in cross sectional area	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	-	-	-	-	-	TRUE
Residual failure material at bank toes	TRUE	TRUE	-	TRUE	TRUE	TRUE
Unconsolidated depositional bed material widening	TRUE	TRUE	-	TRUE	-	-
Depositional center bars	-	-	-	-	-	-
Unconsolidated depositional sediment bars	TRUE	TRUE	-	TRUE	-	TRUE
Reinforced knickpoints and knickzones	-	-	-	TRUE	-	-
Large woody debris jams	-	-	-	TRUE	-	TRUE
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 Adjustments						
Planform Adjustment meander advance and lateral migration	-	-	TRUE	-	-	TRUE
Cutbanks with active scour lines opposite of advancing bar formations	-	-	TRUE	-	-	TRUE
Circular failures along alternating banks or at the outside of banks	-	-	TRUE	-	-	-
Alternating pattern of scour and deposition	-	-	-	-	-	-
Bar formations are consolidated with an unconsolidated leading edge	-	-	TRUE	-	-	-
Bar material unsorted with fines downstream	-	-	TRUE	-	-	-
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	second round incision.	2nd round of incision moving through.	transition to incision at us	soundly incising, consider gc reach	-	indications of widening in lower, planform in upst

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	OC005R005	OC005R010	OC005R015	OC005R020	OC005R025
Channel Length	583	1101	592	1059	1351
Valley Length	582	1097	588	1059	1346
Reach Sinuosity	1.00172	1.00365	1.0068	1	1.00371
Dominant Process	Dynamic Equilibrium	Incision	Widening	Incision	Dynamic Equilibrium
Indicators of Dynamic Equilibrium					
No persistent scour or erosion features	TRUE	-	-	-	TRUE
Bankfull shelf along one or both banks	TRUE	-	-	-	TRUE
Gradually sloping banks	TRUE	-	-	-	TRUE
Herbaceous vegetation growing at or near the water surface	TRUE	-	-	-	TRUE
Well established woody vegetation on healed failure surfaces	-	-	-	-	-
Vegetated consolidated bars	-	-	-	-	-
Consolidated bed material	-	-	-	-	-
Imbricated rock bed material	-	-	-	-	-
De facto grade controls reinforcing knickpoints	TRUE	-	-	-	TRUE
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	-	-	-	-	-
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	-	-	TRUE	-	-
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	-	-	TRUE	-	-
Large woody debris jams	-	-	-	-	-
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	-	-	TRUE	-	-
Circular failures along alternating banks or at the outside of banks	-	-	TRUE	-	-
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	-	-	3;4	incising	riparian corridor is young but providing good canopy cover, sediment from us is captured here.

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	OC005R030	OC005R035	OC010R005	OC010R010	OC010R015
Channel Length	1133	1250	2483	6740	3034
Valley Length	1105	1241	2467	6732	3023
Reach Sinuosity	1.02534	1.00725	1.00649	1.00119	1.00364
Dominant Process	Incision	Managed Swale	Widening	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	-	-	-	-	TRUE
Knickpoints and knickzones occurring in channel profile	TRUE	-	-	-	TRUE
Steep bed slope	TRUE	-	-	-	TRUE
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	-	-	-	TRUE
Undercut or perched infrastructure	TRUE	-	-	-	TRUE
Indicators of Widening					
Wide "U" shaped channel cross section	-	-	TRUE	-	-
Increase in cross sectional area	-	-	-	-	-
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	-	-	-	-	-
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	incising reach	concrete channel, grass overbank	persistent scour mass wasting indicates widening. Reach gc at culvert unable to downcut further	concrete swale with drop structures	lower end incising, upper reach managed swale

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	OC015R005	OC020R005	OC020R010	OC020R015	OC020R020
Channel Length	2036	3262	2741	2015	4008
Valley Length	2009	3238	2558	1551	3576
Reach Sinuosity	1.01344	1.00741	1.07154	1.29916	1.12081
Dominant Process	Managed Swale	Incision	Incision	Managed Swale	Incision
Indicators of Dynamic Equilibrium					
No persistent scour or erosion features	-	TRUE	TRUE	-	-
Bankfull shelf along one or both banks	-	TRUE	TRUE	-	-
Gradually sloping banks	-	TRUE	TRUE	-	-
Herbaceous vegetation growing at or near the water surface	-	TRUE	TRUE	-	-
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	-	-	-	-	-
Scoured bed material	-	TRUE	TRUE	-	TRUE
Consolidated bed material Incision	-	-	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	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	stable in lower, incision at road and us	-	lake	-

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	OC020R025	OC020R030	OC020R035	OC025R005	OC025R010
Channel Length	418	2687	1634	2576	6207
Valley Length	347	2049	1557	2569	5875
Reach Sinuosity	1.20461	1.31137	1.04945	1.00272	1.05651
Dominant Process	Managed Swale	Managed Swale	Managed Swale	Managed Swale	Incision
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	-	-	-	-	-
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	-	-	-	-	-
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	-	-	-	-	-
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	lake	managed swale	managed swale	managed swale, lower section in incision, but structures gc, and arrest progression	fairly stable early incision

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	OC025R015	OC030R005	OC030R010	OC030R015	OC035R005
Channel Length	1359	3742	6402	2573	8653
Valley Length	1350	3693	6332	2478	8323
Reach Sinuosity	1.00667	1.01327	1.01105	1.03834	1.03965
Dominant Process	Managed Swale	Incision	Incision	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	-	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
Scoured bed material	-	TRUE	TRUE	-	TRUE
Consolidated bed material incision	-	-	-	-	-
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	-	us early incision. Ds late with debris jams	early stage incision, partially managed	-	-

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	OC035R010	OC035R015	OC035R020	OC040R005	OC040R010
Channel Length	1766	1772	2318	1653	2892
Valley Length	1747	1761	2297	1646	2788
Reach Sinuosity	1.01088	1.00625	1.00914	1.00425	1.0373
Dominant Process	Managed Swale	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	-
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	-	-	-	-	-
Frequent large woody debris jams	-	-	-	TRUE	-
Lower limit of woody vegetation high with exposed roots	-	-	-	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	lake, swale, managed	gc recommended, course for farmers on how to construct gcs	early stage incision	incision to match maistem	managed swale

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	OC045R005	OC045R010	OC045R015	OC105R005	OC110R005
Channel Length	1478	2314	1987	627	1367
Valley Length	1460	2300	1931	622	1343
Reach Sinuosity	1.01233	1.00609	1.029	1.00804	1.01787
Dominant Process	Managed Swale	Managed Swale	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
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	 managed swale	 managed swale	 concrete channel, grass overbank	 held up by one gc and road xings, dumped rubble attempts have failed

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	OC130R005	OC130R010	OC140R005	OC140R010	OC145R005
Channel Length	4188	4285	1403	4101	1664
Valley Length	3854	4258	1373	3810	1659
Reach Sinuosity	1.08666	1.00634	1.02185	1.07638	1.00301
Dominant Process	Incision	Managed Swale	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	-	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	TRUE	-	-	-	-
Knickpoints and knickzones occurring in channel profile	TRUE	-	TRUE	-	-
Steep bed slope	-	-	TRUE	-	-
Scoured bed material	TRUE	-	TRUE	-	-
Consolidated bed material Incision	-	-	-	-	-
Frequent large woody debris jams	-	-	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	early stage incision	managed swale	early stage incision in managed swale	early stage incision in managed swale	early stage incision

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	OC145R010	OC210R005	OC245R005	EC005R005	EC010R005
Channel Length	1995	1037	829	8954	662
Valley Length	1993	1031	760	8697	619
Reach Sinuosity	1.001	1.00582	1.09079	1.02955	1.06947
Dominant Process	Managed Swale	Incision	Managed Swale	Dynamic Equilibrium	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	-	-	-	TRUE	-
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	-	-	-	-	-
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	-	-	-	-	-
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	managed swale	backwatered by ds gc, incising us of confluence	managed swale	crossings and reinforced knicks are holding up trib preventing progression to incision	managed swale, lots of dumped material lower half

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	EC010R010	EC015R005	EC015R010	EC015R015	EC020R005
Channel Length	3642	6299	4763	8520	3218
Valley Length	3601	5369	4419	7334	3106
Reach Sinuosity	1.01139	1.17322	1.07785	1.16171	1.03606
Dominant Process	Managed Swale	Incision	Incision	Incision	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	-	-	-	-	-
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	-	-	-	-	-
Scoured bed material	-	TRUE	TRUE	TRUE	-
Consolidated bed material incision	-	-	-	-	-
Frequent large woody debris jams	-	TRUE	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, lots of dumped material lower half	-	-	short segment of managed swale	managed swale, ds wooded area incising

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	EC020R010	EC020R015	EC025R005	EC030R005	EC030R010
Channel Length	722	1271	683	7944	674
Valley Length	712	1247	680	7697	668
Reach Sinuosity	1.01405	1.01925	1.00441	1.03209	1.00898
Dominant Process	Managed Swale	Managed Swale	Incision	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	TRUE	-
Wedge failures along both banks	-	-	TRUE	TRUE	-
Steep near vertical banks	-	-	TRUE	TRUE	-
Perched bankfull floodplain or abandoned terraces	-	-	TRUE	TRUE	-
Knickpoints and knickzones occurring in channel profile	-	-	TRUE	TRUE	-
Steep bed slope	-	-	TRUE	TRUE	-
Scoured bed material	-	-	TRUE	TRUE	-
Consolidated bed material Incision	-	-	-	-	-
Frequent large woody debris jams	-	-	-	TRUE	-
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	managed swale	-	lots of knicks, stabilize to protect road	-	managed swale held up by beaver dam

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Reach Name	EC115R005	EC130R005	EC130R010	EC215R005	EC215R010
Channel Length	5633	1938	3070	3269	5887
Valley Length	5509	1929	2926	3108	5600
Reach Sinuosity	1.02251	1.00467	1.04921	1.0518	1.05125
Dominant Process	Managed Swale	Managed Swale	Managed Swale	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
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	-	-	-	TRUE	TRUE
Knickpoints and knickzones occurring in channel profile	-	-	-	TRUE	TRUE
Steep bed slope	-	-	-	TRUE	TRUE
Scoured bed material	-	-	-	TRUE	TRUE
Consolidated bed material incision	-	-	-	-	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	lower segment is stable	managed swale	swale, managed	-	-

Field Observations and Data Input

Appendix E: Oak Creek Tributary Reach Data

Field Observations and Data Input	Reach Name	EC230R005	
	Channel Length	4695	
	Valley Length	4543	
	Reach Sinuosity	1.03346	
	Dominant Process	Incision	
	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	-	
	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	-	
	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	intermittent sections in early stage incision		

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