

Project ID (RM)	Restoration Project Type	Project Description	Length (lf)	Area (ac)	Volume (cy)	No. LWD Units (ea)	No. ELJ Units (ea)	Estimated Construction Cost	Site Access and Construction Feasibility	# of Parcels	Landowner Willingness
0.5R	Riparian restoration	Remove some dredged materials and create riparian and wetland bench	5500	25	130000			\$ 750,000	Very accessible via HWY 432 offramp to boat ramp. Cost of grading material \$5/yd (no haul, sold from site); \$10-15k per acre for revegetation	4	Site is believed to be for sale, contact Longview Booming; Protect site from unauthorized uses
1.0L	Side channel restoration and enhancement	Remove some dredged materials and reconnect side channel, riparian restoration	6200	15	60000			\$ 800,000	Accessible via private road; cost of removing/hauling material \$8/yd; \$10-15k per acre for revegetation	3	One industrial landowner. Uses dredged material for construction purposes. Corps will want to deposit more material here after dredging.
3.0L	Riparian restoration	Slope back banks to create riparian bench; remove riprap; revegetate with riparian species	7000	16				\$ 3,000,000	Very accessible. Construction is straightforward, however project would be adjacent to flood control levees, which could require additional study, coordination and design effort to maintain flood control. Cost estimate of \$400/lf	4	Golf course and levee properties
C3.5R	Side channel restoration and enhancement	Restore connection to RB oxbow on Coweeman about RM3.5, City of Kelso may own	2000	10	10000	50		\$350,000			
C4.0B	Stream channel enhancement	Place LWD to trap spawning gravels upstream of levees on Coweeman	10000	2		100	2	\$350,000			
4.5R	Riparian restoration	Slope back banks to create riparian bench; remove riprap; revegetate with riparian species	2200	3	10000			\$ 900,000	Accessible. Construction is straightforward, however project would be adjacent to local infrastructure and flood control levees, which could require additional study, coordination and design effort to maintain flood control. Cost estimate of \$400/lf.	13	Bioengineer existing levee; likely owned by City or County
7.3R	Riparian restoration	Remove dredged material and replant floodplain; construct setback levee if necessary.	2000	5	10000			\$ 400,000	Very accessible w/ straightforward levee setback construction, removal of material at \$8/yd	1	Dredged material disposal site; need to determine current owner
8.5R	Riparian restoration	Set back levee and plant riparian/floodplain vegetation on bench	2000	10	5000			\$ 1,000,000	Very accessible w/ levee setback construction requiring moving utilities and design to protect flood control. Assume \$500/lf levee	2	Riverside Park
9.0L	Dredged materials removal	Remove dredged materials and revegetate	3500	12	150,000			\$ 2,000,000	Very accessible w/ straightforward earthwork construction, but large volumes at \$8/yd and \$10-15k per acre reveg.	6	Dredged material disposal site; need to determine current owner
9.0L-A	Tributary enhancement	Place LWD and vegetate with willows (mouth of Ostrander Creek)	1000	5		15		\$ 150,000	Need to construct access route to channel. Likely requires fairly significant in-channel construction.	3	
T1	Riparian restoration/noxious weed removal	Remove Japanese knotweed along entire Ostrander Creek length and revegetate	42000	100				\$750,000			
9.7R	Bar and island enhancement	Place LWD and ELJ, plant riparian vegetation	1500	3		39	2	\$ 250,000	Need to build access road spur. Construction is straightforward and can be performed in dry conditions.	3	
T2	Culvert replacement	Replace culvert at Hazel Dell Road	100	1	5000	5		\$300,000			
9.8L	Riparian restoration	Remove/reduce revetment, remove dredged material and re-shape banks	2000	5	50,000			\$ 750,000	Existing construction access. Construction is straightforward and can be performed in dry conditions.	3	Quarry
10.5L	Riparian restoration	Remove dredged material to slightly increase floodplain width and provide gentle bank slope and plant riparian vegetation	3500	10	100,000			\$ 1,300,000	Existing construction access. Construction is straightforward and can be performed in dry conditions.	2	Only considering larger undeveloped parcels
11.2L	Bar and island enhancement	Place wood to promote side channel persistence	2000	5		30	2	\$ 250,000	Minor construction access required. Construction is straightforward and can be performed in dry conditions.	2	May be DNR land
12.5L	Side channel restoration and enhancement	Place woody debris, revegetate, minor excavation	2000	10	10,000	20	1	\$ 400,000	Very accessible. Steep embankment for construction w/ little in-water construction that can be managed from bank.	5	DNR land plus residential
12.5R	Riparian restoration	Remove riprap and bioengineer as feasible, remove dredged materials to restore floodplain	2500	5	50000			\$ 1,000,000	Accessible. Very steep riprap embankment with some construction challenges.	4	Only considering larger undeveloped parcels
13.5L	Riparian restoration	Create bench by sloping back steep dredged material and revegetate	3000	7	40000	250		\$ 900,000	Very accessible. Steep embankment for construction w/ little in-water construction that can be managed from bank.	11	Numerous private parcels-houses on dredged material; steep high eroding banks
14.0L	Side channel restoration and enhancement	Excavate side channel, place LWD	4200	20	25000	80	2	\$ 750,000	Very accessible. Higher level of design required to protect railroad embankment. Assume channel is 4200 feet long by 25 feet wide by 5 feet deep.	6	May be primarily in RR ROW
14.5R	Side channel restoration and enhancement	Excavate side channel, place LWD, plant riparian	4500	20	25000	85	2	\$ 750,000	Very accessible. Higher level of design and complexity due to existing infrastructure in floodplain at site.	7	Location of historic river channel need to determine current owner
15.0L	Bar and island enhancement	Remove dredged materials and revegetate; make better Sandy Creek outlet	2000	6	10000	20	2	\$ 450,000	Need to construct access spur route. Construction simple and straightforward.	1	Mouth of Sandy Creek and both dredged material and recently deposited bar; need to determine current landowner

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16.0R	Bar and island enhancement	Create defined boat launch area and restore historic side channel and improve floodplain with plantings and wood	3000	30	10000	30	2	\$ 500,000	Very accessible. Project feasibility function of additional boat launch locations.	2	County land and road?
16.7L	Bar and island enhancement	Enhance bar with LWD and riparian plantings and promote side channel maintenance	1500	8	20000	30	2	\$ 525,000	Very accessible. Straightforward floodplain and riparian restoration.	2	Recently deposited bar, need to determine landowner
16.8R	Tributary enhancement	Create riparian bench, place LWD and riparian along lower end of Arkansas Creek	1000	5	40000	30		\$ 650,000	Very accessible. Fairly straightforward floodplain and riparian restoration, with some existing infrastructure.	3	Dredged material disposal site; need to determine current owner
T3	Culvert replacement	Replace culvert on Delameter Creek at Delameter Road	100	1	5000	5		\$250,000	Easily accessible.		
T4	Riparian restoration	Fence off stream from livestock and restore riparian below fishways at RM4 on Delameter Creek	2500	5				\$100,000	Privately owned		
T5	Culvert replacement	Replace culvert on Monahan Creek at Delameter Road	100	1	5000	5		\$250,000	Easily accessible.		
T6	Riparian restoration/noxious weed removal	Remove Japanese knotweed along lower 4 miles of Monahan Creek and revegetate	21000	120				\$750,000	Privately owned		
T7	Riparian restoration and channel realignment	Remove invasive species on lower Whittle Creek, revegetate, remainder channel	1500	6	8000	30		\$250,000	Privately owned		
17.0L	Riparian restoration	Restore riparian zone along Castle Rock	4000	5	30,000			\$ 600,000	Accessible. Steep riprap embankment/levee providing protection to Castle Rock requiring coordination with levee owners.	?	Unclear if City owns or if individual landowners parcels extend to water
17.0R	Riparian restoration	Restore riparian zone along Castle Rock	2500	5	20,000			\$ 500,000	Accessible. Steep embankment, no levee. Requires some additional level of design and construction engineering.	2	Fairgrounds
18.0L	Side channel restoration and enhancement	Reconnect backwater channel and place LWD	1500	5	5,000	10	2	\$ 300,000	Very accessible, simple construction with minimal in-water work.	3	Dredged material disposal site; need to determine current owner
18.5L	Dredged materials removal	Remove dredged material to increase floodplain; reconnect creek channel and plantings	2500	9	200,000	10		\$ 2,500,000	Very accessible, simple construction with minimal in-water work. Major cost is excavation and hauling.	3	Dredged material disposal site; need to determine current owner
18.8R	Floodplain restoration	Boat launching area; segregate boat launching from riparian zone and bars; cut chute overflow channels and restore floodplain/riparian habitat	2000	7	10,000	50	2	\$ 500,000	Very accessible, simple construction with minimal in-water work. Major cost is hauling.	3	Another unofficial boat launch
19.8L	Dredged materials removal	Remove majority of dredged material pile, restore riparian zone	3000	12	800,000			\$ 8,500,000	Very accessible, simple construction with minimal in-water work.	3	Dredged material disposal site; need to determine current owner
T0.2R	Dredged materials removal	Remove dredged materials on lower Toutle	2000	7	225,000			\$ 2,500,000	Very accessible, may be for sale, simple construction, major cost is hauling	2	Dredged material disposal site; need to determine current owner
T3.2R	Reconnect off-channel ponds	Reconnect off-channel ponds behind dredged material	1500	2	8000			\$100,000			
20.2L	Dredged materials removal	Remove dredged material, slope back bank, and revegetate	1200	10	250,000			\$ 3,000,000	Accessible, some limitations due to railroad crossings. Simple construction with minimal in-water work.	2	Dredged material disposal site; need to determine current owner
22.2L	Dredged materials removal	Remove dredged material, slope back bank, and revegetate	1500	7	120000			\$ 1,500,000	Very accessible, simple construction with no in-water work.	1	Dredged material disposal site; need to determine current owner
23.0L	Off-channel and floodplain restoration	Reconnect wetland to river	2000	2	20000	10		\$ 1,000,000	Would require culvert at RR, could be difficult.	3	
23.2R	Bar and island enhancement	Place LWD along side channel and revegetate where appropriate on Hog Island	2500	15	2500	20	2	\$ 450,000	Existing access may need reconstruction. Straightforward bar and side channel restoration.	3	Determine ownership
T8	Culvert replacement	Replace culvert on Rock Creek at West Side Highway	100	1	5000	20		\$500,000	Easily accessible		
24.0L	Tributary enhancement	Remove water control structure and reconnect Hill Creek; riparian reveg along lower 1000 feet	1000	7	500	15		\$ 150,000	Accessible, some limitations due to railroad crossings. Simple construction with minimal in-water work.	1	May be RR property
24.5L	Riparian restoration	Slope back banks and restore narrow floodplain with riparian.	2500	5	50000			\$ 750,000	Very accessible. Straightforward levee modification and floodplain restoration. Some minor in-channel work.	4	Need to determine owners and development plans; currently farmed, but platted
T9	Tributary enhancement	Restore side-channel and riparian/floodplain along lower 1/2 mile of Olequa Creek	2500	17	1500	40	2	\$ 425,000	Very accessible on both banks. Straightforward side-channel excavation and wood placement.		
25.0A	Channel Migration Zone Easement	Acquire easements in active channel migration area	4800	100				\$1,000,000	Very accessible w/ minimal construction.	3	Right bank only
25.0B	Side channel restoration and enhancement	Remove car bodies, place LWD and riparian restoration	4800	100		20		\$500,000			
26.0L	Riparian restoration	Slope back banks to create riparian bench; remove riprap; may need to move road in one area	3500	8	60000			\$750,000	Very accessible from Mandy Road, difficulty will be in ensuring road stability while providing riparian habitat	3	County land and road?
27.7R	Side channel restoration and enhancement	Place LWD and minor excavation	1000	2	5000	25	2	\$ 250,000	Access would need to be from private land; Easy access from Hwy 506.	2	
27.7L	Side channel restoration and enhancement	Place wood and create side channel around point; revegetate with native species	650	2	10000	20	2	\$ 300,000	Accessible. Side channel restoration fairly straightforward with minimal in-channel work.	1	Wallace or DNR property?
28.0L	Gravel mined floodplain restoration	Breach levees, reconnect gravel mined floodplain, add LWD, partially fill, regrade shorelines of pond, riparian plantings	2000	40	100000	50	2	\$ 1,500,000	Very accessible. Construction and design would be complex compared to other projects.		

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T10	Stream channel enhancement	Enhance lower portion of Foster Creek and restore riparian to create high quality off-channel site	500	3	10000	30		\$350,000	Easily accessible from Mandy Road; portions privately owned		
T11	Culvert replacement	Replace culvert on Foster Creek at I-5	500	2	5000	10		\$500,000	Easily accessible, but difficult due to I-5 location		
T12	Culvert replacement	Replace culvert on Foster Creek at Jackson Hwy	200	2	10000			\$500,000	Easily accessible		
T13	Culvert replacement	Replace culvert on Foster Creek at private drive immediately upstream of Jackson Hwy	100	1	1000			\$50,000	Privately owned		
30.5R	Bar and side channel enhancement	Place log jam at head of side channel	1000	1		40	2	\$ 175,000	Access from private residence; could potentially be done for mitigation for stone wall placed in channel	2	New construction, need to determine ownership
30.7L	Bar and side channel enhancement	Place log jam at head of side channel; minor excavation to reconnect, place LWD and revegetate	1000	1	5000	40	2	\$ 200,000	Access from private residence (crossing from roadway); minor excavation and hauling from site	2	
31.5R	Bar and side channel enhancement	Expand T-5 acquisition, place wood to improve flow and scour	1500	5		45	2	\$ 250,000	Access from Wallace property. In-water construction	1	Also Wallace
32.0L	Channel migration zone easement	Acquire easement to allow migration of Cowlitz and Salmon Creek through confluence area	2500	40				\$450,000	Available access, minimal construction required for placement of LWD.	4	Likely only 1-2 landowners
32.5R	Bar and side channel enhancement	Protect and preserve Wallace side channel	1500	25	5000	50	2	\$ 300,000	Access from farm road. Minor excavation and hauling to/from site	1	Major landowner with some past regulatory problems
33.0L	Channel migration zone easement	Protect existing side channel and allow natural channel migration	1500	25	5000	50	2	\$ 350,000			Determine ownership
34.5A	Gravel mined floodplain acquisition	Acquire gravel mined ponds		100				\$ 800,000	Very accessible. Construction and design would be complex compared to other projects.	24	Property in dispute; could be interest in a sale
34.5B	Gravel mined floodplain restoration	Breach levees, reconnect gravel mined floodplain, add LWD, partially fill, regrade shorelines of pond, riparian plantings	2000	100	200000	100	2	\$ 2,500,000			
36.0R	Side channel restoration and enhancement	Reconnect side channel, riparian vegetation, place LWD	1500	40	10000	100	2	\$ 500,000	Very accessible. Fairly significant length of excavation for reconnection to occur.	4	Boat ramp, WDFW ownership of all??
36.5L	Gravel mined floodplain restoration	Breach levees, reconnect gravel mined floodplain, add LWD, partially fill, regrade shorelines of pond, riparian plantings	1500	40	100000	100	2	\$ 2,000,000	Very accessible. Fairly significant length of excavation for reconnection to occur. Likely need to construct interior levees and protect several pieces of infrastructure. Can mostly be constructed in the dry behind existing levee.		
37.5L	Side channel restoration and enhancement	Remove riprap and bioengineer approximately 250 feet of levee as feasible, construct controlled inlet culvert to reconnect side channel, restore side channel and revegetate	3000	20	10000	50		\$ 500,000	Very accessible. Significant modification of existing levee structure requiring higher level of design and construction.	12	Nursery may not be cooperative; gravel ponds may be for sale
37.5R	Side channel restoration and enhancement	Restore floodplain and side channel	2500	20	10000	100	2	\$ 350,000	Limited access need spur road. Straightforward construction requiring minor in-water work and crossings.	12	
38-40A	Channel migration zone easement	Acquire easements at channel migration zone		550				\$ 5,000,000		42 parcels	Largest landowner died (who had offered property to WDFW); need to find out current owner
T14	Riparian restoration	Fence off Skook Creek from livestock and restore riparian upstream of Howe Road	2500	5				\$100,000	Privately owned		
40.1L	Side channel restoration and enhancement	Excavate opening to Springer channel, place LWD, and riparian restoration	10000		72000	200	2	\$ 1,000,000	Accessible via gravel bars; may require water crossing to place LWD.		
41.0L	Riparian restoration	Remove riprap and bioengineer along private properties	3500	4	20000	100		\$ 400,000	Very accessible. Complex construction feasibility due to multiple private property owners.	18	Numerous landowners
41.9R	Bank enhancement	Place LWD and create controlled deposition zone for material eroding from high bank (reduces fine sediment inputs)	1000	3	5000	150	2	\$ 400,000	Access via gravel bars from hatchery. In-water construction required.		Likely to all be DNR land
42.0R	Tributary Enhancement	Enhance lower 1/2 mile of Blue Creek, ensure passage	2500	12	1000	100		\$ 300,000	Access from hatchery.	6	Associated with changing of hatchery outflow
42.5L	Bar and side channel enhancement	Otter Creek bar and side channel enhancement; place LWD to provide cover and promote scour of openings	2000	10		50	2	\$ 150,000	Accessible w/ water crossing. Construction straightforward LWD placement.	6	City of Tacoma?
42.7R	Bar and side channel enhancement	Enhance backwater and ponds and riparian zone	1500	10	5000	30	2	\$ 300,000	Very accessible. Some in-water work and diversions required.	4	City of Tacoma and WDFW own parcels
44.5R	Bar and side channel enhancement	Place LWD to provide cover and promote scour of openings	1500	10		30	2	\$150,000	Some demolition and removal of existing structures required.	14	City of Tacoma?
T15	Culvert replacement	Replace culvert on Jones Creek at Spencer Road	100	1	5000	5		\$250,000	Easy access, replace culvert under two-lane county road.		
46.5R	Side channel restoration and enhancement	Reconnect side channel in front of Timber Trails, revegetate	3000	15	20000	60	2	\$400,000	Easy access		
47.0L	Side channel acquisition	Enhance bar and side channel with wood and plantings	2000	10			2	\$ 200,000	Limited access w/ water crossings for construction required.	3	
49.5L	Side channel restoration and enhancement	Excavate debris plug at Barrier Dam and place LWD along side channel	1500	10	10000	35	2	\$ 600,000	Limited access w/ water crossings for construction required.	3	City of Tacoma owns