

JCWC Action Plan - Prioritized Projects

Adolfson 6/13/03

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ID	Restore and Enhance Watershed Functions	Location	Description	Limiting factors addressed	Approximate Project Size	Targeted Benefit Area	PFC Functions (Flow/Hydrology, Physical Habitat, Water Quality, Biological Communities)	Meets Key Limiting Factors	Core Habitat, or High Priority Restoration Area	Meets Multiple Objectives /PFC Functions	PFC Connects to Uplands	Total Watershed Health	Watershed Health (averaged)	Succ./Tech	Urgency	Landowner	Stakeholder	Partners ID	Education	Funding	Total Soc/Econ	Total Soc/Econ (average)	Total
R1	Reed Branch Habitat Restoration/Fish Passage	Crystal Springs	Replacement of culvert at 28th Ave.; Large wood placement upstream in Reed Canyon. Revegetation in Reed Canyon for temperature reduction; Possible subsurface channel	Access: restores access to upper section of Reed branch (S); Structure: addition of wood will help encourage more channel meandering (S); Temperature: revegetation to help keep water cool (P)	30 acres	Crystal Springs headwaters, as well as middle reaches of Crystal Springs	Flow, physical habitat, water quality	5	3	5	5	18	4.5	5	3	4	5	3	5	1	26	3.7143	8.21429
R2	Alsop/Brownwood Flood Mitigation/habitat Restoration	Middle Johnson Creek	Create flood storage to mitigate nuisance flooding. Create off-channel habitat for salmon and water quality improvement.	Habitat Diversity: increases channel complexity, reconnects floodplain and removes WPA(S); Flow: provides winter flow refugia (S)	50 acres	Reach 14	flow, physical habitat, water quality	5	3	5	5	18	4.5	3	5	5	5	5	5	3	31	4.4286	8.92857
R3	Kelley Creek Confluence flood mitigation/habitat improvement	Middle Johnson Creek/Kelley Creek	Create flood storage to mitigate nuisance flooding. Create off-channel habitat for salmon and water quality improvement.	Connectivity: Improves connectivity between Johnson Creek and higher quality habitat in Kelley upstream of the culvert (P); Habitat Improvement: Increases channel complexity by removing WPA and providing winter flow refugia (S).	5 acres	Reach 13/14	flow, physical habitat, water quality	4	3	5	4	16	4	3	5	5	5	5	5	3	31	4.4286	8.42857
R4	Tideman Johnson/ Errol Heights Flood Mitigation	Lower JC Reach 5	Purchase frequent flooded properties and create flood storage to mitigate nuisance flooding. Rehabilitate over 50 acres of wetland. Create off-channel habitat for salmon and water quality improvement. Address water quality issues associated with outfalls in this area.	Habitat Diversity: restores Errol creek and the oxbow, Removes WPA, reconnects floodplain, add LWD, restore riparian (S)	40 acres (basically entire reach)	Reach 5	Flow, physical habitat, water quality	4	3	5	3	15	3.75	3	5	3	5	5	5	1	27	3.8571	7.60714

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R5	SE 7th Street Br.	Middle JC Reach 15	Develop two wetlands, reconnect floodplain, remove invasives, stabilize bank and toe; Restore native vegetation, especially conifers and large hardwoods in floodplain and adj. slopes on both sides of JC. Add of large complexes of wood in channel and floodplain to reclaim historic floodplain function, and greatly improve habitat complexity.	Flow: restores wetlands and capacity to augment base flows (P); Habitat Diversity: reconnects floodplain and adds LWD (S); Sediment: bank stabilization deals with a local sediment source (P)	15 acres	Reach 15	Flow, physical habitat,	5	5	3	2	15	3.75	3	3	3	5	5	5	3	27	3.8571	7.60714
R6	Main City Park Improvements (B)	Middle JC Reach 16	Implement Master Plan for restoration; lengthening channel and daylight trib;	Flow: Creek daylight and channel lengthening will help bring flows back to natural conditions (S); Habitat Diversity: reconnects floodplain (S)	10 acres	Reach 15	Flow, physical habitat	5	5	3	2	15	3.75									0	3.75
R7	West Lents Flood Mitigation project	Middle Johnson Creek	Create flood storage to mitigate nuisance flooding. Create off-channel habitat for salmon and water quality improvement. Purchase frequently flooded properties to move people out of floodplain.	Habitat Diversity: increases channel complexity, reconnects floodplain and removes WPA (S) Flow: provides winter flow refugia (S)	25 acres (almost entire reach)	Reach 8	flow, physical habitat, water quality	5	3	5	2	15	3.75										
R8	Freeway Land Company Flood Mitigation project	Middle Johnson Creek	Create flood storage to mitigate nuisance flooding. Create off-channel habitat for salmon and water quality improvement.	Habitat diversity: Increase channel complexity by removing WPA and providing winter flow refugia (S)	37 acres	Reach 9	Flow, Physical habitat, water quality	4	1	5	3	13	3.25	3	5	3	3	5	5	1	25	3.5714	6.82143
R9	Springwater Wetlands Complex	Middle Johnson Creek	Create and restore wetlands habitat for flood storage, aquatic and wildlife habitat, and water quality improvement.	Flow: restores wetlands and capacity to augment base flows (P)	30 acres	Middle and Lower Johnson	flow, physical habitat, water quality	2	3	5	3	13	3.25	3	5	3	5	5	5	3	29	4.1429	7.39286
R10	East Lents South of Foster Flood Mitigation project	Middle Johnson Creek	Create flood storage to mitigate nuisance flooding. Create off-channel habitat for salmon and water quality improvement. Purchase ___homes to move people out of floodplain.	Habitat diversity: increase channel complexity by removing WPA and providing winter flow refugia (S)	50 acres	Reach 10	Flow, Physical habitat, water quality	4	1	5	3	13	3.25	3	5	3	5	5	5	1	27	3.8571	7.10714

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R11	Habitat Restoration (Jeff)	Kelley (Mitchell to mouth); Richey through Bliss property	Large wood placement/enhancement of instream habitat complexity and floodplain connectivity/revegetation	Connectivity: Improves connectivity between Johnson Creek and higher quality habitat in Kelley and Mitchell Creek (S); Habitat Improvement: Increases channel complexity by adding LWD (S).	over 10 acres	Lower Kelley fish refugia	flow, physical habitat	5	5	3	0	13	3.25	3	3	3	3	3	3	1	19	2.7143	5.96429
R12	SW 14th Street Riparian Corridor	Butler Creek and Upper JC Reach 15	Control erosion by re-grading banks of JC and install soil bioengineering, remove invasives and install natives; Address streambank instability and erosion. Consider a range of options including soil bioengineering, geo-textile and geo-grid installations, revegetation, and large wood complexes. Addition of large complexes of wood in channel and floodplain could serve multiple functions of reclaiming historic floodplain function, and greatly improve habitat complexity.	Sediment: Helps to control a local sediment source (P); Habitat Diversity: Addition of large wood will significantly improve habitat diversity (S)	20 acres	Reach 15	physical habitat	4	5	0	3	12	3	3	3	3	3	3	1	1	17	2.4286	5.42857
R13	Main City Park Improvements (A)	Middle JC Reach 15	Remove island and create wetland and floodplain; remove invasives and plant natives.	Habitat Diversity: Wetland and floodplain creation will improve habitat diversity (P)	4 acres	Reach 15	Flow, physical habitat,	2	5	3	2	12	3	3	1	0	3	3	5	1	16	2.2857	5.28571
R14	Westmoreland Park Improvements	Crystal Springs	Master Planning effort to create a variety of habitat enhancements, including re-establishing Crystal Spring's channel and revegetating the banks to create a more naturalistic riparian edge. Other improvements may include adding boardwalks and viewpoints	Structure: removing WPA and restoring channel (S); Temperature: redesigning duck pond to reduce heat source (S)	25 acres	Crystal Springs	flow, physical habitat	5	3	3	1	12	3	5	5	1	3	1	5	1	21	3	6

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R15	Habitat Restoration (Jeff)	Upper Johnson reach 17	heavy restoration, wood, whatever it needs, channel restoration; Large wood placement/enhancement of instream habitat complexity and floodplain connectivity/ revegetation	Habitat Diversity: reconnect floodplain and adding woody debris (S)	over 10 acres	Reach 16 and below into middle JC	flow, physical habitat	4	5	3	0	12	3								19	2.7143	5.71429	
R16	West Powell Loop Impervious Reduction and Flood Storage	Upper JC Reach 15	Reduce roadway width at Springwater Corridor at 190th by excavating area to create wetland. Daylight creeks in vicinity and implement a stormwater management program.	Flow: Creek daylight will help bring flows back to natural conditions (P); Habitat Diversity: Wetland creation will improve habitat diversity (P)	3 acres	Reach 15	Flow, physical habitat,	3	5	3	0	11	2.75								21	3	5.75	
R17	BES Revegetation Projects Kelley Cr., tributaries, and private lands	Kelley Cr. and tribs	133.8 acres including Mitchell Cr. Natural Area, Clatsop Cr., Kelley Cr. Farms, Lower Mitchell Cr., Ukolov Creek, PV School Cr., PV Richie Rd., and Kelley Cr. Headwaters	temperature (P) sediment (P)	133.8 acres	Kelley Creek	physical habitat	3	5	0	3	11	2.75								25	3.5714	6.32143	
R18	BES/Gresham Revegetation Projects Gresham Woods	Upper JC Reach 15	51.5 acres including Wet meadow, 7th Street Meander, and east and west private	temperature (P) sediment (P)	51.5 acres	Reach 15	physical habitat	3	5	0	1	9	2.25								3	29	4.1429	6.39286
R19	BES Revegetation Projects Upland Park Reforestation	Lower JC Reach 7, and Middle JC Reach 13	68.0 acres including Powell Butte 3 Firs, Mt. Scott Nature Park, Hawthorne Ridge Nature Park, and Mt. Olive Park	temperature (P)	68 acres		physical habitat	1	3	0	5	9	2.25								3	27	3.8571	6.10714
R20	Revegetation and Channel Reconstruction	Unnamed Trib. just above Regner Rd. Reach 16	Channelized mouth of trib. could be reconstructed in JC floodplain to provide wetland and off-channel rearing for salmonids. Small scale project 1/4 acre.	Habitat Diversity: Off channel rearing (M-due to size)	1/4 acres	Reach 16 (local benefit)	flow, physical habitat	1	5	3	0	9	2.25								1	13	1.8571	4.10714
R21	Grace Community Church Stormwater Enhancements	Upper JC Reach 16	Install stormwater swales adj. to parking lots and sidewalks to improve water quality. Daylight the creek and meander in large lawn area along the property line.	Flow: Creek daylight will help bring flows back to natural conditions (M); Habitat Diversity: Creek daylight will add more habitat (M)	.5 acres	Reach 16	flow, physical habitat, water quality	1	3	5	0	9	2.25								1	15	2.1429	4.39286

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R22	Spring Creek Restoration	Other Trib	Daylighting of Spring Creek; Revegetation ; large wood; 5 passage barriers;	temperature: revegetation around shallow impoundments; habitat diversity: creates passage to and improves habitat	12.8	Spring Creek/ Reach 1	Flow, physical habitat	5		0	3	19	2.25	3	1	3	5	5	5	3	25	3.5714	5.82143
R23	Outfall retrofits	Watershed Wide	Structurally modify existing outfalls and the stormwater system to reduce pollutant discharges; modify on a selected basis, or as O&M occurs, or where failures occur.	Pollution: Helps to control local source of pollution (P); Sediment: Helps to control local source of sediment (P)	can't measure	n/a			n/a- not yet identified	0	3	6	2	5	1	3	3	3	1	1	17	2.4286	4.42857
R24	Springwater Trail Corridor @ SE Dowsett Lane	Upper JC Reach 16	Work with property owners to control invasives and plant natives, re-grade and install soil bioengineering on eroding banks of JC and add wood	Sediment: Helps to control a local sediment source (P), Habitat Diversity: adding wood (P)	5 acres	Reach 16	physical habitat	3	5	0	0	8	2	3	3	3	3	3	1	1	17	2.4286	4.42857
R25	BES and Gresham Revegetation Projects Johnson Creek	Middle JC Reach 14, and Upper JC Reaches 15-17	58.1 acres including Highland Dr., Pleasant View Drive, SE Park Drive, and Telford Road	temperature (P) sediment (P)	58.1 acres	Middle JC Reach 14, and Upper JC Reaches 15-17	physical habitat	3	5	0	0	8	2	5	3	3	3	3	1	3	21	3	5
R26	Bell Station Flood mitigation/ habitat improvement	Lower Johnson Creek	Create flood storage to mitigate nuisance flooding. Create off-channel habitat for salmon and water quality improvement. Purchase frequently flooded properties to move people out of floodplain. Address exposed sewer pipe crossing creek in this location.	Habitat diversity: remove WPA and allow lateral channel movement (S); Pollutants: prevent contamination due to pipe failure (P)	19 acres	Reach 6/7	Flow, Physical habitat	4	1	3	0	8	2	3	3	3	5	5	3	1	23	3.2857	5.28571
R27	Revegetation Hogan Creek	Hogan Cr. at Cedar Lake Reach 16	Cedar Lake is relatively new impoundment with virtually no shading - temperature sink. Very high quality habitat below.	Temperature: revegetation to help keep water cool (P); Sediment: Helps to control a local sediment source (P);	don't know; ask Jeff	Reach 16		3	5	0	0	8	2	5	3	3	3	3	1	1	19	2.7143	4.71429

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R28	SE Gresham Riparian Corridor Restoration and Enhancement overlap with Kathy	Upper JC Reach 16 and tributaries	Remove exotics in the understory and replace with native shrubs and long-lived conifers in floodplain and adj. Slopes on both sides of JC and tributaries from Palmbad downstream to Regner Road.	Temperature (P)	15 acres	Reach 16	physical habitat	2	5	0	0.7	1.75	5	3	3	3	3	3	3	1	21	3	4.75
R29	Lents Crossing	Lower Johnson Creek	Replace exposed sewer pipe crossing Johnson Creek with an inverted siphon laid _feet below the creek.	Pollutants: prevent contamination due to pipe failure (P)	less than an acre	Reach 5	water quality	2	5	0	0.7	1.75	3	5	5	5	5	5	4	5	32	4.5714	6.32143
R30	Lower Powell Butte Land Acquisition Program	Middle Johnson Creek	Purchase frequently flooding properties from willing sellers to move people and property out of harms way. Land bank property for restoration projects.	Flow: remove impervious surfaces (M)	60 acres	Reach 13	flow	1	3	0	3.7	1.75	5	3	3	5	5	5	1	3	25	3.5714	5.32143
R31	BES Revegetation Projects Misc. Construction and Revegetation	Lower JC Reaches 3-4	4.0 acres including Tideman-Johnson Lents Crossing, and JC Umatilla	temperature (M)	4 acres		physical habitat	1	5	0	1.7	1.75	5	3	3	5	5	5	5	3	29	4.1429	5.89286
R32	Upper Kelley Restoration	Kelley Cr	Revegetation and large wood placement/instream habitat complexity improvements (upstream of Bliss property)	Temperature: revegetation to help keep water cool (P); Sediment: Helps to control a local sediment source (P); Habitat Diversity: Addition of large wood will significantly improve habitat diversity (M)	50 acres	Quality Cutthroat habitat above 190th in mainstem Kelley	physical habitat	3	1	0	3.7	1.75	3	3	3	5	3	3	1	1	19	2.7143	4.46429
R33	BES and Gresham Revegetation Projects Butler Creek	Butler Cr.	41 acres including Lower Butler Cr., Middle Butler Cr., and Middle Butler Cr. 2	Temperature: revegetation to help keep water cool (P); Sediment: Helps to control a local sediment source (P);	41 acres	Butler Creek/ Reach 15	physical habitat	3	1	0	3.7	1.75	5	3	3	3	3	3	1	3	21	3	4.75
R34	Willowbrook Pond	Butler Creek	Reduce sediment from upstream sources by increasing riparian buffer, control beaver activity and manage large wood to reduce erosion and provide habitat.	Sediment: Helps to control a local sediment source (P);	34 acres	Reach 15	physical habitat	2	1	0	3.6	1.5	3	3	3	3	3	3	3	1	19	2.7143	4.21429

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R35	BES Revegetation Projects Portland Riparian	Lower JC Reach 3, Crystal Springs Cr. and Veterans Cr.	145.7 acres including Reed Canyon, EM Golf Course, Johnson Cr. Park, Leach Botanical Garden, Westmoreland Manor, and Veterans Cr.	temperature (P)	145.7 acres	Crystal and veterans	physical habitat	2	3	0	16	1.5	5	3	3	5	5	5	3	29	4.1429	5.64286	
R36	Fish Barrier replacement*	unknown	Replace or upgrade highest priority culvert or passage barrier	Removes highest priority barrier to fish passage (S)		n/a	physical habitat	4	not yet identified n/a	0	0.4	1.33											
R37	Bus Creek Parking Lot Improvements	Upper JC Reach 16	Reduce the parking area and install native plants, revegetate the area in Bus Creek, and create vegetative swales and other storm water management facilities.	temperature (P)	2.5 acres	Reach 16	water quality	2	3	0	0.5	1.25	3	1	3	3	3	1	1	15	2.1429	3.39286	
R38	Golf Course and Rhododendron Gardens pond water quality improvements	Crystal Springs	Install islands/planter boxes to shade solar input into the golf course pond for temperature reduction	Temperature: reducing heat source (P)	6 acres	Upper and Middle Crystal Springs and Lower Mainstem JC	water quality	2	3	0	0.5	1.25	3	3	3	3	3	3	3	1	19	2.1429	3.96429
R39	West Gresham Grade School	Upper JC Reach 15	Restore and enhance the riparian buffer adj. to the play field.	temperature (M)	1.25 acres	Reach 15	physical habitat	1	3	0	0.4	1	5	1	3	3	3	3	3	1	19	2.7143	3.96429
R40	Demo Project: Fencing, Habitat Restoration, and Revegetation	Upper Johnson Reach 20 At mouth of Wheeler Cr.	1/4-mile reach of JC is heavily grazed, with bank erosion. Two trib mouths could be incorp. 1-3 landowners.	Sediment: Helps to control a local sediment source (P);	15 acres	Upper Mainstem JC and Reach 16 (?)	physical habitat	2	1	0	0.3	0.75	5	3	3	3	1	1	1	17	2.4286	3.17857	
R41	BES Revegetation Projects Private Lands, Clackamas Dip	Lower JC Reaches 6-7	25.6 acres including JC Blvd. Nature Park, SE 55th Ave. natural Area, SE 45th Bridge, SE 55th Ave., SE Stanley Ave., SE Linwood Ave., and SE Luther Rd.	temperature (P)	25.6 acres	Reaches 6-7	physical habitat	2	1	0	0.3	0.75	5	3	3	3	3	1	3	21	3	3.75	
R42	BES Revegetation Projects Private Lands and City of Milwaukie	Lower JC Reaches 1-2	14.0 acres including JC Confluence, SE Milport Road, and SE Milport North	temperature (P)	14 acres	Lower JC Reaches 1-2	physical habitat	2	0	1	0.3	0.75	5	1	3	5	3	1	3	21	3	3.75	
R43	Instream habitat improvement at JC mouth	JC Reach 1	Backwater channel and large wood placement in JC at mouth and upstream 300 yards	Habitat Diversity: Addition of LWD will improve habitat diversity (P)	15 acres	Reaches 1-3; and Crystal Springs	physical habitat	2	0	0	0.2	0.5	5	1	0	3	1	3	1	14	2	2.5	
R44	Revegetation Wheeler Cr.	Wheeler Cr. Reach 20	Previous planting site on west fork; hayfield on east fork. Small sites (1 acre each)		?	Reach 20			1	1	0.2	0.5	5	3	3	3	1	1	1	17	2.4286	2.92857	

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R45	SE Powell and Linden Stormwater Improvements	Middle JC Reach 15	Remove asphalt that is not needed in parking lot adj. to Golden Knight Motel and install natives. Install bioswale along parking lot	temperature (1)	.4 acres	Reach 15	water quality	1	1	0	0.2	0.5	5	1	3	3	3	3	1	1	17	2.4286	2.92857
R46	E. Gresham Grade School, McCarty Middle School, and Tohm Park Flood Storage	Upper JC Reach 16	Develop storm water, flood storage facility in play field behind both schools, bioswale, and plant natives in new riparian buffer		?	Reach 16			1	0	0.1	0.25	5	1	3	3	3	3	3	1	19	2.7143	2.96429
R47	Eastmoreland sewer pipe upgrade and repair	Lower Johnson Creek	Upgrading and repairing sewer pipe to increase capacity and prevent basement flooding.	none		Reach 4/5		0	0	0	0.0	0	5	5	5	4	5	1	1	26	3.7143	3.71429	
R48	Sellwood sewer pipe upgrade and repair	Lower Johnson Creek	Upgrading and repairing sewer pipe to increase capacity and prevent basement flooding.	none		Reach 2/3		0	0	0	0.0	0	5	5	5	4	5	1	1	26	3.7143	3.71429	

*This project should take place after project prioritizing fish barriers (M17)

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Fish Passage	Mitchell	Replacement of culvert beneath 162nd to enable passage of both juvenile and adult salmonids.	Connectivity and Habitat	Enable pasage betw. Kelley and higher quality habitat in upper Mitchell				
Fish Passage	Mitchell	Daylighting of stream and remediation of fish passage barrier. Revegetation. Landowner has not yet consented.	Connectivity and Habitat	Enable pasage betw. Kelley and higher quality habitat in upper Mitchell				
Fish Passage	Kelley	Replacement of culvert beneath 190th to enable fish passage of both juvenile and adult salmonids.	Connectivity and Habitat	Enable pasage betw. Lower Kelley and upper Kelley				
Fish Passage	Kelley	Removal or modification of dam that impounds a backyard pond. Landowner has not yet consented.	Connectivity, Temperature, and Habitat	Middle and Lower Kelley				

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Fish Passage	Unnamed Trib. near Park Drive Reach 16	Culvert under Springwater Trail is full barrier, culvert under Roberts Road is partial barrier. Approx. 2-mile of good overwintering habitat above.	Habitat	Reach 16 and below into middle JC				
Fish Passage	Badger Creek Reach 18	Culvert under county road is full barrier; approx. 2-mile + of good seasonal habitat above.	Habitat	Reach 16-18				
Fish Passage	Badger Creek Reach 18	Small earth fill dams form small perennial ponds supporting trout; passage could allow rearing	Habitat	Reach 16-18				

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Fish Passage	Wheeler Creek (South-side tributary; main project below Wheeler Road crossing and two above Reach 20)	Lower earthen fill dam has an existing fishway, inoperable due to missing steps. 1/4-mile of seasonal habitat - good rearing in all 3 spring fed ponds. Two ponds above Wheeler Road have not had an passage historically. Most of these landowners have participated in fish habitat and riparian improvement activities.	Habitat	Reach 20				

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Fish Passage	Wheeler Creek south side trib at Wheeler Road crossing Reach 20	Culvert is partial barrier; 0.1 mile stream and 2 nice ponds (barriers) above	Habitat	Upper mainstem JC and Reach 20				
Fish Passage	SE 282 and Stone Road	Culvert Replacement Project	Habitat	Upper Mainstem JC and Reach 20				

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Project ID	Protect Functions from Degradation - advocate for watershed-friendly policies and practices	Location	Description	Limiting Factors impacted	Within Core Habitat or High Priority Restoration area	Targeted Benefit Area	PFC Functions (Flow/Hydrology, Physical Habitat, Water Quality, Biological Communities)	Urgency/Timing	Significance of Potential Degradation	Meets Key Limiting Factors	Core Habitat, or High Priority Restoration Area	Meets Multiple Objectives/PFC Functions	PFC Connects to Uplands	Total Watershed Health (sum)	Total Watershed Health (average)	Succ./Te	Landowner	Stakeholder	Partners ID	Education	Funding	Total Soc/Econ (sum)	Total Soc/Econ (average)	Total	
P1	Implementation Code for the Springwater Concept Plan	Upper Johnson	Creation of concept and implementation plans for land use code, green practices code, street network, public facilities plan, annexation plan and natural resources protection, restoration, and enhancement plan. Ensure that code is adopted and implemented	Temperature: Restore riparian area (M)	impacts reach 16 habitat area	reaches 16, 17, 18	flow, physical habitat, water quality	5	5	1	5	5	3	24	4.00										
P2	Clackamas New Development Standards	Bell Station area- Reaches 6 and 7	Implement CCSD#1 R&R: Erosion control which provides for a comprehensive, districtwide erosion and construction site pollutant control program; provide training and other support as needed.	Sediment: control sediment from leaving construction sites (S)	no	reaches 1-7	water quality	5	5	4	4	0	4	22	3.67	3	3	5	5	5	5	26	4.33	8.33	
P3	Implementation Code for the Pleasant Valley Concept Plan	Kelley Creek	Creation of implementation plans for land use code, green practices code, street network, public facilities plan, annexation plan and natural resources protection, restoration, and enhancement plan. Ensure that code is adopted and implemented according to	ESRA Restoration under separate project	impacts Kelley Creek restoration linkage	Kelley Creek	flow, physical habitat, water quality	5	5	0	3	5	3	21	3.50										
P4	Implementation Code for the Damascus Concept Plan	Other Trib	Creation of concept and implementation plans for land use code, green practices code, street network, public facilities plan, annexation plan and natural resources protection, restoration, and enhancement plan. Ensure that code is adopted and implemented.	Temperature: restore riparian area (M)	impacts some restoration linkage areas	Sunshine Creek	flow, physical habitat, water quality	5	5	1	2	5	2	20	3.33										
P5	Implementation and restoration of ESRA's	Kelley Creek	Develop plans and/or programs to protect those areas of the ESRA that are not protected by environmental zoning and to address potential takings involved where properties have lost all development potential. Also develop plans and or programs to	Temperature: protect riparian area (M)	impacts Kelley Creek restoration linkage	Kelley Creek	physical habitat	5	5	1	3	0	3	17	2.83	3	3	5	5	5	1	22	3.67	7.00	
P6	Stormwater Master Plan	Kelley Creek	Create master plan to accompany the Public Facilities Plan for stormwater. Determine appropriate size and design for conveyance swales and regional stormwater management facilities. Also determine appropriate location and release rates for stormwater management.	Flow: Improve flows by implementing green development practices and stormwater facilities that enhance habitat conditions (M)	impacts Kelley Creek restoration linkage	Kelley Creek	flow	5	5	1	3	0	3	17	2.83	3	3	3	5	3	1	18	3.00	5.83	

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Project ID	Monitoring and Data Management: Improve understanding of watershed functions	Location	Project Description	Identifies new or potential problems/ opportunities	Potential sources of degradation identified	Identifies Problems or Opportunities	Identifies Sources of Degradation	Provides Trend Information	TotHealth (sum)	TotHealth (average)	Succ./ Tech	Urg./Opp	Landowner	Stakeholder	Partners ID	Education	Funding	Tot.Soc/ Ec (sum)	Tot.Soc/ Ec (average)	TOTAL
M1	Sediment Monitoring	Upper Johnson Creek	Conduct TSS/Turb. monitoring to ID point and nonpoint pollution sources of sediment loading during storm events. Model watershed to determine "hot spots".	will significantly add to body of knowledge about specific areas contributing to sediment problem and loadings; identified as significant data gap	will help identify cause of sediment loads by studying land use activities associated with nonpoint sources of sediment loading.	5	5	3	13	4.33	5	5	3	3	1	3	1	21	3.00	7.33
M2	TMDL Bacteria	Watershed Wide	Baseline monitoring of e-coli at 8 locations along Johnson Creek to support establishment or implementation of TMDLs.	will significantly add to body of knowledge about specific areas contributing to bacteria problem; identified as significant data gap	will help identify cause of bacteria loads	5	5	3	13	4.33	3	3	3	5	3	1	1	19	2.71	7.05
M3	Toxics source ID	Watershed Wide	Identification of sources of toxics; establish continuous monitoring program	will significantly add to body of knowledge about specific areas contributing toxics; identified as significant data gap	will help identify cause of toxics loading and extent of problem	5	5	3	13	4.33	3	3	3	3	1	3	1	17	2.43	6.76
M4	Fish Survey	Other Trib	Additional fish surveying to determine extent of fish use of all tributary systems	will significantly help to identify areas of fish usage in creek and trib; identified as significant data gap	fish presence an indicator of water and habitat quality; can help to eliminate source of degradation	5	1	3	9	3.00	5	3	3	5	3	1	1	21	3.00	6.00
M5	Outfall discharge characterization	Watershed Wide	GPS specific outfall locations, where they discharge from and what they typically discharge	significantly improves understanding of where discharges originate so that can more precisely study constituents discharging from outfalls and impact on water quality; identified as data gap	partially identifies source of water quality problems by identifying outfalls that might be causing water quality degradation	5	3	0	8	2.67	3	5	3	3	1	1	1	17	2.43	5.10
M6	Cutthroat trout EDT model results	Watershed Wide	Cutthroat trout EDT model results	will significantly help to identify problem and opportunity areas for cutthroat; identified as significant data gap	Will identify source of many instream habitat related problems but few water quality problems	5	3	0	8	2.67	5	3	0	5	3	5	1	22	3.67	6.33
M7	Fish passage barriers inventory	Watershed Wide	Complete inventory of passage barriers to include private barriers; characterize severity of barrier	identifies location of private barriers that limit fish migration	identifies how severe the barrier is to migration	5	3	0	8	2.67	5	3	3	5	3	3	1	23	3.29	5.95
M8	Upland habitat and wildlife resources	Watershed Wide	Characterize upland habitat problems and opportunities	Large data gap; Significantly improves understanding of problems and opportunities for watershed health	partially identifies where to begin studying sources of wildlife habitat problems	5	2	0	7	2.33	5	3	3	5	3	5	1	25	3.57	5.90

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Project ID	Monitoring and Data Management: Improve understanding of watershed functions	Location	Project Description	Identifies new or potential problems/ opportunities	Potential sources of degradation identified	Identifies Problems or Opportunities	Identifies Sources of Degradation	Provides Trend Information	TotHealth (sum)	TotHealth (average)	Succ./ Tech	Urg./Opp	Landowner	Stakeholder	Partners ID	Education	Funding	Tot.Soc/ Ec (sum)	Tot.Soc/ Ec (average)	TOTAL
M9	Water Rights information	Watershed Wide	locate legal and illegal water diversions and quantify the extent of water withdrawals	significantly improves understanding of water withdrawal from the creek; identified as data gap	partially identifies extent to which withdrawals are a source of baseflow problems	5	2	0	7	2.33	3	3	3	5	3	3	1	21	3.00	5.33
M10	Johnson Creek Ambient conditions	Watershed Wide	Baseline monitoring of metals, TSS, phosphorus, nitrate, nitrite, ammonia, BOD and fecal coliform	Adds to baseline water quality information to improve understanding of water quality conditions in creek over time	Does not identify cause of water quality problems	4	0	3	7	2.33	5	1	3	3	3	1	1	17	2.43	4.76
M11	Identification of Refugia for fish	Watershed Wide	Identify refugia areas that provide cool waters or conditions that support areas for avoiding hot spots or chemicals.	will significantly help to identify areas of refuge and core habitat areas; identified as significant data gap	refuge an indicator of water and habitat quality; can help to eliminate source of degradation	5	1	0	6	2.00	3	3	3	3	1	1	1	15	2.14	4.14
M12	Upper watershed tributary functions and values	Upper Johnson Creek	Characterize habitat and water quality conditions in upper watershed tributaries; focus on tributaries suspected to provide refuge; collect similar level of data available for Kelley and Crystal	will significantly help to identify problem and opportunity areas in the upper watershed; identified as significant data gap	habitat and water quality indicator of watershed health; can help to eliminate source of degradation	5	1	0	6	2.00	5	3	3	5	3	5	1	25	3.57	5.57
M13	Identify specific WPA locations and condition	Lower and Middle Johnson	GPS specific locations of bank and channel lining and condition of lining	significantly improves understanding of where habitat diversity and channel stability are most impacted by channelization; identified as data gap	WPA already identified as major source of habitat diversity and channel stability problems	5	0	0	5	1.67	5	3	3	5	3	3	1	23	3.29	4.95
M14	Vegetative monitoring	Watershed Wide	Create volunteer structure to monitor revegetation sites for water quality, habitat, other objectives.	will partially add to understanding of impact of vegetation on water quality and habitat improvements	problem has not yet been identified	2	0	3	5	1.67	5	3	5	5	3	3	3	27	3.86	5.52
M15	Groundwater monitoring	Middle Johnson Creek	Install 2 staff gauges in wetland complex along Springwater Corridor to monitor seasonal surface water fluctuations. Install two piezometers south of Foster and 1 in wetland complex to monitor groundwater fluctuations.	will partially add to understanding of groundwater fluctuations and impacts wetlands and base flows in Reaches 9 and 10	problem has not yet been identified	3	0	1	4	1.33	5	1	0	3	1	1	1	12	1.71	3.05
M16	UIC Monitoring	Middle Johnson Creek	Sampling of public UIC's at multiple locations in the City of Portland. Three of which are located within the JC Watershed. Evaluate potential impacts to groundwater.	will partially add to information on potential groundwater contamination problems	problem has not yet been identified	3	0	0	3	1.00	3	3	0	3	3	1	1	14	2.00	3.00

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Project ID	Monitoring and Data Management: Improve understanding of watershed functions	Location	Project Description	Identifies new or potential problems/ opportunities	Potential sources of degradation identified	Identifies Problems or Oportunities	Identifies Sources of Degradation	Provides Trend Information	TotHealth (sum)	TotHealth (average)	Succ./ Tech	Urg./Opp	Landowner	Stakeholder	Partners ID	Education	Funding	Tot.Soc/ Ec (sum)	Tot.Soc/ Ec (average)	TOTAL
M17	Tree Canopy Volume Study	Lower Johnson Creek	Monitor a canopied and non-canopied catch basin in Johnson Creek to determine influence of canopy cover on flow volume	improves understanding of canopy cover on flow volume in Johnson Creek	problem has not been identified	2	0	0	2	0.67	5	1	3	3	1	1	1	15	2.14	2.81
M18	Fish Passage	Watershed Wide	Prioritization of fish passage barrier removal/replacement within the entire watershed (may supercede other proposed fish passage projects)	Problems and opportunities identified by barrier inventory project	Identifies most significant passage barriers	0	5	0	5	1.67	5	3	3	5	3	3	1	23	3.29	4.95
M19	Data Collection and Management	Watershed Wide	Development of a Restoration and Monitoring Database	improves ability to collect and analyze existing and incoming data but minimally adds to body of knowledge about problems and opportunities	problem has not been identified	1	0	0	1	0.33	5	3	0	3	1	0	1	13	1.86	2.19
M20 *	EDT Attribute Follow-up	Watershed Wide	Collect data and information to improve confidence levels for EDT attributes																	

Note: * Project Not Ranked yet

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Stewardship: Inspire and facilitate stewardship behavior (outreach and education)			PFC Flow	PFC Habitat	PFC WQ	PFC Biologic	PFC Connect	Near Term	ID Source	TotHealt	Succ./ Tech	Urg./Opp	Landowner	Stakeholder	Partners ID	Education	Funding	Tot.Soc/ TOTAL	
Project Title	Location	Project Description																	
Enhanced SB1010 Implementation	Upper Johnson	Coordinate with EMSWCD and ODA to enhance education and technical assistance programs towards meeting WQ Management Area rules and minimize need for enforcement and fines.	3	3	5	1	0	3	5	20	3	5	3	5	3	3	1	23	43
Landowner Outreach	Upper Johnson Creek Reaches 17-18	Contact all landowners in these reaches, especially in the confluence area of North Fork, Badger, and Sunshine Creeks; ID and	3	5	5	3	0	3	3	22	3	5	3	3	1	3	1	19	41
Community Restoration Project	Middle Johnson Creek	Work with private property owners to restore creek and riparian area to provide flood storage and improve habitat and water quality.	1	3	1	3	1	3	1	13	3	3	3	5	3	3	1	21	34
Construction BMPs	Watershed Wide	Offer assistance to regulatory agencies, builders and developers to ensure adequate erosion control and construction site BMPs.	0	0	5	0	0	5	3	13	3	1	3	3	3	3	1	17	30
Public Involvement	Watershed Wide	Implement a comprehensive stormwater/watershed Public Participation Program that includes information, education, involvement, and stewardship.	1	1	1	1	0	1	1	6	3	1	3	5	3	5	3	23	29

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Green Stormwater Solutions *	Watershed Wide	Generate public support for green stormwater solutions through tours and demonstrations																
Landowner Education - On-site Septic System Maintenance *	Watershed Wide	Provide landowner education on on-site septic system maintenance to decrease leaks and spills																

Note: * Projects not ranked yet.