APPENDIX 2

TABLES

Table A-1: Soil, Land Cover, and Slope Characteristics
Percival Creek Basin

(Ref: Thurston Geographic Information Facility, 1990)

Subbasin	Contributing Areas in Acres										
	Outwash		Till						Saturated Soils	Water Bodies	Impervious Surfaces	Total
	Forest	Grass	Forest			Grass						
			Mild*	Moderate	Steep	Mild*	Moderate	Steep				
P-1	81	136	0	0	0	0	0	0	44	20	33	314
P-2	131	77	8	1	263	0	4	30	138	2	75	729
P-3	130	89	49	1	53	7	1	9	24	0	53	416
P-4	135	79	36	217	358	15	14	22	200	0	55	1,131
P-5	14	11	101	194	135	70	92	7	0	25	90	739
P-6	42	20	1	10	1	0	9	0	39	0	58	180
P-7	19	4	123	171	1	29	80	9	6	45	111	598
P-8	0	0	19	64	0	15	43	0	8	0	95	244
P-9	1	0	5	19	0	5	12	0	4	0	71	117
P-10	0	0	0	0	0	14	0	0	0	0	1	15
P-11	21	5	10	30	2	13	13	1	0	0	142	237
P-12	3	6	28	21	2	8	28	0	0	0	49	145
P-13	45	31	56	66	73	12	14	4	13	0	120	434
Total	622	458	436	794	888	188	310	82	476	92	953	5,299

*Slope: Mild = 0-3%; Moderate = 3-15%; Steep = >15%

Table A-2: Soil Characteristics
Percival Creek Basin
(Ref: Soil Survey of Thurston County, WA, 1990)

Soil Type	Geologic Formation	Slope (%)	Surface Soil Depth (inches)	Cemented Pan Depth (inches)	Clay (%)	Permeability (inches/hour)	Hydrologic Group*	High Water Table - Depth to Surface (feet)	High Water Table - Time Period (months)	Runoff Velocity	Septic Adsorption Field Limitations	Acres within Basin
Alderwood	Glacial till plains	0-30	0-15	20-40	5-10	2.0-6.0	C	1.5-3.0	Jan.-March	Slow	Severe: wetness, cemented pan	2,010
Schneider very gravelly loam	Foothills & mountains	20-65	0-6		0	0.6-2.0	B	>6.0	–	Slow	Severe: slope	830
Everett very gravelly sandy loam	Outwash plains & terraces	0-15	0-3		0-5	6.0-20	A	>6.0	–	Slow	Severe: poor filter	525
Indianola loam & sand	Sandy glacial drift, terrace escarpments	15-30	0-6		0-5	2.0-6.0	A	>72		Medium	Severe: poor filter	437
Kapowsin silt loam	Glacial till plains	0-15	0-4	20-30	0-15	0.6-2.0	D	1.0-2.0	Dec.-June	Slow	Severe: wetness, cemented pan	392
Norma silt loam	Depressions on till plains and alluvium*	0-3	0-8		5-15	0.6-6.0	D	+12-12	Nov.-Apr.	Slow	Severe: ponding	43
Mukilteo muck, drained	Upland depressions	0-2	0-6		–	0.6-2.0	C	0	Oct.-May	Slow, ponded	Severe: wetness	31
McKenna gravelly silt loam	Depressions & drainage ways	0-5	0-9		10-35	0.06-0.2	D	+1.0-0.5	Nov.-Apr.	Ponded	Severe: ponding	233
Giles silt loam	Outwash terraces & volcanic ash	0-30	0-10		0	0.6-2.0	B	>6.0	–	Slow	Moderate: percs slowly	115
Yelm fine sand loam	Volcanic ash/glacial outwash	0-30	0-8		0-5	2.0-6.0	C	18-36	Dec.-Mar.	Slow	Severe: wetness, slope	41

* See glossary for definitions

Table A-2 Soil Characteristics (Continued)

Soil Type	Geologic Formation	Slope (%)	Surface Soil Depth (inches)	Cemented Pan Death (inches)	Clay (%)	Permeability (inches/hour)	Hydrologic Group*	High Water Table - Depth to Surface (feet)	High Water Table - Time Period (months)	Runoff Velocity	Septic Adsorption Field Limitations	Acres within Basin
Semiahoo muck	Flood plains	0	0-6		0	0.6-2.0	C	1.5-3.0	Nov.-May	Slow	Severe: wetness	170
Nisqually loamy fine sand	Sandy glacial outwash	0-3	0-5		0-5	2.0-6.0	B	>6.0	-	Slow	Severe: poor filter	139
Gravel Pit												67
Cagey	Sandy glacial drift	0-4	0-6		1-5	6.0-2.0	C	1.5-2.5	Nov.-Apr.	Slow	Severe: wetness poor filter	46

See glossary for definitions

Table A-3: Current and Potential Future Land Use
Percival Creek Basin

(Ref: Thurston Regional Information Facility, 1990)

	Current							Potential Future						
Subbasin	Undeveloped	Sparse Residential	Suburban	Medium Residential	High Residential	Light Commercial	High Commercial	Undeveloped	Sparse Residential	Suburban	Medium Residential	High Residential	Light Commercial	High Commercial
P-1	155	0	95	17	0	28	0	53	0	135	0	83	4	24
P-2	552	63	26	31	0	55	0	67	6	401	4	248	2	0
P-3	211	107	57	14	5	22	0	1	7	53	169	83	12	90
P-4	930	38	0	4	0	89	67	207	231	109	90	1	463	31
P-5	515	15	135	8	0	30	11	0	195	297	0	179	22	23
P-6	118	0	21	0	0	31	10	58	1	12	0	53	58	0
P-7	470	7	57	3	8	18	34	35	0	250	0	286	0	23
P-8	107	10	41	0	12	27	47	0	0	73	0	106	0	34
P-9	30	0	0	0	0	12	75	0	0	0	0	0	12	104
P-10	15	0	0	0	0	0	0	15	0	0	0	0	0	0
P-11	100	0	3	0	32	44	58	0	0	3	0	105	0	128
P-12	63	0	3	0	0	79	0	0	0	28	0	30	0	86
P-13	300	0	22	0	10	91	10	73	0	94	0	155	30	75
Total	3,566	240	460	77	67	526	312	509	440	1,455	263	1,329	603	618

Table A-4: Instream Culverts
Percival Creek Basin
(Ref: City of Olympia Field Survey, 1991)

Subbasin	Size (inches)	Material*	Length (feet)	Gradient (percent)	Location Landmark
P-1	36	RCP	20	1.2	Private Road
P-1	36	RCP	65	--	54th Avenue, SW
P-2	24	RCP	30	--	Trailer Park
P-2	36	RCP	20	--	Private Road
P-2	60	CMP	50	--	Tumwater Meadows
P-2	60	RCP	43	2.0	Sapp Road, SW
P-3	48	RCP	60	--	Chapparel Road, SW
P-3	60	CMP	102	0.7	Somerset Hill Drive
P-3	60	RCP	169	1.2	Mottman Road
P-13	2-72	CMP	63	2.1/1.6	Mottman Road

*RCP = Reinforced Concrete Pipe, CMP = Corrugated Metal Pipe

Table A-5: Creek Flows With Existing Land Use Conditions Percival Creek Basin

(Ref: HSPF Computer Model, 1990)

Creek Location	Flows (cfs) For 1- to 100-Year Flood Events							
	1	1.25	2	5	10	25	50	100
Percival Creek/Sapp Road	22	38	51	66	75	86	93	107
Percival Creek/Mottman Road	33	59	80	107	124	144	158	172
Black Lake Drainage Ditch/ Mottman Road	66	113	171	235	276	327	363	399
Percival Creek/Percival Cove	117	223	311	421	489	569	625	678
Grass Lake Outlet	4	7	8	10	10	11	11	11
Yauger Park Outlet	15	22	26	30	32	34	35	37
Westside Olympia Outlet	16	31	43	55	62	69	73	77
Ken Lake Outlet	9	19	27	39	46	55	61	67

Table A-6: Low Creek Flows With Existing Land Use Conditions Percival Creek Basin

(Ref: HSPF Computer Model, 1991)

Creek Location	Flows (cfs) For 1- to 100-Year Drought Events							
	1	1.25	2	5	10	25	50	100
Percival Creek/Sapp Road	1.2	0.9	0.8	0.7	0.7	0.7	0.6	0.6
Percival Creek/Mottman Road	1.6	1.2	1.0	1.0	0.9	0.9	0.9	0.9
Black Lake Drainage Ditch/ Mottman Road	3.1	2.7	2.6	2.5	2.5	2.5	2.5	2.5
Percival Creek/Percival Cove	5.2	4.1	3.8	3.6	3.6	3.6	3.5	3.5
Grass Lake Outlet	0	0	0	0	0	0	0	0
Yauger Park Outlet	0	0	0	0	0	0	0	0
Westside Olympia Outlet	0	0	0	0	0	0	0	0
Ken Lake Outlet	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Table A-7: Potential Effects of Urban Runoff on Stream Systems

(Ref: Kirkpatrick, 1990)

EFFECTS UPON:

Hydrology	Stream Morphology	Large Organic Debris (LOD)	Riparian Zone	Water Quality
Increase Flow	Increase Channel Width	Decrease Number and Size of LOD	Decrease Riparian Vegetation	Increase Sediments
Increase Peak Flow	Increase Floodplain Elevation	Decrease Cedar and Fir Species	Decrease Naturally-Occurring Tree Speciation	Increase Bacteria
Increase Concentration Time	Increase Sediment Transport		Increase Soil Saturation	Increase Oil and Grease
Increase Flood Frequency	Decrease Streambed Stability			Increase Trace Metals
Decrease Base Flow	Increase Erosive Energy			Increase Trace Organics (Pesticides, Plasticizers, Wood Preservatives)
Increase Hydraulic Energy				Increase Orthophosphate
				Increase Inorganic Nitrogen
				Increase Oxygen Demand
				Increase/Decrease Temperature

HABITAT RESPONSES:

Flooding	Increase Quantity of Riffles	Decrease Fish Rearing Pools	Increase Readily Decomposable Tree Species	Decrease Spawning Success and Juvenile Fish Survival
Decreased Summer Flows	Decrease Quantity of Pools	Decrease Habitat Diversity	Decrease Barrier to High Flow Erosion	Increase Primary Production
Decreased Groundwater Recharge	Increase Quantity of Channel Scoured to Great Depth	Decrease Sediment and Organic Matter Storage Sites	Decrease Energy Dissipation	Increase Fish Disease
Displace Fry, Eggs, and Benthic Organisms	Increase Channel Erosion	Decrease Meanders, Secondary Channels, and Backwaters	Decrease Channel Stability	Decrease Benthic Organism Diversity
Decrease Ability of Wetlands to Store Flows	Contaminate Gravels with >10% Fine Sediments	Decrease Fish Refuge from High Flows	Decrease Shade, Food Sources, and Cover	
	Smother Eggs	Decrease Cover from Predators	Decrease Filtration of Run-off	
		Decrease Spawning Areas	Decrease Benthic Organism Diversity	
			Decrease Lower and Upper Bank Stability	

Table A-8: Salmon Biological and Habitat Requirements Percival Creek Basin

(Ref: Washington Department of Fisheries)

Salmon Species	Spawning Location	Time in Gravel (Eggs)	Gravel Emergence	Rearing Location	Time In Freshwater	Time In Saltwater	Return to Freshwater
Coho	Mid to upper main stem	80-150 days	April - May	Mid or upper main stem; spring-fed tributaries and wetlands	1 year	1.5 years	Late fall
Fall Chinook	Mid to upper main stem	90-150 days	March - April	Main stem and estuaries	60-120 days	1 - 4 years	November (intermittant)
Cutthroat	Mid to upper main stem	90-150 days	June - July	Mid or upper main stem and spring-fed tributaries	2 - 3 years	2 years	Fall and winter
Steelhead (winter)	Mid to upper main stem	50-150 days	June - July	Mid or upper main stem and spring-fed tributaries	2 years	0.5 - 3 years	Early winter
Chum	Mid to upper main stem	90-150 days	Late February, April - May	Saltwater, estuaries	0	3 - 4 years	Early to late fall

Table A-9: Salmon Environmental Parameters
Percival Creek Basin

Category	Parameter Type						
Quality		Levels of Impact					
		Desirable	Acceptable	Chronic	Lethal	Stops Migration	Comments
	DO (dissolved oxygen)	≥9.0 ppm or near saturation levels	7.0-8.0 ppm	≤6.0 ppm	Not available	Not available	DO levels must not be below 7 ppm at any time during spawning.
	T° (temperature)	<58°F	45°F to 65°F	>68°F	Not available	Not available	50% reduction in swimming capability of salmonids is known to occur at upper and lower temperature limits.
	SS (suspended solids)	<25 mg/l	25-80 mg/l	80-400 mg/l	Not available	>4,000 mg/l ppm	Excessive turbidities can stop or delay upstream migration.
	Sediment	10% of fines in streambed core sample; maximum 72% survival rate	10%-12% fines	12%-15% fines	>25% fines	Not applicable	The sampling method for sediment is based on streambed core samples in representative spawning areas. Fines are 0.85 mm or less in size. Based on survival-to- emergence ratios.
Quantity		Measurements					
	cfs (cubic feet per second)	Velocities of 10-13 ft/sec approach the upper swimming ability of salmon.					
	Minimum depth	0.59-0.79% of the width of the fish.					
Barriers		Anadromous Barriers					
	Waterfalls	Any falls 10 feet in height.					There is a jumping ability difference between species; chum are poor negotiators of barriers greater than 2 feet in height.
	Culverts	When slope exceeds 2%					

Table A-10: Common Water Quality Contaminants Percival Creek Basin

Pollutant Category	Sources	Potential Impacts	Forms/Measurements
Bacteria	Sediments Animal and manure transport Domestic animals Septic systems	Shellfish bed contamination Drinking water contamination recreation limitations	Coliform indicators: Total Fecal Specific pathogens
Sediment	Construction sites Stream channel erosion Poorly vegetated lands Steep slopes Vehicular deposition	Tissue abrasion Gill clogging Light reduction Benthic siltation Transport of other pollutants	Total suspended solids (a mass measure) Turbidity (a light scattering measure)
Nutrients	Sediments Fertilizers Petroleum products Domestic animals Septic systems Vegetative matter	Eutrophication (enrichment) Nuisance algal blooms Reduced clarity Odors Oxygen depletion Reduced drinking water quality	Phosphorus: Soluble Particulate Nitrogen: Ammonia Nitrate and nitrite Organic
Metals	Sediments Vegetative matter Domestic animals Petroleum products	Toxicity	Lead Copper Zinc Cadmium Others
Organic toxins	Sediments Pesticides Combustion products Petroleum products Paints and preservatives Plasticizers Solvents	Toxicity	Many specific chemicals
Oil and grease	Petroleum products	Benthic accumulation Toxicity	Oil and grease
Oxygen-demanding organics	Sediments Vegetative matter Domestic animals Petroleum products	Oxygen depletion	Biochemical oxygen demand Chemical oxygen demand

Table A-11: Creek Flows With Predeveloped Conditions[1]
Percival Creek Basin
(Ref: HSPF Computer Model, 1991)

Creek Location	Flows (cfs) For 1- to 100-Year Flood Events							
	1	1.25	2	5	10	25	50	100
Percival Creek/Sapp Road	18	33	44	56	62	69	73	77
Percival Creek/Mottman Road	23	45	62	81	91	102	108	115
Black Lake Drainage Ditch/ Mottman Road	52	97	137	190	224	267	298	329
Percival Creek/Percival Cove	81	160	226	310	361	422	464	504
Grass Lake Outlet	3	6	8	9	10	10	10	10
Yauger Park Outlet	6	14	22	33	39	47	52	57
Westside Olympia Outlet	3	11	19	30	37	46	52	57
Ken Lake Outlet	9	16	23	33	39	47	53	59

[1]These flows in all likelihood greatly exceed actual predevelopment flows. Refer to Section 6.1.1 for further discussion.

Table A-12: Creek Flows With Build-Out Land Use Conditions Percival Creek Basin

(Ref: HSPF Computer Model, 1990)

Creek Location	Flows (cfs) For 1- to 100-Year Flood Events							
	1	1.25	2	5	10	25	50	100
Percival Creek/Sapp Road	23	41	56	76	88	102	113	123
Percival Creek/Mottman Road	34	62	95	153	157	187	209	231
Black Lake Drainage Ditch/ Mottman Road	70	146	215	310	372	449	506	562
Percival Creek/Percival Cove	138	273	392	553	658	786	880	972
Grass Lake Outlet	5	8	9	11	11	12	12	13
Yauger Park Outlet	17	23	28	34	38	34	47	51
Westside Olympia Outlet	21	39	52	69	79	90	98	105
Ken Lake Outlet	10	24	35	48	55	63	68	72

Table A-13: Current and Potential Future Creek Widths at Selected Locations Percival Creek Basin

(Ref: HSPF and HEC-2 Computer Analysis1991)

Subbasin	Location	2 Year Flood		100 Year Flood	
		Current	Potential Future	Current	Potential Future
P-2	**Sapp Road Culvert**				
	Upstream	24	55	61	61
	Downstream	14	15	23	44
P-3	**Chapparel Drive Culvert**				
	Upstream	60	63	91	106
	Downstream	14	14	45	98
P-3	**Somerset Drive Culvert**				
	Upstream	19	20	60	86
	Downstream	25	26	29	34
P-3	**Mottman Road Culvert**				
	Upstream	23	25	32	41
	Downstream	12	13	14	14
P-13	**Black Lake Ditch Confluence**				
	Upstream	15	16	14	21
	Downstream	25	27	35	40
P-13	**S.R. #101 Overpass**	28	29	33	38
P-13	**Footbridge in Percival Canyon**	37	40	45	48
P-13	**Creek Mouth**	149	164	202	204
P-4	**Black Lake Outlet**	17	17	18	18
P-4	**Bridge at Jones Quarry**	11	11	14	14
P-6	**Downstream of Ken Lake Tributary**	39	39	0	0
P-6/P-13	**Mottman Road/Black Lake Ditch**				
	Upstream	36	36	41	41
	Downstream	39	39	43	43
P-13	**Upstream of Percival Creek Confluence/Black Lake Ditch**	37	39	101	127

Table A-14: Actual and Recommended Culvert Water Depths and Velocities, Existing Flow Conditions Percival Creek Basin

(HSPF and HEC-2 Computer Analysis and Washington Department of Fisheries)

Subbasin	Culvert Location	Low Flow Depth, feet			High Flow Velocities, ft/sec		
			Recommended Minimum			Recommended Maximum[4]	
		Current Condition[1]	Juvenile[2]	Adult[3]	Current Condition	Juvenile	Adult
P-1	Trosper Road	N/A	0.3	1.0	N/A	4.0	6.0
P-2	Tumwater Meadows	0.01-0.02	"	"	1.5-1.7[5]	"	"
P-3	Sapp Road	0.05-0.11	"	"	3.2-5.6	"	"
P-3	Chapparel Road	0.02-0.06	"	"	4.1-7.5	"	"
P-3	Somerset Road	0.14	"	"	3.8-4.7	N/A[6]	5.0
P-3	Mottman Road/ Percival Creek	0.03-0.20	"	"	3.0-8.1	N/A[6]	4.0
P-13	Mottman Road/ Black Lake Drainage Ditch	0.03-0.13	"	"	2.4-7.8	N/A[6]	5.0

1 - 2-year, 7-day low flow
2 - Salmonid, < 6-inch
3 - Coho, chinook, sockeye, and steelhead salmon
4 - 2-year flood event
5 - culvert inlet and outlet, respectively
6 - Based on culvert length, the passage of juveniles is unlikely regardless of velocity

Table A-15: Estimated Private Costs of Drainage System Development Percival Creek Basin

Land Use Type	Potential Developable Acres[1]	Estimated Costs of Drainage Systems[2]	
		Existing Drainage Regulations	Recommended Drainage Regulations
Sparse Residential	374	$217,443	$364,125
Suburban	911	$3,031,765	$5,148,446
Medium Residential	241	$605,442	$1,028,143
High Residential	1,262	$7,036,470	$12,218,040
Light Commercial	401	$2,377,603	$4,165,761
High Commercial	376	$3,721,320	$6,618,240
Total	3565	$16,990,044	$29,542,756

[1]Assumes conversion of existing developed land uses to higher density developments.

[2]Based on existing and proposed minimum storage requirements and estimated 1991 construction cost assuming no infiltration.

A-16: Basin Specific Structural Projects and Potential Funding Sources
Percival Creek Basin

Recommendation	Engrs Cost Est	Existing vs Future	Utility	GFC	Street	Gen Fund	Fee in Lieu	Plan Rev	SRF	PWTF	Bonds	LIDs	Centennial	CZM	FLAAP
9.1.1 Construct North Percival stormwater management facility	$1,700,000	Existing	X	X		X	X		X	X	X		X	X	X
9.1.2 Upgrade Cooper Point/Black Lake Boulevard conveyance system	$199,000	Existing/Future	X	X	X	X	X		X	X	X		X		X
9.1.3 Retrofit Mottman Industrial Park drainage system	$87,000	Existing	X	X	X	X			X	X	X	X	X		X
9.1.4 Upgrade North Basin conveyance system	N/A	Future													
9.1.6 Increase the flood control capacity of Yauger Park	$123,000	Future	X	X		X			X	X	X	X			
9.1.7 Improve Capital Mall Drive conveyance system	N/A	Future													
9.1.8 Improve conveyance system to regional detention pond at Cooper Point Bridge	N/A	Future													
9.1.9 Upgrade existing private stormwater storage facilities	$60,000	Existing	X			X			X	X					
9.2.2 Remove fish barriers in Percival Creek	$165,000	Existing	X	X	X	X			X	X	X		X		
9.2.3 Improve fish passage in the Black Lake Drainage Ditch	$4,000	Existing	X		X	X			X	X	X		X		

Table A-17: Implications of Stormwater Utility Rate Changes Percival Creek Basin

Potential Change in Utility	Potential Revenue Increases Under Existing Conditions/Year		
	Olympia	Tumwater	Thurston County
Single Family Residential Base Rate:			
$1.67 to $4.50/month/residence	N/A	N/A	15,200
$4.50 to $6.00/month/residence	18,800	3,600	23,300
$4.50 to $7.00/month/residence	31,400	6,000	28,700
Non-Single Family Residential Base Rate:			
Based on Single Family Equivalency			
$1.67 to $4.50/month/SF equiv.	N/A	N/A	N/A
$4.50 to $6.00/month/SF equiv.	107,300	20,700	N/A
$4.50 to $7.00/month/SF equiv.	178,800	34,600	N/A
Single Family Surcharge:[1]			
$1.00/month/residence	8,100	1,200	4,000
$2.00/month/residence	16,200	2,400	7,900
$3.00/month/SF residence	24,300	3,600	12,000
Non-Single Family Residential Surcharge:[1]			
$1.00/month/SF equiv.	19,200	2,300	N/A
$2.00/month/SF equiv.	38,400	4,600	N/A
$3.00/month/SF equiv.	57,600	6,900	N/A
Streets:			
(Currently charged 30% of non-SF base rate)			
40%	20,600	9,000	3,300
50%	41,200	18,000	6,600
60%	61,800	27,000	9,900
General Facilities Charges (GFCs) of $1,700/acre:	N/A	60,000	8,000

[1]Surcharge on developments without stormwater storage facilities, estimated.

Table A-18: Grant and Loan Programs
Percival Creek Basin

Agency	Program Purpose and Description	Available to	Financial Information	Matching Requirement	Conditions of Eligibility	Terms
Department of Ecology: Centennial Clean Water Fund	Grants and loans for planning, design, construction or implementation of water pollution control facilities and activities to meet state or federal requirements and protect water quality.	Any public body.	Approximately $45 million per year Freshwater: $4.5 Nonpoint: $4.5 Discretionary: $4.5	50% for facilities 25% for other activities	Ineligible projects: collector sewers, water supply, state and federal facilities, industrial/commercial	Interest-free: 0-5 years 4%: 6-14 years 5%: 15-20 years
Department of Ecology: State Revolving Fund	Low-interest loans for water pollution control projects, both facilities and activities to meet state and federal requirements and to protect water quality.	Any public body.	Approximately $30 million for FY 1993 80% water pollution control facilities; 10% nonpoint; 10% estuary management	None.	Ineligible projects: collector sewers, water supply, state and federal facilities, industrial/commercial	Interest-free: 0-5 years 4%: 6-14 years 5%: 15-20 years
Department of Ecology: Flood Control Assistance Account	Flood plan management program for (1) development of Comprehensive Flood Control Management Plans, and (2) Flood Control Facility Maintenance projects.	Counties, cities, service agencies, districts, tribes.	$150,000/event	20% match		
Department of Community Development: Public Works Trust Fund	Low-interest revolving loan fund which helps local governments finance critical public works needs.	Local governments with long-term plan for financing public works needs. If applicant is a city or county, it must be imposing the ¼% real estate excise tax for capital purposes.	$43+ million		Eligible projects include: repair/replacement/improvement to bridges, roads, local ferries, domestic water, sanitary sewer, and stormwater systems	
Conservation Commission: Water Quality Research Grant Program	Problem-oriented applied or basic research that will produce results for solving high priority water quality problems. Multi-governmental cooperative projects will be considered. Projects must be considered through conservation district.	Counties, cities, Washington State institutions of higher education, districts, tribes, state and federal agencies.	$200,000/biennium; grants	75% match		

Table A-19: Potential Revenue Sources
Percival Creek Basin

Potential Revenue Source	Revenue Increases Under Existing Conditions		
	Olympia	Tumwater	Thurston County
Street Utility: $2.00/month/SF residential Minor business contribution	29,900*	4,800*	10,700*
Sales Tax Levy:	Two ½% taxes collected. This is the maximum allowed for a jurisdiction to collect.	Two ½% taxes collected. This is the maximum allowed for a jurisdiction to collect.	Two ½% taxes collected. This is the maximum allowed for a jurisdiction to collect.
Real Estate Levy:	Two ¼% taxes collected, both dedicated to capital improvements.	One ¼% tax collected and dedicated to capital improvements; second ¼% tax could be assessed if ordinance passed by Council.	One ¼% tax collected and dedicated to capital improvements; second ¼% tax could be assessed if ordinance passed by County Commissioners.
Development Impact Fees:	Street improvements and open space eligible for collection of impact fees.	Street improvements and open space eligible for collection of impact fees.	Street improvements and open space eligible for collection of impact fees.
Fuel Tax:	Currently, only cities and towns within 10 miles of an international border have the authority to impose a 1-cent-per-gallon fuel tax. In order to impose a fuel tax in Thurston County, a bill would have to be passed by the state legislature and then approved by Thurston County voters.	Currently, only cities and towns within 10 miles of an international border have the authority to impose a 1-cent-per-gallon fuel tax. In order to impose a fuel tax in Thurston County, a bill would have to be passed by the state legislature and then approved by Thurston County voters.	Currently, only cities and towns within 10 miles of an international border have the authority to impose a 1-cent-per-gallon fuel tax. In order to impose a fuel tax in Thurston County, a bill would have to be passed by the state legislature and then approved by Thurston County voters.
Site Preparation Fee:	Fee based on the amount of clearing and grading done to prepare a site for development. Could generate additional funds, as well as act as an incentive to retain natural vegetation thereby decreasing erosion and water quality problems.		

* These funds would to be used for street improvements and, potentially, stormwater systems associated with streets.