

Redmond's Citizen Academy

Natural Resources Division & Related Planning Functions

May 19, 2011



NR Staff



Mission: To Preserve, Protect and Enhance the Land and Water Resources of the City of Redmond and Support Regional Efforts to do the Same.

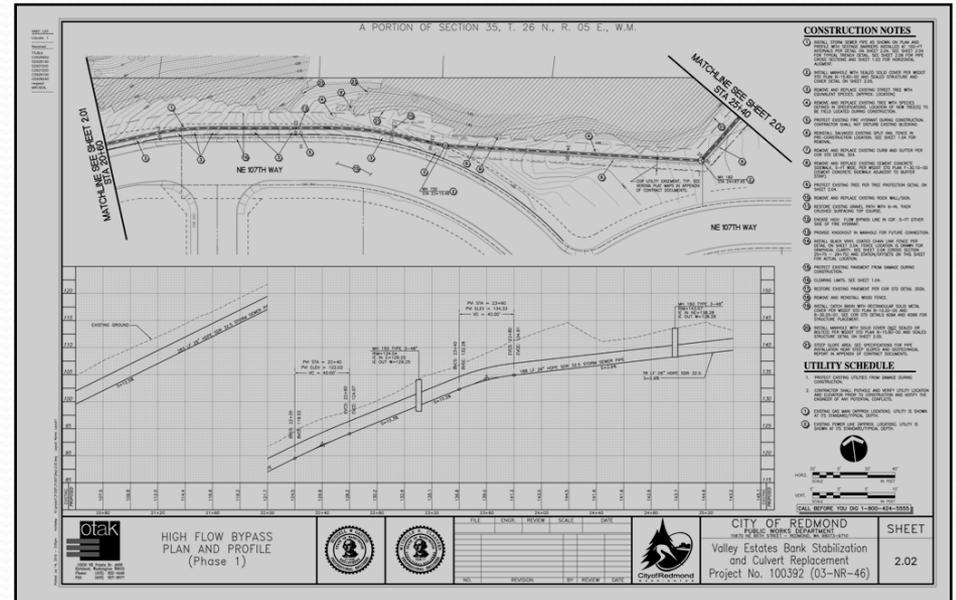
Natural Resources Program Areas

- Engineering
- Environmental Compliance
- Resource Conservation

Engineering

- Stormwater Infrastructure and Engineering
- Stream Habitat Enhancement
- Soil and Groundwater Cleanup
- GIS/Mapping

Stormwater Infrastructure & Engineering



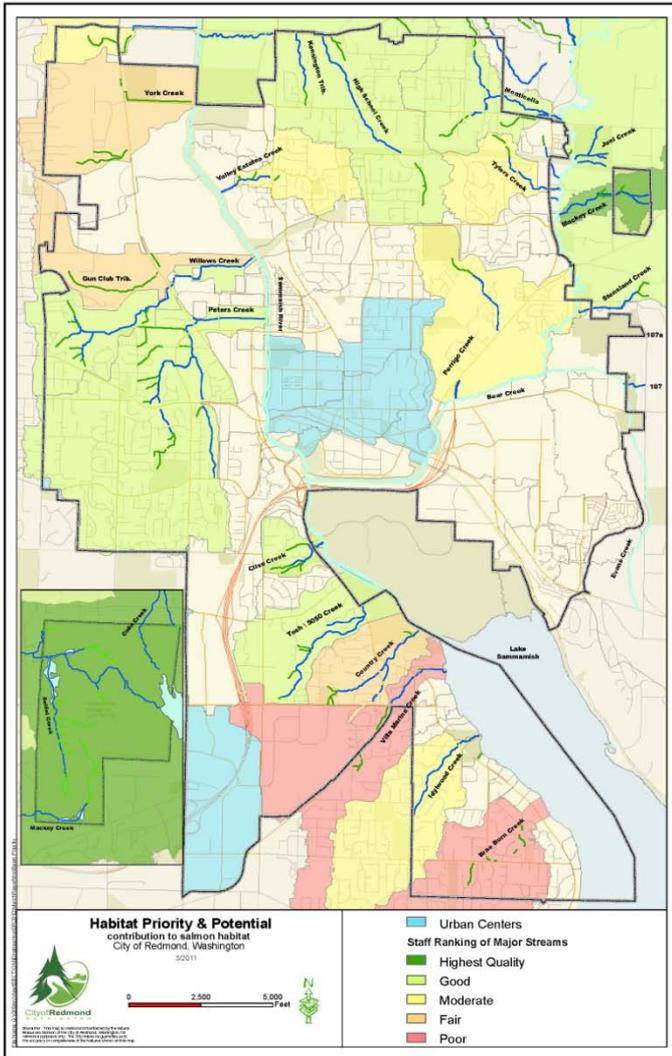
Stream Habitat Enhancement



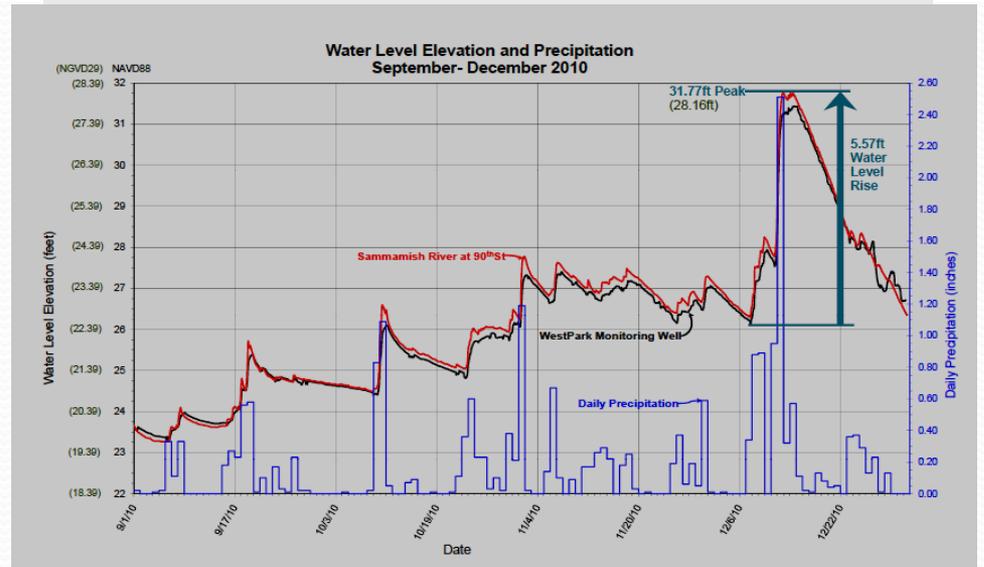
Soil & Groundwater Cleanup



GIS and Data Management



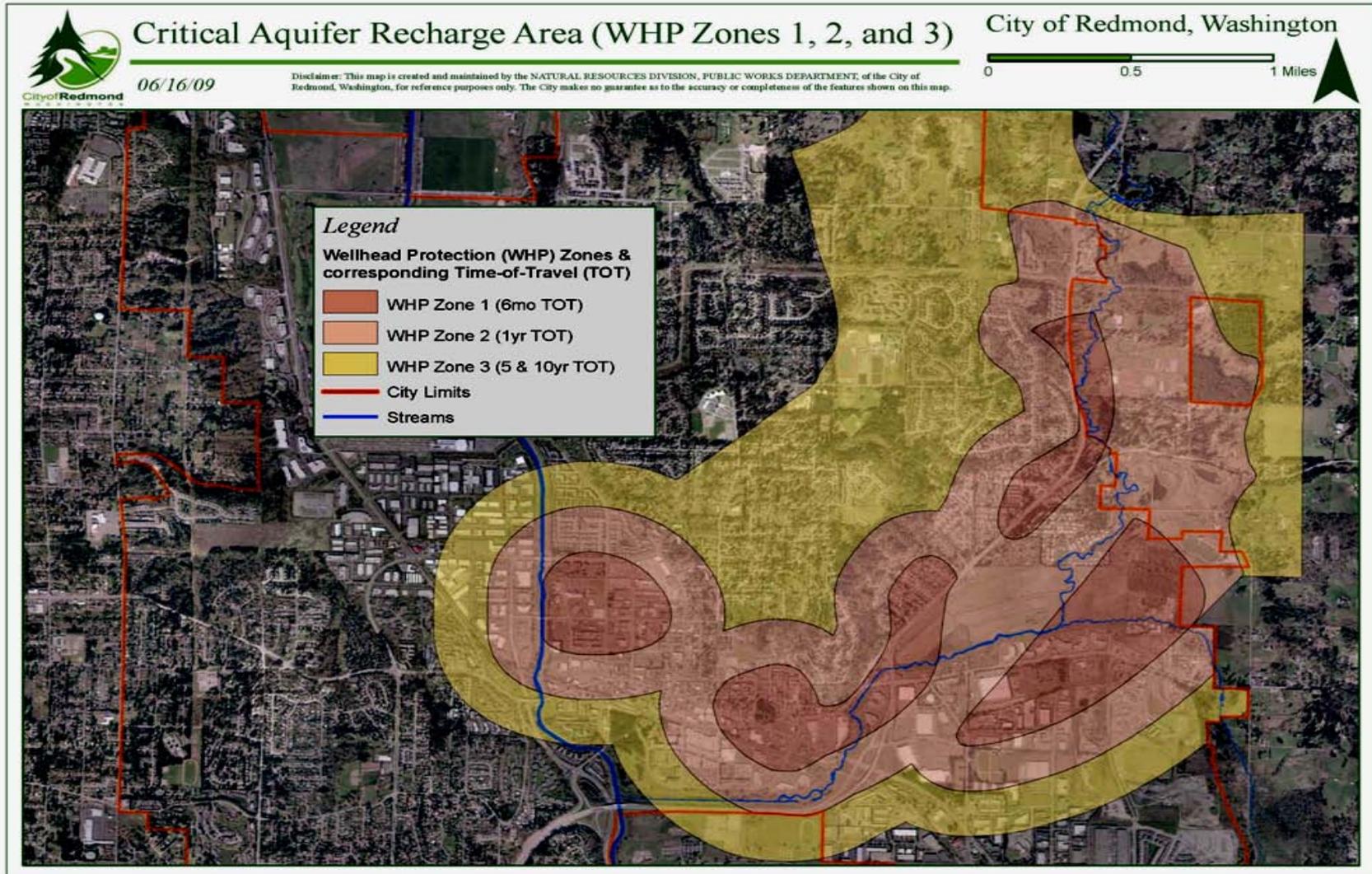
stream name	segment name	reachID	reach notes	(Reach GIS after recheck, includes rubbers, measured ST)	LWD count	LWD per 100 feet	monitoring location (only for several per segment)	diameter reading center (# open cells)	diameter reading right (# open cells)	diameter reading left (# open cells)	% canopy closure average	bankfull width feet (West & South, typ.)	bankfull depth feet
Juel	MS	bear creek to forks	r18Ma010		695	16.0	2.8 J1	5	1	2	89	6.0	1.6
Juel	MS	forks to 116th	r18Ma010		1235	22.0	1.8 J20	1	1	1	96	8.0	0.5
Juel	MS	forks to 116th		same			J24	1	1	4.5	91	5.8	0.7
Juel	SF	south trib	r18Fa010		255	8.0	3.3 J23	1	3	2	92	5.6	0.9
Juel	SF	south fork	r18Fa010		435	16.0	1.7 J24	1	2	1	94	3.7	0.5
Juel	SF trib	south fork - trib	r18Z010		315	16.0	5.1 J23	1	0.5	4	90	2.6	0.8
Monticello	MS	main stem mouth to Anasazi (PC property)	r18Mc010		425	11.0	2.6 N16	1	2.25	0.75	94	5.5	0.9
Monticello	MS	main stem COB property downstream of 184th	r18Mc010		200	5.0	2.5 N14	5	3.5	4.5	82	11.0	0.7
Monticello	MS	main stem in Lakawit NCPA	r18Mc010		325	12.0	1.7	6	3.5	4	81	4.5	1.5
Monticello	MS	main stem confluence to 177th	r18Mc010		85	2.0	2.4 N8	6.5	13	4	67	5.5	0.8
Monticello	MS	main stem Monticello NCPA (above Ray)	r18Mc010		825	11.0	6.7 N2	3	4.5	1.5	87	4.6	0.7
Monticello	MS	main stem Monticello NCPA (above Ray)		same			N4	1	2	0	94	4.6	0.7



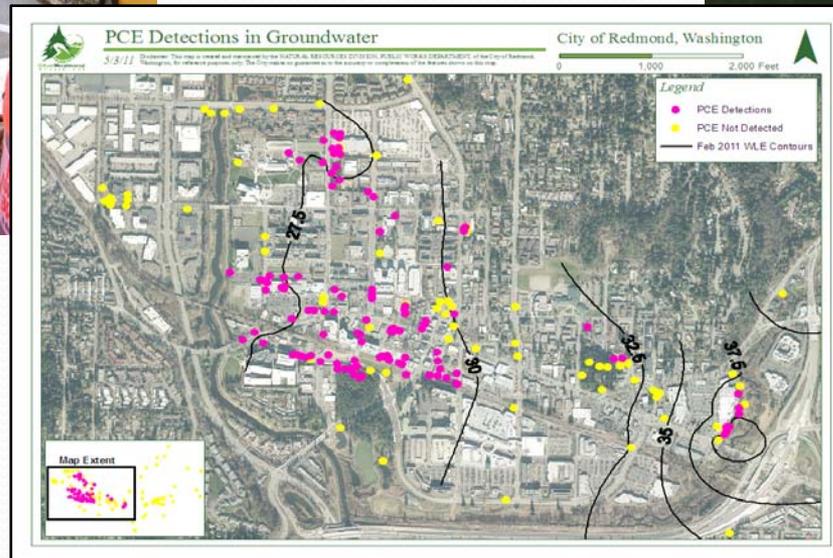
Environmental Compliance

- Watershed Management
- Wellhead Protection (groundwater)
- Environmental Monitoring
- Stormwater System Inspection
- Illicit Discharge Elimination

Wellhead Protection



Environmental Monitoring



Stormwater Inspections



Illicit Discharge Detection & Elimination



Spill Response Line
(425) 556-2868



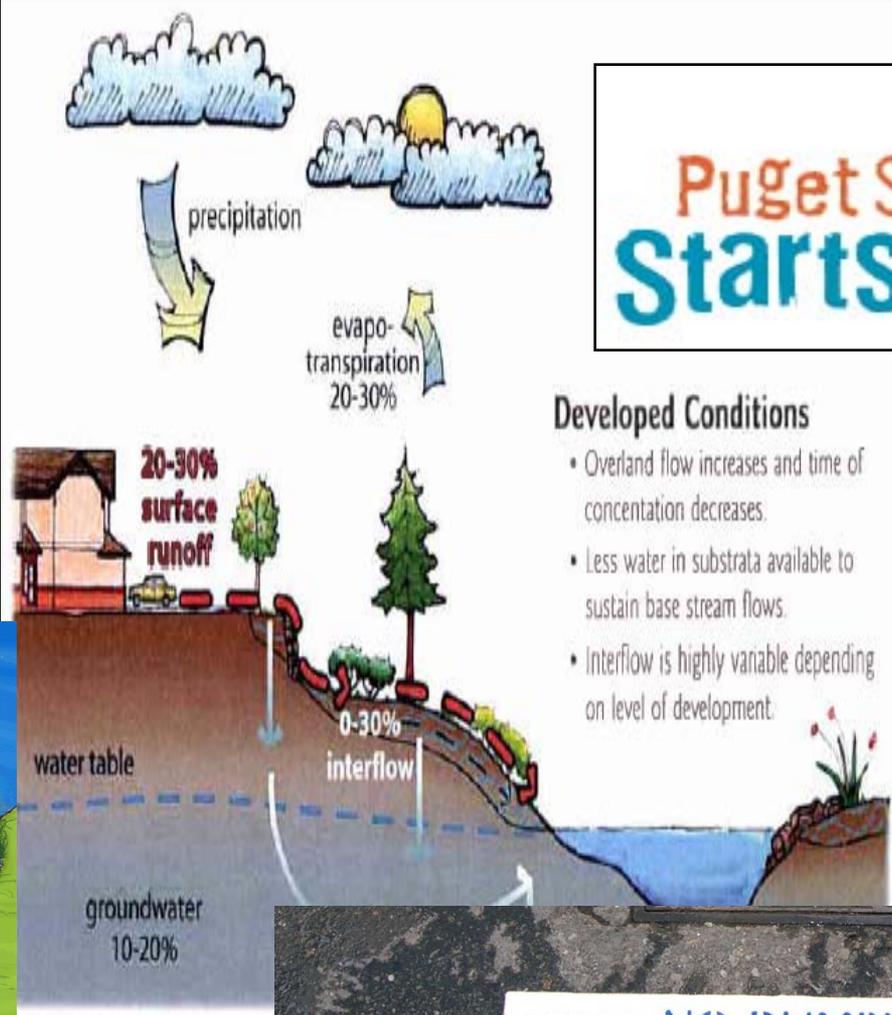
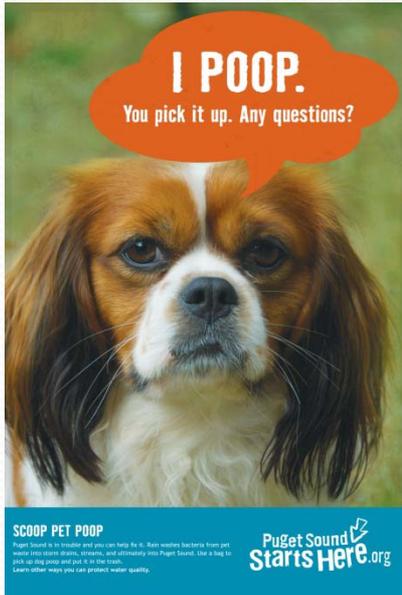
Resource Conservation

- Solid Waste and Recycling
- Stewardship and Volunteer Coordination
- Contract Management (solid waste hauling)

Solid Waste and Recycling



Outreach



Puget Sound Starts Here

Developed Conditions

- Overland flow increases and time of concentration decreases.
- Less water in substrata available to sustain base stream flows.
- Interflow is highly variable depending on level of development.



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Education



Volunteer Events



Natural Resources Funding

- Stormwater Utility
 - Stormwater rates
 - Connection charges
 - Development fees
- Water Utility
 - Water rates
- Solid Waste and Recycling
 - Garbage rates
 - Grants

Hot Topics

- Regional Stormwater Facilities
- FEMA Coordination
- Shoreline Management Program
- Sustainability

Regional Stormwater Facilities

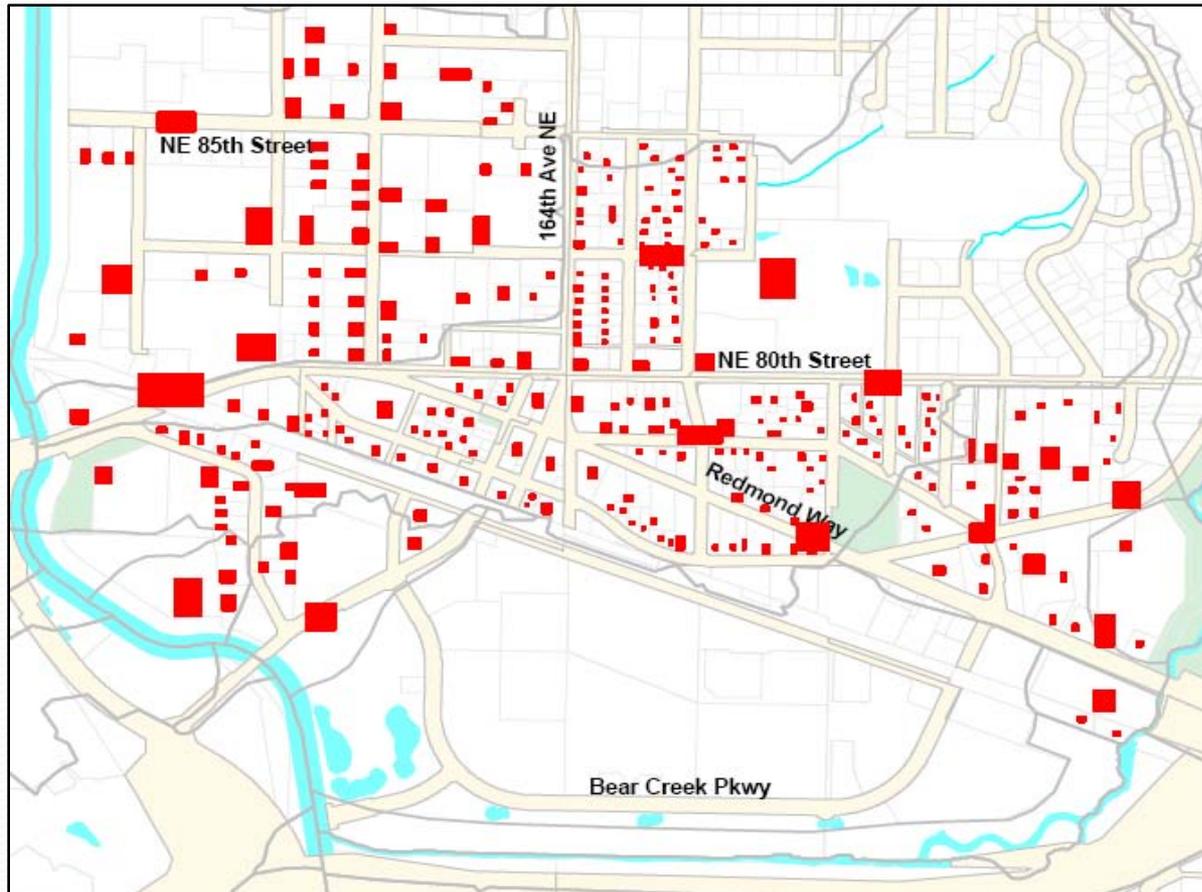
- Downtown

6 facilities including 50 year conveyance to the River and water quality for 530 acres

- Overlake

3 major facilities providing detention, infiltration and some water quality for 465 acres

Conventional Stormwater Management



Downtown Stormwater Management

Regional Facilities Project List

85th St WQ Facility (future)

Will provide WQ treatment for the entire watershed (including City roads).

Redmond Way Trunk WQ Facility (future)

Will provide WQ treatment for the Redmond Way Storm Trunk.

Luke McRedmond WQ Vault (completed)

Will also provide WQ treatment for the Redmond Way Storm Trunk.

Redmond Way Storm Trunk (2011)

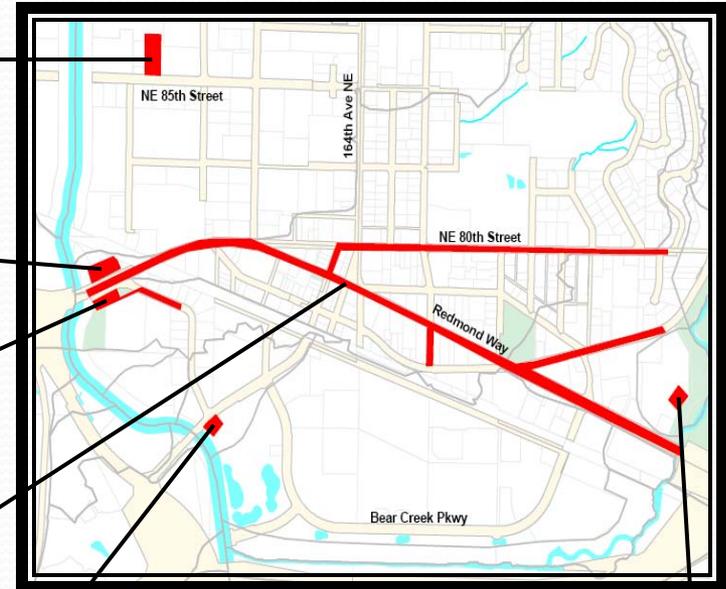
Will convey all water directly to the Sammamish River, eliminating the need for onsite detention facilities downtown.

Leary Way SW Treatment Wetland (completed)

Will retrofit and expand an existing SW facility to meet current regulations and accommodate future growth.

Safeway/Bear Cr WQ Facility (2011)

Will comprise of a small diversion and treatment system to provide clean stormwater to Bear Creek while eliminating the need for stormwater detention.



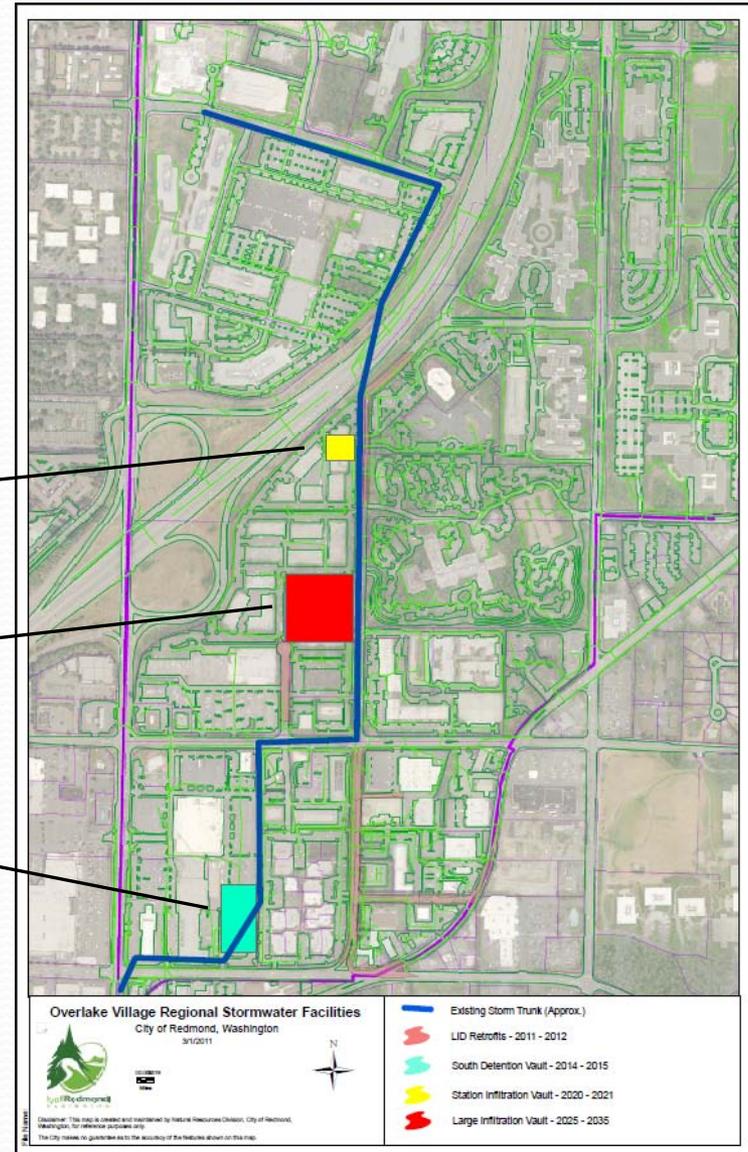
Overlake Stormwater Management

Regional Facilities Project List

Vault at light rail station (future)
Will provide detention and future park

Village center vault (future)
Will provide infiltration

Sears Detention Facility (future)
Will provide detention and future park



FEMA Coordination



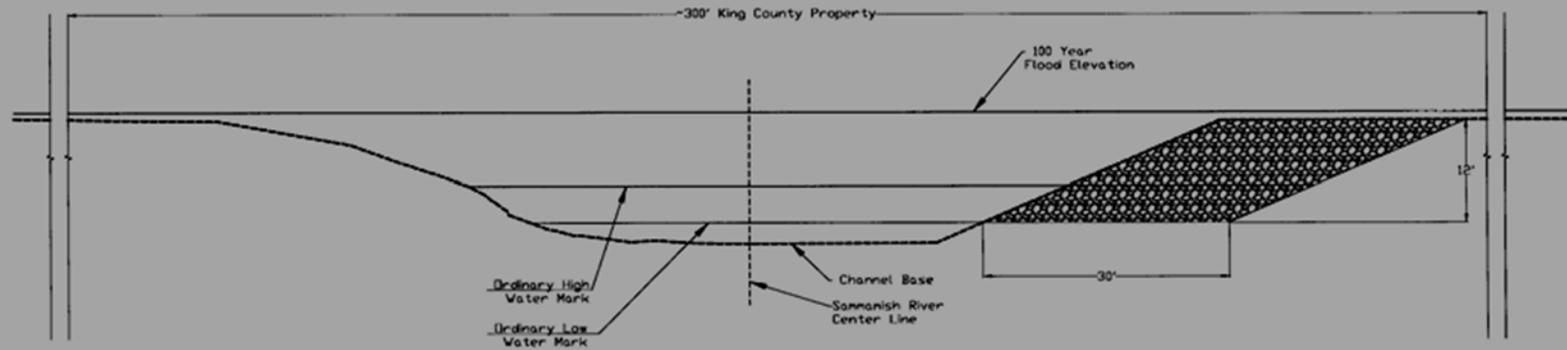
Sammamish River Overlook Underwater



NE 85th Street Bridge – Trail Flooding Closures

Compensatory River Excavation

Typical Compensatory Excavation Concept
Sammamish River Habitat Enhancement



Related Planning Functions

- Shorelines
- Sustainability

Shorelines

- Shoreline Management Act
 - State law
 - Establishes requirements and parameters for local jurisdictions
- Redmond's Shoreline Master Program
 - Jurisdiction
 - Policies
 - Regulations

Shoreline Management Act

- Recognize and protect the state-wide interest over local interest;
- Preserve the natural character of the shoreline;
- Result in long-term over short-term benefit;
- Increase public access to publicly-owned areas of the shoreline;
- Increase recreational opportunities for the public in the shoreline; and
- Provide for any other element deemed appropriate or necessary.

Highlights of Redmond's SMP

- Goal of no net loss of shoreline ecological functions
- Establishes six shoreline environment classifications
- Requirements for shoreline public access
- Establishes shoreline buffer widths
- Establishes design and construction guidelines for bulkheads and docks
- Identifies restoration opportunities

Sustainability

- Electric Vehicle Infrastructure Deployment
- Climate Action Plan
- Impact Redmond website
- Greenhouse gas emissions tracking
- Green building program and incentives
- EECBG funds
- Regional Collaboration

Questions?