

WATER AND LAND RESOURCES DIVISION SURFACE WATER MANAGEMENT CAPITAL IMPROVEMENT PROGRAM

Introduction to Program, Goals, and Highlights

The Water and Land Resources (WLR) Capital Program has two primary goals.

- To protect public safety and property from hazards posed by river flooding and excess storm water runoff, and
- To protect and restore aquatic ecosystems from damage due to storm and surface water runoff and past land development practices.

The 2009-2014 CIP supports these goals through numerous actions, including constructing regional stormwater flow control facilities, retrofitting flow control facilities, upgrading conveyance pipe, relieving drainage problems affecting residential areas and agricultural fields, and restoring salmon habitat in the major watersheds.

There are three key developments for the Surface Water Management (SWM) capital program in 2009:

The division has maintained a policy for the past several years of transferring 30% of budgeted SWM fee revenue annually to implement capital projects. In the 2008 budget the transfer was reduced from 30% to 25.5% to allow continued funding of critical operating programs in the rural area. Increased costs in the operating budget are driven by new state requirements under the agency's NPDES Storm Water permit, as well as covering inflation and Critical Areas Ordinance (CAO) implementation costs without a rate increase. While the SWM program is increasing its 2009 CIP transfer to about 27 percent of estimated SWM fees, the cost drivers affecting this continue to place a burden on how much revenue WLR able to transfer to their capital improvement program. This also has an adverse impact on WLR's ability to leverage grant funding.

In an effort to deliver a more cost-effective service model for cleaning agricultural drainage ways, WLR plans to focus in 2009 on modifying the program. The objectives are to solve regulatory and service delivery problems that have created barriers to providing technical and financial support to farmers maintaining agricultural waterways to prevent flooded fields. Work to achieve this will begin in 2008 starting with a revised approach to local, federal and state permitting processes. It is expected this will take some time but contribute significantly to permit cost reductions and staff efficiencies. This is expected to result in significant savings over the next five years.

The Flood Control Zone District Board of Supervisors recently adopted a resolution establishing an allocation process and eligibility criteria for the Subregional Opportunity Fund of the Flood Control Zone District annual levy. The resolution adopts the recommendations of the Flood Control Zone District Advisory Committee, with the condition that watershed management projects are linked to a stormwater or flood control project. Efforts are underway to have 2008 and 2009 funds available for distribution in January 2009. The Water and Land Resources Division is proposing to program the unincorporated King County share in the public safety and property and neighborhood drainage and water quality eligible projects in the SWM CIP. This is an increase in funding of \$1 million in 2009 utilizing two years of opportunity funding.

Project Prioritization Methodology

The 2009 Surface Water Management CIP was prioritized under the “priority team” process intended to optimize resources given the division’s diverse objectives. The different priority teams include representatives from across the division’s many programs including Basin Stewards, River Management, Agriculture Preservation, Natural Lands Management, Stormwater Management, etc. One team was formed to oversee public safety projects and five were formed for ecosystem protection projects (for WRAs 7, 8, 9, 10 and Vashon). Each team prepared a 6-year CIP for their area, considering all relevant planning information and project criteria such as cost, effectiveness, feasibility, urgency, and geographic equity. Funding was then allocated by division management across the priority teams with a formula constructed to balance the agency’s two goals and the geographic spread of the county.

Growth Management and Comprehensive Plan Issues

The projects included in the 2009 request address the Growth Management Act policy directives in accordance with the 2004 King County Comprehensive Plan. A number of policies refer to the capital program and capital projects generally; three policies are specific to the work of WLRD.

- Chapter 4, Environment, contains Policy E-126 which states that stormwater runoff shall be managed through a variety of methods to limit impacts to aquatic resources, protect and enhance the viability of agricultural lands, and promote groundwater recharge.
- Policy E-168 states that King County shall use measures such as regulations, incentives, capital projects and purchase, to designate and protect fish and wildlife habitat conservation areas.
- Chapter 7, Facilities, lists resources and services that the County must provide: regional parks, trails, and preserved open spaces; water resource management, surface water management and flood warning, protection and preservation of natural resources (Policy F-103).

Financial Planning and Policy Overview

Multi-year financial plans are maintained for each CIP fund showing all revenues and expenditures for the present year, the prior year actuals, and a five-year projection. A six-year plan is prepared annually to quantify the division’s long-term capital requirements in conformance with long-term comprehensive plans.

WLR’s SWM CIP has several funding sources for capital projects. The primary sources are Surface Water Management fees, grants (including KCD grants) and revenues from interlocal agreements.

The 2009 Executive Proposed CIP Budget for the Water and Land Resources Program is \$13,767,000. The total 2009-2014 proposed budget plan is approximately \$36,754,000.

A summary of the various revenue sources is shown in Table A.

Table A: Major CIP Funds and Restrictions		
Fund No.	Fund Name	Fund Usage/Restrictions
3151	Conservation Futures Tax	KC Citizen Oversight Committee selects acquisition projects from a list of applications meeting specific Conservation Futures Levy selection criteria for County Council approval. The revenue source is the Conservation Futures Levy.

Fund No.	Fund Name	Fund Usage/Restrictions
3180	Flood Hazard Reduction Capital Fund	For projects to control waters subject to flooding conditions through the construction, operation and maintenance of dams and impounding basins and dikes, and the acquisition of property. (This fund is proposed to be phased out in preference to fund 3571)
3292	Surface Water Management Capital Fund	Funds are to be used for projects that protect public safety and property from stormwater hazards and that restore and protect aquatic ecosystems. The primary revenue sources are SWM fees, bond proceeds and external grants.
3522	Open Space Non-Bond Fund	Revenue from numerous sources such as REET, RCO, IAC and SRFB grants. Restrictions on usage depend upon revenue source, usually restricted to specific area or properties.
3672	Environmental Resource	Contains the \$2.5 million received from the City of Tacoma as mitigation for their second water supply pipeline. This fund was established through a comprehensive mitigation plan for the project that was adopted by King County Council in 1993. The monies are used for ecosystem restoration in the Green River basin in accordance with the project list approved by the steering committee.
3673	Mitigation Reserves	This fund contains fees paid to the County by developers in lieu of mitigating impacts to critical area. WLR uses these fees for wetland mitigation projects as described under the Critical Areas Ordinance.

2009 Significant Project Highlights

The most significant CIP project requests for 2009 are highlighted below:

Significant Projects Surface Water Management Capital Improvement Program	2009 Executive Proposed Budget	Continuation of Existing Project
WRIA 7 Ecosystem Protection	\$ 1,621,720	X
WRIA 9 Ecosystem Protection	\$ 2,776,750	X
Vashon Ecosystem Protection	\$ 1,735,550	X
Other WRIA Ecosystem Projects	\$ 181,300	X
Public Safety & Major Property	\$ 2,292,650	X
Neighborhood Drainage and Water Quality	\$ 1,040,000	X

The percentage split between public safety and ecosystem protection for SWM Pay As You Go in 2009 is 61 percent public safety to 39 percent ecosystem.

WRIA 7, 8, 9, 10 and Vashon Ecosystem Protection Projects: \$6,315,320 (for all five projects)

The Water Resource Inventory Area (WRIA) projects collectively protect or restore aquatic ecosystems in King County. Each WRIA project covers a distinct watershed within the waterway systems in Washington: WRIA 7 is the Snoqualmie River Watershed, WRIA 8 is located in the unincorporated portions of the Cedar/Lake Washington Watershed, and WRIA 9 is located in the Green River Watershed. WRIA 10 is the White River Watershed in South King County and the Vashon Ecosystem project is located on Vashon Island. Typical actions include reconnecting side-channel habitat to the mainstem river, removing levees and other forms of bank hardening, eliminating man-made barriers to fish migration such as blocked culverts, increasing riparian forest cover to improve water quality, and recreating log jams to increase dynamic complexity in river flows.

Public Safety and Major Property Protection: \$2,292,650

This project undertakes actions to preserve public safety and/or protect property from events such as flooding, erosion, adverse water quality, or the deterioration of stormwater facilities designed to prevent such events. The highest priority projects in this program are those which protect the health and safety of the public, with particular emphasis given to preventing flooding inside inhabited structures and allowing emergency vehicle access. Other important projects address water quality problems which adversely affect both public safety and the ecosystem. These projects are usually identified through citizen complaints, basin planning, facility inspections, monitoring data, or reconnaissance by County engineers.

Neighborhood Drainage and Water Quality: \$1,040,000

This project addresses smaller neighborhood problems of localized flooding, erosion, sedimentation and water quality. These problems are typically identified through citizen drainage complaints or inspections of residential stormwater facilities. Actions typically include installing pipes and catch basins, upsizing culverts, removing accumulated sediment, stabilizing drainage channels, or retrofitting stormwater flow control facilities such as retention/detention ponds. This project includes small-scale drainage improvements to reduce flooding on private property and retrofits of drainage facilities to comply with legally mandated requirements of King County’s NPDES Phase 1 Municipal Stormwater Permit.

The following tables provide a list of identified sub-projects and the related master project for the Surface Water Management Capital Fund in the 2009 Executive Proposed Budget.

Table C: Fund 3292 Subproject and Master Project Detailed Budget Request

Master Project	Sub-project	Project Description	Total
P20000		Public Safety / Property Protection	
	0A1205	May Valley Flood Reduction	\$500,000
	0D1871	Mill Creek Trib 045	\$100,000
	P20001	Public Safety Grant Contingency	\$250,000
	P20021	Lake Hicks Bypass Repair @ Ambaum	\$275,000
	P20022	Horseshoe Lake Emergency Infiltration	\$119,219
	P20023	Bear CreekWQ Retrofit Reconnaissance	\$70,000

Master Project	Sub-project	Project Description	Total
	P20024	Hazard Dam & Lake Remediation EAP/Program	\$30,000
	P20025	Mullen Slough	\$100,000
	P20200	White Center Regional SW Improvement	\$598,431
	P20800	Feasibility Reserve	\$50,000
	P20900	Emergency/Opportunity Reserve	\$200,000
		Public Safety/Property Protection	\$2,292,650
P23000		WRIA 7 Ecosystem Restoration	
	P23012	Chinook Bend Levee Removal	\$285,000
	P23016	Lower Tolt Construction	\$1,336,720
		WRIA 7 Ecosystem Restoration	\$1,621,720
P24000		WRIA 8 Ecosystem Restoration	\$0
P25000		WRIA 9 Ecosystem Restoration	
	0A1525	Plemmons Meander Restoration	\$36,000
	1A1647	Duwamish Place Site 1/North Winds Weir	\$1,300,000
	1F1647	Fenster-Pautzke-Phase 2 KC	\$1,100,000
	1H1647	Big Springs Creek	\$340,000
		WRIA 9 Ecosystem Restoration	\$2,776,000
P26000		WRIA 10 Ecosystem Restoration	
	0Z1795	Boise Mouth Restoration	\$181,300
		WRIA 10 Ecosystem Restoration	\$181,300
P27000		Vashon Ecosystem Restoration	
	P27001	Vashon Grant Contingency	\$1,670,550
	P27026	Heyer Pt Drift Cell Preservation	\$65,000
		Vashon Ecosystem Restoration	\$1,735,550

CIP Program Accomplishments and Completion Lists

Projects Completed in 2007

1A1647 Duwamish Place Site 1/North Wind Weir Soil Remediation Phase I
0A1767 Des Moines Creek Basin High Flow Bypass
0A1781 Lake Hicks/ Ambaum Way Drainage Improvement
0A1785 Neighborhood Drainage Assistance Program: Three projects constructed
0A1786 Drainage and Habitat Improvement Program: One project constructed
0A1827 Rapid Response Opportunity Emergency: 1 project constructed
1A1505 Auburn Narrows Phase II: constructed
5B1767 Des Moines Creek Stream Restoration Phase I
86318F Cedar Hills Stormwater Management Improvements
MR8001 Cold Creek Mitigation Reserve
P20011 Lake Hicks Pump Inlet
P20016 Deer Creek Culvert Replacement
P2097J Coal Creek Emergency Bank Stabilization
P2098F Ravenna Creek Sewage Spill Emergency Response
P20200 White Center Regional Stormwater Retrofit-House Demolition
P21000 Neighborhood Drainage Assistance Program: 15 projects constructed;
(3 Retrofits, 8 Large NDA, 2 Regular NDA, 2 Quickfixes)
P25001 White Center Regional Stormwater Wetland Restoration-Plantings
P27020 Vashon Island-Ellis Creek
P24020 Carey Creek Culvert Removal
P28000 Small Habitat Restoration Program: 26 projects constructed; 18 monitored and
maintained
P28400 Monitoring and Maintenance: 16 projects monitored; 10 maintained.

Projects to be Completed in 2008

0A1205 May Creek Obstruction Removal: Design plan completed
0A1525 Lower Newaukum Habitat Restoration (major construction)
0A1795 Lower Tolt Levee Setback: Phase I construction
0E1145 Cedar Rapids Floodplain Restoration (Cedar River)
1A1647 Duwamish Place Site 1/North Wind Weir -Soil Remediation Phase 2
7B1767 Des Moines Creek Stream Reconnection-City of Des Moines
86313F Madsen Creek R/D Pond Repairs Phase III
P20012 FEMA November 2006 Flood-Repairs
P20016 Deer Creek Culvert Replacement
P20200 White Center Regional Stormwater Retrofit – House Demolition
P2097J Coal Creek Emergency Bank Stabilization
P2098E Ravenna Creek Sewage Spill Emergency Response
P2098F Billy Creek Stormwater Outlet Stabilization
P21000 Neighborhood Drainage Assistance Program: 8 projects planned for completion;
(6 Retrofits, 1 Large NDA, 2 Quickfixes)
P23011 Gilead Off-Channel Habitat Restoration
P23012 Chinook Bend Levee Removal: Phase I Plantings
P27010 Vashon Natural Drainage – Center Park and Ride
P28000 Small Habitat Restoration Program: 27 projects to be constructed; 25 planned

P28400 for monitoring and maintenance
Monitoring and Maintenance: 28 projects to be monitored; 18 planned for maintenance

Projects to be Completed in 2009

0A1205 May Creek Obstruction Removal: Final SEPA on Basin Proposal
0E1645 Hamm Creek Water Quality Pond Retrofit
0Z1795 Boise Mouth Restoration Phase I
1A1647 Duwamish Place Site 1/North Wind Weir - Restoration
1F1647 Pautzke Levee Setback Phase I
1H1647 Big Spring Creek Habitat Restoration Phase I: Channel Relocation
P20012 FEMA November 2006 Flood-Repairs
P20022 Horseshoe Lake Flood Reduction-Infiltration
P20200 White Center Regional Stormwater Retrofit:
 1) Wetland Restoration Cell 1
 2) White Center Heights Wetland
 3) Lake Hicks Bioswale
 4) Lake Hicks Bypass Pump
 5) IDDE Program –Field Training
P2097B Johnson Pond – Small Dam Remediation
P21000 Neighborhood Drainage Assistance Program: 24 projects planned for completion; (20 Retrofits, 2 Regular NDA, 2 Quickfixes)
P23012 Chinook Bend Levee Removal: Phase 2
P23016 Lower Tolt River Levee Setback: Phase 2
P28000 Small Habitat Restoration Program: 4 projects planned to be constructed; 20 projects planned for monitoring and maintenance
P28400 Monitoring and Maintenance – 23 projects to be monitored and 18 planned for maintenance