



**Long-Range Work Plan  
South Washington Watershed District**

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- 9 High to urgent level of priority, action by District likely to be imminent
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 Date Last Updated: 24-Jun-10  
 Last Updated by: MMM

Management Area / Action Item	Plan Policy	Implementation Tools	Priority	Status	Probable Implementation Dates		Dependency?		Estimated Budget	SWWD Fund	General assumptions/comments
					Begin	End	Yes / No	Whom			
<b>(2) Storm Water Runoff Rate and Volume</b>											
2.1 Initiate hydrologic and hydraulic modeling to identify flood prone areas and assess potential damages	ST-1	Surface water modeling program	Assessment Locations	9	Ongoing	Jan-06	Dec-06			\$45,000.00	
2.2 Analyze downstream effects of outlying landlocked basins in order to identify critical landlocked basins potentially affecting flow rates	ST-1	Surface water modeling program	Assessment Locations	3	Pending	Jan-08	Jun-08			\$30,000.00	
2.3 Initiate hydrologic and hydraulic modeling to identify the allowable discharges between cities and townships	ST-2	Surface water modeling program	Assessment Locations	9	Ongoing	Jan-06	Dec-06			\$15,000.00	
2.4 Initiate hydrologic and hydraulic modeling to assess flows at critical regional crossings and locations	ST-2	Surface water modeling program	Assessment Locations	9	Ongoing	Jan-06	Dec-06			\$45,000.00	
2.5 Complete hydrologic and hydraulic modeling to properly size an overflow for surface waters to the Mississippi River	ST-2	Surface water modeling program	Assessment Locations	9	Pending	Jan-07	Dec-07			\$45,000.00	
2.6 Develop a storm water policy manual to assist Cities with NPDES compliance	ST-3	Storm Water Design Manual		3	Pending	Jun-08	Dec-08			\$15,000.00	
2.7 Develop a storm water design standards manual to assist Cities with NPDES compliance	ST-3	Storm Water Design Manual		9	Pending	Jun-07	Jun-08	Yes	Need Technical Advisory Committee involvement	\$80,000.00	
2.8 Identify the overflow direction and maximum elevation on all development plans for the 100-year, critical duration event	ST-4	Surface water modeling program	Emergency Response Plan	9	Pending	Jun-08	Jun-09			\$20,000.00	
2.9 Size storm water conveyance facilities in accordance with the need to protect infrastructure and maximize safety	ST-4	Flood Damage Reduction		0*	Ongoing	Jun-06	Dec-08			\$40,000.00	
2.9a Non-structural flood damage reduction projects and programs	ST-4	Flood Damage Reduction		9	Pending	Jun-07	Jun-09			\$200,000.00	
2.9b Evaluation of Wilmes Lake emergency overflow and Powers Lake impacts	ST-4	Flood Damage Reduction		9	Pending	Jun-07	Jun-09			\$90,000.00	
2.9c Evaluation of Wilmes Lake normal water level reduction and increased live storage for flood damage reduction	ST-4	Flood Damage Reduction		9	Pending	Jun-07	Jun-09			\$50,000.00	
2.9d Storage locations within Wilmes Lake Sub-watershed in conjunction with other projects	ST-4	Flood Damage Reduction		3	Pending	Jun-07	Dec-10			\$9,000,000.00	
2.10 Identify and preserve critical areas necessary for the temporary storage of runoff	ST-4	Surface water modeling program		3	Pending	Jun-07	Jun-08			\$15,000.00	
2.11 Identify and preserve critical areas necessary for the conveyance of storm water runoff	ST-4	Surface water modeling program		3	Pending	Jun-07	Jun-08			\$15,000.00	
2.12 Design and construction of watershed overflow to the Mississippi River through the East Ravine subwatershed	ST-4	Infrastructure Improvement Program		9	Pending	Jun-03	Dec-10				
2.12a Central Draw Overflow Phase I											
2.12a1 Bailey Lake Lift Station				0	Complete					N/A	City of Woodbury
2.12a2 Regional Detention/Infiltration Basins CD-P85 and CD-P86 North and South				0*	Ongoing	Jun-03	Dec-09			\$600,000.00	Land acquisition completed \$7 million
2.12a3 CD-P85/86 Connection				0	Complete		May-05			\$400,000.00	Project completed May 2005
2.12a4 County Road #19 Stabilization				9	Ongoing	Jun-04	Dec-07			\$150,000.00	
2.12a5 CD-P86 Berm				9	Ongoing	Jun-04	Dec-07			\$100,000.00	
2.12a6 Military Road Crossing				0	Complete		Jun-03			\$400,000.00	Project completed August 2003
2.12a7 70th Street Stabilization				9	Pending	Jan-07	Dec-08			\$800,000.00	
2.12b Central Draw Overflow Phase II											
2.12b1 Overflow Conveyance System 70 <sup>th</sup> Street to Cottage Grove Ravine Regional Park				9	Pending	Jan-08	Dec-10			\$10,000,000.00	
2.12b2 Overland flow/conveyance North of Ravine Park Lake				9	Pending	Jan-08	Dec-10			\$2,000,000.00	
2.12b3 Flow through lake, Ravine Park Lake and lake outlet control				9	Pending	Jan-08	Dec-10			\$1,500,000.00	
2.12b4 Conveyance South of Ravine Park Lake to the Mississippi River				9	Pending	Jan-08	Dec-10			\$2,500,000.00	
2.13 Develop a design method / standard which can be used to gage the response of natural waterways to the rate of runoff	ST-5	Storm Water Design Manual	Rate control policy	3	Pending	Jun-07	Jun-08			\$15,000.00	
2.15 Along with cities, develop an Emergency Response Plan	ST-6	Surface water modeling program		3	Ongoing	Jan-04	Dec-06			\$10,000.00	
2.16 Set action triggers based on monitored lake water levels and Ordinary High Water Levels	ST-6	Surface water modeling program	Emergency Response Plan	3	Pending	Jan-07	Jun-07			\$20,000.00	
2.17 Newport Ravine Stabilization	ST-5			9							
2.17a Phase I					Pending	Sep-09	Nov-09			\$1,040,000.00	
2.17b Phase II					Pending	May-10	Jul-10			\$780,000.00	
2.18 Clear Channel Pond Relief	ST-2	Infrastructure Improvement Program		9							
2.18a Property Acquisition					Pending					\$450,000.00	
2.18b Stormwater storage facility study & design					Pending					\$120,000.00	
2.18c Stormwater storage facility construction					Pending					\$450,000.00	

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<b>(3) Water Quality</b>											
3.1 Utilize monitoring data to establish an attainable range for lake water quality in District lakes	WQ-1		9	Pending	Dec-07	Dec-08			\$ 15,000.00		
3.2 Establish numeric lake water quality goals and maximum allowable nutrient loading rates	WQ-1		9	Pending	Dec-06	Jun-07			\$ 15,000.00		
3.3 Prepare lake-specific management plans and, where appropriate, for priority shallow basins. (Consider implementing an overall chain-of-lakes study approach to developing lake management plans.)	WQ-1		9	Pending	Dec-07	Dec-10			\$ 500,000.00		
3.4 Use National Urban Runoff Program water quality improvement practices as the minimum requirement	WQ-2		9	Pending	Dec-06	Jun-07			\$ 15,000.00		
3.5 Establish additional measures necessary to protect unique or high quality water resources within the District	WQ-2		9	Pending	Dec-06	Jun-07			\$ 15,000.00		
3.6 Establish collaborative efforts for addressing nonpoint source pollution with regulated NPDES* Phase II MS4* communities, or communities with impaired waters	WQ-2		3	Pending	Jun-08	Jun-09			\$ 30,000.00		
3.7 Evaluate issues associated with the nondegradation of receiving waters from storm water runoff	WQ-2		3	Pending	Jun-08	Jun-09			\$ 15,000.00		
3.8 Develop a BMP selection process to assist communities in choosing BMP tools to mitigate storm water impacts	WQ-2		3	Pending	Jun-08	Jun-09			\$ 15,000.00		
3.9 Evaluate a process to utilize nutrient trading in new developments to achieve maximum benefit in addressing District-wide water quality	WQ-3		1	Pending	Dec-09	Dec-10			\$ 15,000.00		
3.10 Develop a cost-sharing program to encourage the use of innovative or demonstration technologies	WQ-3		1	Pending	Jun-07	Dec-07			\$ 40,000.00		
3.11 Action: Develop a Stormwater Utility Fee credit program and credit manual to reduce downstream impacts from urbanization.				Pending	Jun-07	Jun-08	Yes	Need Technical Advisory Committee involvement	\$ 15,000.00		
3.12 Monitor and evaluate the effectiveness of innovative and demonstration technologies	WQ-3		1	Ongoing	Jun-06	Jun-08			\$ 70,000.00		
3.13 Use monitoring data to aid in establishing subwatershed annual load values reflective of variability in climate and land use	WQ-4		3	Pending	Jun-07	Jun-08	Yes	Need Technical Advisory Committee involvement	\$ 15,000.00		
3.14 Participate by cost-sharing to support Washington Conservation District	WQ-5		3	Pending	Jun-07	Dec-07			\$ 30,000.00		
3.15 Evaluate and if possible quantify the impacts to receiving waters (and groundwater) from sand, chloride and other compounds	WQ-6		3	Pending	Jun-08	Jun-09			\$ 30,000.00		
3.16 Develop surface water monitoring/sampling protocol manual			3	Pending	Jun-08	Jun-09			\$ 25,000.00		
3.17 Grey Cloud Island Slough Crossing	WQ-3		9	Pending	May-10	Jul-10			\$ 630,000.00		
3.18 Coordinated Capital Improvement Program	WQ-3		9	Pending							
3.18a South Washington CCIP					Jun-10	Indefinite			NTE \$1,000,000 Annually		
3.18b East Mississippi CCIP					Jun-11	Indefinite			NTE \$1,000,000 Annually		

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<b>(4) Wetlands</b>											
4.1 Establish a method and / or process for defining functional values	WT-1		0*	Ongoing	Jan-07	Jun-07	Y	2.7	\$ 10,000.00		
4.2 Inventory the wetland resource and analyze wetland functions and values	WT-1		0*	Ongoing	Jan-07	Jun-07	N		\$ 10,000.00		
4.3 Develop a weighting system reflecting importance, based on the values of the District, for the managing wetlands	WT-1		0*	Ongoing	Jan-07	Jun-07	N		\$ 10,000.00		
4.4 Periodically re-evaluate a subset of inventoried wetlands to assess for signs of impact to identified function and value	WT-1		1	Pending	Jan-10	-----	N		\$ 60,000.00		
4.5 Inventory wetland functions and values in East Mississippi subwatershed in accordance with the Comprehensive Wetland Management Plan methods	WT-1		9	Pending	Jun-07	Dec-07	N		\$ 35,000.00		
4.6 Use hydrologic modeling to identify those wetlands providing important peak flow reduction and needing preservation to maintain flood damage reduction function	WT-2		0	Ongoing	Jun-06	Dec-07	N		\$ 5,000.00		
4.7 Complete technical analysis to identify the volume of storage by subwatershed as needed for ultimate development conditions	WT-2		0	Ongoing	Jun-06	Dec-07	N		\$ 5,000.00		
4.8 Evaluate legal options for preserving critical wetland storage areas	WT-2		0	Pending	Jun-07	Dec-07	Y	2.7	\$ 5,000.00		
4.9 Identify functional values characteristic of high priority wetlands	WT-3		0*	Ongoing	Jun-07	Dec-07	Y	2.7	\$ 5,000.00		
4.10 : Identify the locations of these wetlands within the District	WT-3		0*	Ongoing	Jun-07	Dec-07	Y	2.7	\$ 5,000.00		
4.11 Identify methods and processes for protecting and preserving high priority wetlands	WT-3		0*	Ongoing	Jun-06	Dec-07	Y	2.7	\$ 5,000.00		
4.12 Recommend Comprehensive Wetland Management Plan requirements for buffer strips, inundation duration and bounce, and nutrient pre-treatment	WT-4		3								
4.13 Minimize the presence of invasive plant species and maximize ecological diversity in replacement wetlands within the district	WT-4		1	Pending	Jan-10	-----	N		\$ 100,000.00		
4.14 Where possible, maintain wetland connections with adjacent undisturbed areas to promote connectivity and linear corridors	WT-4		0*	Ongoing	Jun-07	Dec-07	Y	2.7	\$ 5,000.00		
4.15 Establish a priority ranking for potential wetland restoration sites identified in the Comprehensive Wetland Management Plan	WT-5		0*	Ongoing	Jun-07	Dec-07	Y	2.7	\$ 5,000.00		



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<b>(6) Groundwater</b>											
6.1 Identify surface water resources which may be dependent on adequate groundwater flow or quantity	GW-1		0*	Ongoing	Jun-06	Dec-07	N		\$ 5,000.00		Annual budget item
6.2 Develop performance specifications for identifying the risk of contamination or degradation of groundwater such as may arise from infiltration practices	GW-1		3	Pending	Jun-06	Dec-07	Y	2.7	\$ 5,000.00		
6.3 Monitor groundwater quality and condition as pertains to potential impacts from storm water management	GW-1		9	Pending	Jan-07	Dec-07	N		\$ 80,000.00		
6.4 Coordinate with Washington County in managing groundwater in accordance with the County's 2003-2013 Groundwater Plan and associated work plans	GW-2		9	Ongoing	Jun-06	Jan-10	N		N/A		
6.5 Assess the cumulative impact to surface and groundwaters based on turf irrigation and similar practices	GW-2		1								
6.6 Evaluate the establishment of thresholds for groundwater depletion impacts above which the District will take action in surface water management	GW-2		3	Pending	Jun-07	Jun-09	N		\$ 10,000.00		
6.7 Quantify and manage road deicing impacts in regional groundwaters	GW-2		3	Pending	Jun-07	Jun-09	N		\$ 10,000.00		
6.8 Continue data collection to analyze groundwater levels as relates to surface water management such as infiltration practices	GW-2		3	Pending	Jun-07	Jun-09	N		\$ 10,000.00		

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<b>(7) Erosion and Sediment Control</b>											
7.1 Provide technical and / or financial support to Washington Conservation District to provide construction site inspections for erosion and sedimentation control practices	EC-1		9	Ongoing	Jun-06	Oct-10	N		\$ 25,000.00		Annual budget item 200 hrs * \$70/hr + \$8000 admin + \$25k
7.2 Establish a template for erosion and sediment control plans that assist cities with the NDPES* permit process	EC-1		1	Pending	Jun-06	Dec-07	Y	2.7	\$ 5,000.00		
7.3 Evaluate the need for more stringent requirements for areas that drain to landlocked or semi-landlocked depressions and those areas identified as regional infiltration areas	EC-1		3	Pending	Jun-07	Jun-09	Y	2.7	\$ 5,000.00		
7.4 Create, or otherwise adopt, a SWPPP* template as a tool for use by the development community	EC-1		1	Pending	Jun-06	Dec-07	Y	2.7	\$ 5,000.00		
7.5 Establish sediment loads as a basis for evaluating the nondegradation of surface waters in accordance with the NDPES MS4* permit program	EC-1		3	Pending	Jun-06	Dec-07	Y	2.7	\$ 5,000.00		
7.6 Coordinate and / or cost share with Washington Conservation District to pursue positive conservation measures for lands with traditional agricultural practices	EC-2		3	Pending	Jun-07	Jun-09	N		\$ 25,000.00		
7.7 Evaluate the sediment transport capability of natural channels and the delivery of sediment to these channels	EC-2		1	Pending	Jan-08	Dec-09	Y	2.12	\$ 30,000.00		
7.8 Ensure the stability of natural waterways and drainageways	EC-2		1	Pending	Jan-08	Dec-09	Y	2.12	\$ 30,000.00		

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<b>(8) Education</b>											
8.1 Implement a web page that includes conveying educational materials	ED-1		0*	Ongoing	Jan-06	Jan-10	N		\$ 8,000.00		Annual budget item
8.2 Complete and implement a stakeholder involvement program	ED-1		0*	Ongoing	Jan-06	Jan-10	N		\$ 5,000.00		Annual budget item
8.3 Web-enable databases and information collected by the District	ED-1		3	Pending	Jun-07	Jun-09	N		\$ 25,000.00		
8.4 Provide funding to the Washington Conservation District to develop and implement education programs and materials to cities in the watershed	ED-2		9	Ongoing	Jun-06	Jan-10	N		\$ 25,000.00		Annual budget item
8.5 Initiate city collaboration regarding NPDES MS4* education requirements and use of Washington Conservation District resources	ED-2		3	Ongoing	Jun-06	Jan-10	N		\$ 10,000.00		
8.6 Pursue partnerships between public and private entities within the District to implement educational programs and projects	ED-2		3	Pending	Jun-07	Jun-09	N		\$ 8,000.00		
8.7 Develop an education plan that defines the target audiences	ED-3		9	Pending	Jun-06	Jun-08	N		\$ 8,000.00		
8.8 Organize education outreach opportunities for target audiences	ED-3		9	Pending	Jun-07	Jun-08	N		\$ 8,000.00		
8.9 Elevate the public awareness of significant surface waters (e.g., Powers and Ravine lakes) and their habitat values	ED-4		3	Pending	Jun-07	Jun-09	N		\$ 8,000.00		
8.10 Identify high quality landscapes which may be used for education or interpretive activities	ED-4		3	Pending	Jun-07	Jun-09	N		\$ 80,000.00		
8.11 Pursue educational opportunities at storm water demonstration sites or notable low impact development facilities in the District	ED-4		9	Pending	Jun-06	Jun-08	Y	2.7	\$ 75,000.00		Annual budget item





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<b>(10) Data Management</b>											
10.1 Post data in electronic format for downloading on the District web page	DM-1		3	Ongoing	Jun-06	Jan-10	N		\$ 5,000.00		annual budget
10.2 Require those providing services to the District to provide data and work products in an electronic format	DM-1		3	Pending	Jun-07	Jun-08	Y	2.7	\$ 8,000.00		
10.3 Create an electronic bibliography of reports and other technical information pertinent to the District	DM-1		0*	Ongoing	Jun-06	Jan-07	N		\$ 5,000.00		
10.4 Inventory, share and distribute computer models developed by the District	DM-1		1	Pending	Jun-07	Jun-09	N		\$ 5,000.00		
10.5 Serve as the source for FEMA boundary information and data	DM-1		1	Pending	Jun-07	Jun-09	N		\$ 15,000.00		
10.6 Establish modeling specifications for use by Cities and consultants working within the District	DM-2		9	Pending	Jun-06	Jun-07	Y	2.7	\$ 20,000.00		
10.7 Define hydrologic parameter development methods	DM-2		9	Pending	Jun-06	Jun-07	Y	2.7	\$ 8,000.00		
10.8 Collect data to characterize the quality of receiving waters within the District	DM-2		9	Pending	Jun-06	Jun-07	Y	2.7	\$ 8,000.00		
10.9 Define goals and objectives for the data collection program	DM-3		3	Pending	Jun-07	Jun-09	Y	3.16	\$ 10,000.00		
10.10 Evaluate the data collection network and revise program to fill gaps or streamline efforts	DM-3		3	Pending	Jun-07	Jun-09	Y	3.16	\$ 10,000.00		
10.11 Recognize the efforts of volunteers in collecting lake quality data	DM-3		1	Pending	Jun-07	Jun-09	N		\$ 5,000.00		