

Storm & Surface Water



View of downtown from the west shore of Capitol Lake

Storm and Surface Water

Storm and surface water management is a key environmental service provided by the City. Capital projects funded by the Storm and Surface Water Utility reflect a local responsibility to correct flooding problems, protect water quality and enhance aquatic habitat in local creeks and wetlands. Typical project work includes:

- Stormwater pipe systems
- Regional stormwater storage ponds
- Neighborhood stormwater treatment facilities
- Culvert replacements
- Streambank stabilization
- Forest and wetland revegetation
- Demonstration projects using new technologies
- Storm and surface water planning
- Environmental land purchases

The effectiveness of the City's stormwater system in managing flooding and protecting the natural environment varies depending on location. Private developments and City capital projects constructed prior



Division Street stormwater pond

to the mid-1980s were required to provide modest stormwater conveyance capacity, no water quality treatment, and very minimal storage of runoff in constructed ponds. Numerous complex flooding problems and irreversible habitat loss were caused by these early developments. Until recently, the majority of stormwater project funding has been spent addressing these historical concerns. Community expectations and regulations for managing stormwater have improved dramatically in recent years, resulting in a more holistic look at stormwater projects.

The capital program's success at resolving flooding problems during the last fifteen years has provided the City an opportunity to focus on water quality improvement, habitat protection, and scheduled replacement of aging pipe systems. The Storm and Surface Water Master Plan (2003) emphasizes the role of the Utility in environmental protection. The Plan provides guidance on Utility goals, implementation strategies, and expected outcomes. Capital projects, in concert with other elements of the Storm and Surface Water program, help meet these Utility goals:

- **Flooding:** *Reduce the frequency and severity of flooding so hazards are eliminated, except during major storm events.* The Utility will minimize potential flooding associated with new development through regulations for on-site stormwater systems. Flooding arising from existing inadequate public infrastructure will be addressed in a timely manner.
- **Water Quality:** *Improve water quality Citywide, while focusing infrastructure upgrades to reduce stormwater contaminant loads from untreated areas of the City.* Olympia drainage basins are managed based on the degree to which water quality is currently impacted by human actions. Unique management approaches are designed to minimize specific impacts in each basin. Green Cove Basin, a Comprehensive Plan designated priority basin, will be protected from further impacts as development occurs.
- **Aquatic Habitat:** *Improve aquatic habitat functions Citywide, while focusing on protecting intact habitat, improving Budd Inlet and managing riparian area vegetation.* The relationship between aquatic habitat conditions and land use impacts in urbanizing basins is scientifically complex and managerially challenging. Efforts include protecting high quality habitats, such as Green Cove Creek, while providing tangible improvements to other systems. Community engagement in environmental issues and the incorporation of innovative development techniques is key to



success in Olympia’s aquatic habitat goals. Our effectiveness will be monitored, evaluated, and reported to the community.

Several new capital needs will face the Utility in the next few years, including new State and Federal regulations and long-term infrastructure replacement. Regulations stemming from the Federal Clean Water Act (e.g., Total Maximum Daily Loads, National Pollution Discharge Elimination System) could lead to new areas for water quality work. These efforts will incorporate storm and surface water planning, education, regulation, technical assistance, and capital projects. Equally significant from a financial perspective is the acknowledgement that numerous major stormwater conveyance systems are reaching, or have exceeded, their life expectancy. Replacing deteriorating pipe systems, especially downtown, will be costly. Efforts are currently underway to evaluate and document aging pipe systems. A prioritized list of replacements and upgrades will become a regular component of the CFP.

The projects contained in the plan are financed annually through Storm and Surface Water Utility rates and General Facilities Charges (GFCs). Loans and grants are occasionally used. Debt financing has been only nominally used by the Utility.

Growth Related Projects

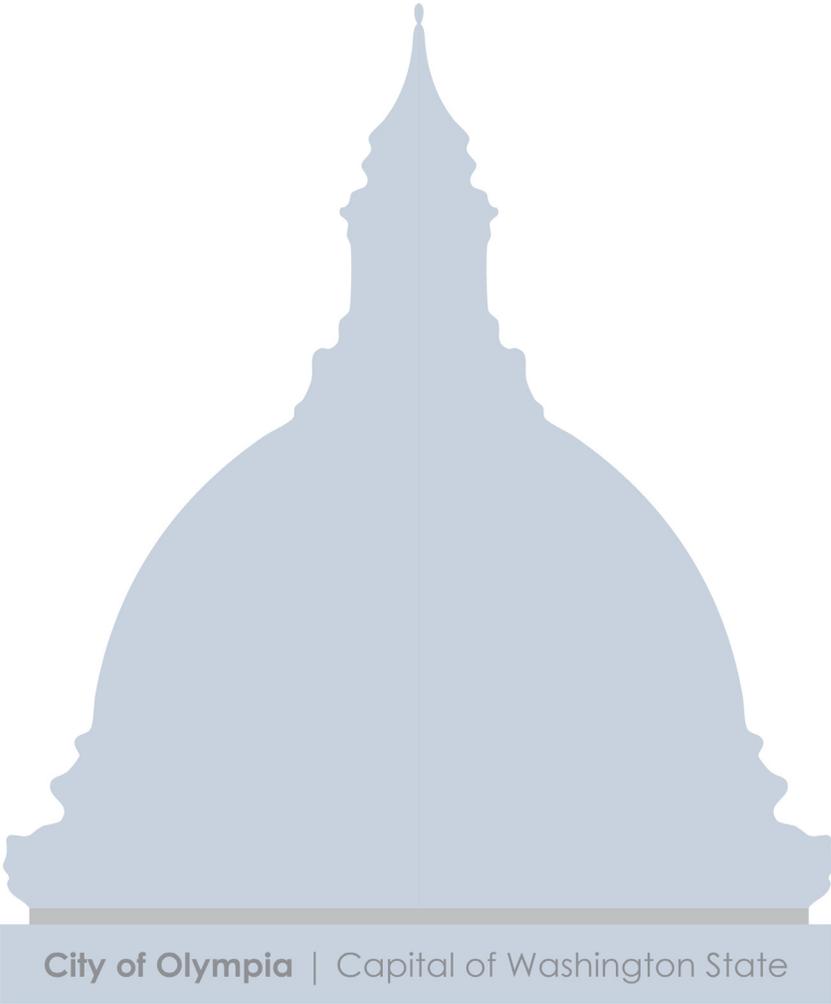
Projects that fall under this category are associated with work needed to accommodate new development and are funded by General Facility Charge (GFC) revenue. When a project serves both new and existing development, a portion of the project cost will also be funded through Stormwater Utility rates.

- Coleman, Bing and Walnut Conveyance Project- addresses both existing and future flows – 25% growth related

Additionally:

Included in the Transportation Section are projects funded by transfers from the Stormwater Utility as follows:

PROJECT	2012	2013-2017	TOTAL
Parks and Pathways Sidewalk	\$168,700	\$950,500	\$1,119,200
TOTAL	\$168,700	\$950,500	\$1,119,200



Aquatic Habitat Improvements (Program #9024)													
Location	Various locations. See Project List section.												
Links to Other Projects or Facilities	Critical Habitat Land Acquisition—Storm and Surface Water section Water Quality Improvements—Storm and Surface Water section Open Space Expansion—Parks, Arts and Recreation section												
Description	Construct projects that protect and enhance aquatic habitat in Olympia’s creeks, wetlands, lakes and marine environments, such as stabilizing streambanks, revegetating, replacing fish-barrier culverts, and supporting technological innovation.												
Project List	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #d9ead3;">YEAR</th> <th style="background-color: #d9ead3;">PROJECT</th> <th style="background-color: #d9ead3;">COST ESTIMATE</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2012</td> <td><i>Percival Creek Streambank Stabilization and Habitat Enhancement.</i> This project provides for improvements to Percival Creek near an existing eroding slope north of Evergreen Parkway. The goal is to stabilize the existing stormwater outfalls and slopes to reduce further erosion and to provide fish habitat enhancement. To achieve these goals, bioengineering techniques may be used.</td> <td style="text-align: right;">\$337,500</td> </tr> <tr> <td style="text-align: center;">2012-2017</td> <td><i>Critical Areas Vegetation Enhancements.</i> This project provides for vegetation enhancement of existing publicly owned stream corridors. The project’s primary goal is creating habitat; the secondary goal is erosion control.</td> <td style="text-align: right;">\$186,400</td> </tr> <tr> <td style="text-align: center;">2014</td> <td><i>Indian Creek Slope Stabilization at Martin Way.</i> The project provides for slope stabilization of Indian Creek upstream of Martin Way. The primary goal is erosion control, but a strong secondary goal is stream habitat enhancement.</td> <td style="text-align: right;">\$175,500</td> </tr> </tbody> </table>	YEAR	PROJECT	COST ESTIMATE	2012	<i>Percival Creek Streambank Stabilization and Habitat Enhancement.</i> This project provides for improvements to Percival Creek near an existing eroding slope north of Evergreen Parkway. The goal is to stabilize the existing stormwater outfalls and slopes to reduce further erosion and to provide fish habitat enhancement. To achieve these goals, bioengineering techniques may be used.	\$337,500	2012-2017	<i>Critical Areas Vegetation Enhancements.</i> This project provides for vegetation enhancement of existing publicly owned stream corridors. The project’s primary goal is creating habitat; the secondary goal is erosion control.	\$186,400	2014	<i>Indian Creek Slope Stabilization at Martin Way.</i> The project provides for slope stabilization of Indian Creek upstream of Martin Way. The primary goal is erosion control, but a strong secondary goal is stream habitat enhancement.	\$175,500
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Justification (Need/Demand)	The quality of aquatic habitat within Olympia continues to be challenged as land is developed for urban uses. The Storm and Surface Water Utility has Council-directed responsibility to help it manage and enhance our aquatic habitats. Capital projects for aquatic habitat enhancement typically complement Utility education, technical assistance, and regulatory work. Utility staff coordinates City efforts with regional and State habitat management efforts. Salmon, and the complex physical, chemical and biological conditions needed for their survival, exist at some level in all eight of Olympia’s major stream systems. The Utility has played a key role in the continued protection of these natural resources.												
Comprehensive Plan and Functional Plan(s) Citations	<p><i>Goals:</i></p> <p>PF 14: Eliminate chronic flooding, surface and groundwater degradation, and habitat loss caused by stormwater.</p> <p>PF 14.4: Incorporate requirements for enhanced protection of wellhead areas.</p> <p>PF 15.2: Streams and wetlands should be evaluated and classified according to their sensitivity.</p> <p>ENV 3.6: Protect the health and functioning of groundwater aquifers, lakes, ponds, wetlands, and stream corridors.</p> <p>ENV 3.12: Protect fish-bearing waters from damage.</p>												

Aquatic Habitat Improvements



Aquatic Habitat



Aquatic Habitat

CAPITAL COSTS	2012	2013-2017	Total
Design & Engineering	\$91,400	\$83,500	\$174,900
Construction	\$274,200	\$250,300	\$524,500
TOTAL	\$365,600	\$333,800	\$699,400

FUNDING SOURCES	2012	2013-2017	Total
Rates	\$365,600	\$333,800	\$699,400
Total	\$365,600	\$333,800	\$699,400

Annual Operations and Maintenance

Estimated Costs	N/A
Estimated Revenues	N/A
Anticipated Savings Due to Project	Not yet determined
Department Responsible for Operations	Public Works
Quadrant Location	North, South, West



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Flood Mitigation & Collection—Stormwater Program (Program #9028)																							
Location	Various locations. See Project List section.																						
Links to Other Projects or Facilities	Infrastructure Pre-Design and Planning—Storm and Surface Water section Open Space Expansion—Parks, Arts and Recreation section																						
Description	<p>Stormwater pipe systems collect and convey runoff to appropriate locations in order to prevent or mitigate flooding. Some projects identified in the program anticipate or correct flooding; others provide for the timely replacement of old, problematic pipe systems.</p> <p>The replacement of aging and deteriorating pipe systems is an increasingly important financial responsibility of the Utility. Problematic pipes are identified through Citywide pipe televising and condition rating programs. The televising program, which was initiated in 2005, focused on evaluating a representative sample of some of the City’s oldest and potentially most problematic pipe systems. Several pipes have been identified that are currently failing or are expected to fail within five years. Some of the problems involve long sections of pipes; others involve only isolated spot repairs.</p> <p>We will continue to utilize the televising and rating program in order to prioritize pipe replacements, and the results will be documented in the CFP annually.</p>																						
Project List	Project list and prioritization is subject to change. Priority is based on a condition rating system.																						
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This project would install steps, handrails and working platforms in order to create safer working conditions at these sites.</td> <td>\$200,000</td> </tr> <tr> <td></td> <td><i>Condition Rating of Existing Conveyance.</i> This project provides for television inspection and condition rating of existing stormwater conveyance systems. Condition rating is used to determine replacement and repair schedules. There are approximately 172 miles of storm sewer owned and operated by the Storm and Surface Water Utility. A portion of the existing system will be rated each year. The target goal is to rate all storm sewers within a 10-year period. The project work will be performed by quality contractors who have a condition rating system which is compatible with the City’s rating system and database.</td> <td>\$275,400</td> </tr> <tr> <td></td> <td><i>Yauger Regional Stormwater Facility Erosion and Landscape Maintenance.</i> This project will ensure that the stormwater facility is stabilized and vegetation suitable for recreational use is established.</td> <td>\$100,000</td> </tr> <tr> <td>2012-2017</td> <td><i>City Owned Stormwater Pond Rehabilitation.</i> This project will rehabilitate City-owned stormwater facilities. This involves removing the sediment, amending the soils, establishing attractive low maintenance landscaping and modifying the structures within the facility as needed. Rehabilitation involves more work than is typically performed during routine maintenance, and is intended to enhance the function and aesthetic appeal of the facility. This project will provide for the rehabilitation of one facility per year on average.</td> <td>\$372,600</td> </tr> <tr> <td></td> <td><i>Conveyance Spot Repairs (Pipe Replacement).</i> This project provides for spot repairs to the stormwater conveyance system at locations determined by the condition rating database. Complete replacement of a storm sewer pipe is less common and is not covered in this project. This project would provide for the repair of the worst portions of the storm sewer system within two years.</td> <td>\$856,000</td> </tr> </tbody> </table>	YEAR	PROJECT	COST ESTIMATE	2012	<i>12th Avenue Pipe Reroute.</i> This project relocates a stormwater conveyance pipe located on private property and under an existing commercial structure. 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Flood Mitigation & Collection—Stormwater Program (Program #9028)

YEAR	PROJECT	COST ESTIMATE
2013	<i>Ascension and 4th Avenue Pond Construction.</i> This project will construct a stormwater facility on City-owned land between 4th and Ascension Avenues. It will provide flow control and water quality treatment to flows generated from existing developed areas that discharge to the downstream stormwater conveyance system. The primary goal of the facility is flood control; water quality treatment is a secondary goal. The facility will be landscaped and integrated into the existing area and will be designed with varying side slopes and edges to provide a natural look. The existing stormwater conveyance in Ascension Ditch shall be discharged into the facility and treated. Access will be provided off 4th Avenue.	\$234,000
	<i>Bing, Harrison to Jackson Conveyance.</i> This project will make improvements to an existing regional conveyance system in the alignment of Bing Street, between Harrison Avenue and Jackson Avenue. The project will install a structure to provide access at a critical point for maintenance and improve the hydraulic capacity of additional structures to reduce the potential for flooding.	\$90,000
2014	<i>Culvert Markings and Inlet Standpipes.</i> This project provides for modifications and markings of significant culverts within the stormwater conveyance system. The markings will make it easier to locate critical structures. The standpipes will make the inlets less prone to clogging and blockages. The modifications will not increase the conveyance capacity of the culverts, but will greatly increase their performance reliability. There are 20 planned culvert improvements. Sample locations are Mud Bay Road, Conger Avenue, Langridge Avenue, and Ensign Road.	\$150,000
2015	<i>Coleman, Bing and Walnut Conveyance.</i> This project will replace an existing regional conveyance system in the vicinity of Coleman Avenue, Bing Street and Walnut Road. The current stormwater system was installed by private properties over a period of many years. Due to increasing regional flows using the system, the City took over its maintenance and operation. A new conveyance system that meets current design and materials standards will replace the old system. This project is partially funded by general facility charges (GFCs).	\$449,900
2016	<i>North Percival Stormwater Facility Modifications.</i> This project will modify the North Percival Stormwater Facility to make it easier to maintain and access. It will replace the new outfall structure with one less prone to clogging by beavers. This project will also enhance the passive education and recreational use of the site. It would create a walking path through and around the facility with a pedestrian/maintenance bridge over the Black Lake drainage ditch.	\$506,100

Justification (Need/Demand)

Certain areas of the system are deteriorating due to age, particularly in the Downtown area. This program replaces parts of the existing system based on televising and a condition pipe rating system. Flooding problems have been reduced in recent years through capital development. However, some regional and localized problems still exist.

Comprehensive Plan and Functional Plan(s) Citations

Goals:
 PF 14: Eliminate chronic flooding, surface and groundwater degradation, and habitat loss caused by stormwater.
 PF 14.1: Existing and new development should minimize increases in total runoff quantity.
 PF 15: Maintain an effective stormwater management program.
 ENV 3: Protect and improve local and regional water resources.
 ENV 3.6: Protect the health and functioning of groundwater aquifers, lakes, ponds, wetlands, and stream corridors.
 ENV 4: Preserve and protect a diversity of wildlife habitat throughout the City and within Olympia’s Urban Growth Area.

Flood Mitigation & Collection— Stormwater Program



Urban Flooding



Stormwater Pond Infrastructure

CAPITAL COSTS	2012	2013-2017	Total
Design & Engineering	\$197,600	\$542,760	\$740,360
Construction	\$592,600	\$2,171,040	\$2,763,640
TOTAL	\$790,200	\$2,713,800	\$3,504,000

FUNDING SOURCES	2012	2013-2017	Total
Rates	\$790,200	\$2,601,325	\$3,391,525
General Facility Charges (GFCs)		\$112,475	\$112,475
TOTAL	\$790,200	\$2,713,800	\$3,504,000

Annual Operations and Maintenance

Estimated Costs	Not yet determined
Estimated Revenues	N/A
Anticipated Savings Due to Project	Decreases likelihood of system failure
Department Responsible for Operations	Public Works
Quadrant Location	Citywide

Infrastructure Pre-Design & Planning—Stormwater Program (Program #9903)								
Location	City stormwater service area							
Links to Other Projects or Facilities	Flood Mitigation and Collection—Storm and Surface Water section							
Description	This program provides funds for specific pre-design and planning efforts associated with the stormwater system construction, including emergency projects.							
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Justification (Need/Demand)	This program evaluates projects prior to their appropriation in the annual Capital Facilities Plan to ensure accurate scope of work, cost estimates, and a full evaluation of project alternatives. Other uses for this information include project scheduling, assessment of rate impacts, and cash flow planning.							
Comprehensive Plan and Functional Plan(s) Citations	Goals: PF 15: Maintain an effective stormwater management program. PF 15.2: Streams and wetlands should be evaluated and classified according to their sensitivity. PF 16: Meet the requirements of the Puget Sound Water Quality Management Plan.							

Infrastructure Pre-Design & Planning— Stormwater Program



Stormwater Pond Facility



Stormwater Pond Facility

CAPITAL COSTS	2012	2013-2017	Total
Pre-Design & Planning	\$27,000	\$152,200	\$179,200
TOTAL	\$27,000	\$152,200	\$179,200

FUNDING SOURCES	2012	2013-2017	Total
Rates	\$27,000	\$152,200	\$179,200
TOTAL	\$27,000	\$152,200	\$179,200

Annual Operations and Maintenance

Estimated Costs	N/A
Estimated Revenues	N/A
Anticipated Savings Due to Project	N/A
Department Responsible for Operations	Public Works
Quadrant Location	Citywide



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Water Quality Improvements (Program #9027)														
Location	Various locations. See Project List section.													
Links to Other Projects or Facilities	N/A													
Description	Continue to improve water quality in Olympia’s creeks, wetlands, lakes, and marine environments through projects that treat contaminated stormwater runoff. Projects are identified and prioritized based on Citywide needs.													
Project List	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%; text-align: center;">YEAR</th> <th style="width: 65%; text-align: center;">PROJECT</th> <th style="width: 20%; text-align: center;">COST ESTIMATE</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2012-2013</td> <td><i>Giles Avenue Water Quality Treatment Facility Expansion.</i> This project provides for the expansion of the Giles Avenue water quality treatment facility in the Schneider Creek watershed. The expansion would be built adjacent to the existing facility on land that is currently privately owned. The goal of the facility would be to provide pretreatment to the flows which are tributary to the stormwater filter system already in operation.</td> <td style="text-align: center;">*\$551,600</td> </tr> <tr> <td style="text-align: center;">2012-2017</td> <td> <p><i>Neighborhood Water Quality Retrofits.</i> This project would create stormwater facilities within existing neighborhoods with the goal of providing some level of water quality treatment to currently unmanaged runoff. We seek opportunities to partner with involved neighborhoods to provide facilities which enhance the neighborhood. A strong secondary goal is to include public outreach and education components into the facility design and operation.</p> <p><i>NSR 1: Madison and Thomas Rain Garden.</i> This project would create a stormwater treatment rain garden on property already owned by the City at the corner of Madison Avenue and Thomas Street. Currently there is a stormwater outfall on this property which is eroding the hillside. The primary goal of the project is erosion control and water quality improvement.</p> <p><i>NSR 2: Brown Street Pond.</i> This project would create a stormwater treatment facility on land to be purchased by the City. The target location for the facility is the junction of Thurston Avenue and Brown Street. Currently there is a stormwater outfall on this property which is discharging to a wetland. The primary goal of the project is water quality treatment.</p> <p><i>NSR 3: 11th and Thomas Rain Garden.</i> This project would create a stormwater facility within the existing unopened right-of-way at 11th Avenue and Thomas Street. The facility will provide stormwater treatment to runoff from 11th and 10th Avenues. The primary goal of the project is water quality treatment.</p> <p><i>NSR 4: Bioswale in Alley between Joy and Ethridge NE.</i> This project would create a bioswale in an existing drainage ditch. The drainage ditch is located in an alley between Joy Street and Ethridge Avenue NE. The primary goal of the project is water quality treatment.</p> <p><i>NSR 5: Oak Avenue Rain Garden.</i> This project would create a stormwater facility within the existing unopened Oak Avenue right-of-way between Lybarger Street and Fir Street. The facility will provide stormwater treatment runoff from Lybarger and Fir Streets. The primary goal of the project is water quality treatment.</p> </td> <td style="text-align: center;">\$1,119,200</td> </tr> <tr> <td style="text-align: center;">2014</td> <td><i>Evergreen Park Drive Treatment Facility.</i> This project would create a stormwater treatment facility for currently untreated runoff from Evergreen Park Drive. The goal of the project will be water quality treatment. The project shall evaluate different treatment technologies and locations for the project. It shall also evaluate providing water quality treatment for water which currently discharges directly to Capital Lake or to Percival Cove.</td> <td style="text-align: center;">\$351,000</td> </tr> </tbody> </table>		YEAR	PROJECT	COST ESTIMATE	2012-2013	<i>Giles Avenue Water Quality Treatment Facility Expansion.</i> This project provides for the expansion of the Giles Avenue water quality treatment facility in the Schneider Creek watershed. The expansion would be built adjacent to the existing facility on land that is currently privately owned. The goal of the facility would be to provide pretreatment to the flows which are tributary to the stormwater filter system already in operation.	*\$551,600	2012-2017	<p><i>Neighborhood Water Quality Retrofits.</i> This project would create stormwater facilities within existing neighborhoods with the goal of providing some level of water quality treatment to currently unmanaged runoff. We seek opportunities to partner with involved neighborhoods to provide facilities which enhance the neighborhood. A strong secondary goal is to include public outreach and education components into the facility design and operation.</p> <p><i>NSR 1: Madison and Thomas Rain Garden.</i> This project would create a stormwater treatment rain garden on property already owned by the City at the corner of Madison Avenue and Thomas Street. Currently there is a stormwater outfall on this property which is eroding the hillside. The primary goal of the project is erosion control and water quality improvement.</p> <p><i>NSR 2: Brown Street Pond.</i> This project would create a stormwater treatment facility on land to be purchased by the City. The target location for the facility is the junction of Thurston Avenue and Brown Street. Currently there is a stormwater outfall on this property which is discharging to a wetland. The primary goal of the project is water quality treatment.</p> <p><i>NSR 3: 11th and Thomas Rain Garden.</i> This project would create a stormwater facility within the existing unopened right-of-way at 11th Avenue and Thomas Street. The facility will provide stormwater treatment to runoff from 11th and 10th Avenues. The primary goal of the project is water quality treatment.</p> <p><i>NSR 4: Bioswale in Alley between Joy and Ethridge NE.</i> This project would create a bioswale in an existing drainage ditch. The drainage ditch is located in an alley between Joy Street and Ethridge Avenue NE. The primary goal of the project is water quality treatment.</p> <p><i>NSR 5: Oak Avenue Rain Garden.</i> This project would create a stormwater facility within the existing unopened Oak Avenue right-of-way between Lybarger Street and Fir Street. The facility will provide stormwater treatment runoff from Lybarger and Fir Streets. The primary goal of the project is water quality treatment.</p>	\$1,119,200	2014	<i>Evergreen Park Drive Treatment Facility.</i> This project would create a stormwater treatment facility for currently untreated runoff from Evergreen Park Drive. The goal of the project will be water quality treatment. The project shall evaluate different treatment technologies and locations for the project. It shall also evaluate providing water quality treatment for water which currently discharges directly to Capital Lake or to Percival Cove.	\$351,000
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Water Quality Improvements (Program #9027)			
Project List (continued)	YEAR	PROJECT	COST ESTIMATE
	2015	<i>Pacific Avenue and Martin Way Stormwater Facility Construction (Phase III)</i> . This project will construct a stormwater facility on City-owned land between Pacific Avenue and Martin Way. The facility will provide stormwater treatment to flows generated from existing developed areas that discharge to Indian Creek. The primary goal is water quality treatment; a secondary goal is to provide flow control. The facility will be integrated into the wetland buffer and shall be designed with varying side slopes and edges to provide a natural look to the facility; it will also be landscaped. Phase 3 will construct a stormwater facility off Martin Way. The existing stormwater conveyance in Martin Way shall be re-routed into the facility for treatment. Access shall be provided off Martin Way through an easement.	\$365,000
<i>* Mitigation funds will be used to pay for a portion of this project.</i>			
Justification (Need/Demand)	Managing water quality problems associated with stormwater runoff is the primary responsibility of the Storm and Surface Water Utility. Increasingly stringent Federal and State requirements (e.g., National Point Discharge Elimination System) necessitate increased efforts to manage water quality. One of the priorities of the Storm and Surface Water Master Plan is to identify water quality projects within the City, in newly annexed areas, and in the Urban Growth Area.		
Comprehensive Plan and Functional Plan(s) Citations	<p><i>Goals:</i></p> <p>PF 14: Eliminate chronic flooding, surface and groundwater degradation, and habitat loss caused by stormwater.</p> <p>PF 15: Maintain an effective stormwater management program.</p> <p>ENV 3: Protect and improve local and regional water resources.</p> <p>ENV 3.1: Support cooperative surface water and groundwater management efforts.</p> <p>ENV 3.6: Protect the health and functioning of groundwater aquifers, lakes, ponds, wetlands, and stream corridors.</p>		

Water Quality Improvements



Stormwater Facility



Stormwater Facility

CAPITAL COSTS	2012	2013-2017	Total
Design & Engineering	\$42,200	\$554,500	\$596,700
Construction	\$126,500	\$1,663,600	\$1,790,100
TOTAL	\$168,700	\$2,218,100	\$2,386,800

FUNDING SOURCES	2012	2013-2017	Total
Rates	\$168,700	\$2,218,100	\$2,386,800
TOTAL	\$168,700	\$2,218,100	\$2,386,800

Annual Operations and Maintenance

Estimated Costs	Giles Avenue Treatment Facility—\$4,000 annually; Evergreen Park Drive Treatment Facility—\$3,000 annually
Estimated Revenues	N/A
Anticipated Savings Due to Project	Facilities will operate more efficiently.
Department Responsible for Operations	Public Works
Quadrant Location	South, West, Downtown



City of Olympia | Capital of Washington State