

Core Services Enhancement Strategies Table*

Core Service: Long Range Planning		
Program	Current Program Description	Proposed Core Services Enhancements (Applicable Strategies)
Storm and Surface Water Plan	The Storm and Surface Water Plan provides policy, program and financial guidance to the Utility. The plan update process, projected to occur on a ten-year cycle, brings together staff from throughout the Utility. Public review is a key component of the update process.	<ul style="list-style-type: none"> • The Utility proposes to permanently fund the pilot habitat program. Many long range planning efforts are currently performed by habitat management staff brought on with the pilot program. <ul style="list-style-type: none"> ○ Increase Utility staff time devoted to collaborating with others on habitat and climate change related activities (3-1) ○ Analyze land for possible protection through acquisition or easements (3-4) ○ Identify and manage invasive species by increasing both removal in city-managed aquatic habitats and landowner education activities (3-5) ○ Identify important habitat corridors crossing public and private properties (3-6) ○ Participate in City-wide revisions of environmental protection regulations (3-8) ○ Identify and manage vegetation in riparian areas by increasing both removal in city-managed riparian areas and landowner education activities (3-10) ○ Identify aquatic habitat on private properties for focused outreach and technical assistance (3-14) ○ Increase Utility staff time devoted to collaborating with internal and external partners on large-scale habitat projects (3-16) • Develop and adopt new City regulations to expand enforcement of illicit discharges (2-4) • Coordinate with LOTT Clean Water Alliance to evaluate options for providing higher levels of water quality treatment (2-13) • Update the City’s integrated pest management plan in coordination with other departments (2-14). • Collaborate with City departments to develop a coordinated City-wide integrated pest management strategy (3-2) • Develop and implement vegetation and habitat management plans for City-owned properties (3-3) • Refine and prioritize the Utility’s 2013 inventory of and actions to improve remaining habitat (3-7) • Develop beaver management strategy that recognizes environmental benefits while managing flood risk (3-9) • Monitor aquatic habitat quality and quantity using the best available science (3-11) • Create (or update) standard operating procedures for inspections, preventative maintenance and correction programs (4-9) • Develop and adopt new City regulations to expand enforcement capabilities (4-11) • Develop and implement and sea level rise response plan (4-17)
Citywide Planning	Utility staff participates in Citywide planning efforts, including Comprehensive Plan, Shoreline Management Plan and development regulation updates. A significant work effort is currently being devoted to sea level rise response planning with Utility staff serving as the lead in the City-wide effort.	
Water Quality Coordination	Utility staff is responsible for coordinating the City’s compliance with its National Pollution Discharge Elimination System (NPDES) permit and Total Maximum Daily Load (TMDL) requirements. Program tasks include: monitoring NPDES program requirements; annually updating the City’s Stormwater Management Program; coordinating ongoing training requirements; and participating in the Deschutes TMDL Advisory Group.	
Habitat Coordination	Collaborating with internal and external partners is critical to efforts to restore and enhance aquatic habitat and adapt to climate change. Program tasks include: assessing priorities for restoring and enhancing habitat; assessing potential land acquisition; planning restoration projects; ensuring the Utility’s outreach program is efficient and effective; overseeing the City’s noxious weed control efforts; and assessing and monitoring habitat quality and quantity.	
Standard Operating Procedures	The Utility develops and maintains standard operating procedures that enable Operations and Maintenance staff to perform tasks properly and safely.	

Core Service: Asset Management		
Program	Current Program Description	Proposed Core Services Enhancements (Applicable Strategies)
Mapping	Mapping aids in infrastructure maintenance, repairs and upgrades decisions. Stormwater infrastructure mapping is also a NPDES permit requirement. Mapping tasks include developing and maintaining an accurate inventory of assets, impervious surfaces and geonetwork connectivity of connections to the stormwater system.	<ul style="list-style-type: none"> • Ensure inspection and maintenance standards for private and public stormwater treatment facilities are being met (2-19) • Expand efforts to identify important habitat corridors crossing public and private properties (3-6) • Expand efforts to monitor the quantity and quality of aquatic habitat (3-11) • Develop a natural infrastructure asset management program (4-4) • Develop public stormwater infrastructure maintenance plans that include level of service standards (4-12) • Monitor resources through work order system and identify any additional needs (4-13) • Research, map, analyze and inspect private stormwater treatment facilities built prior to 2005 (4-14) • Develop an in-house CCTV program to provide long term condition rating of stormwater pipes (4-21) • Develop field-based data collection tools for inspection and maintenance of public and private stormwater utility infrastructure (4-24) • Implement a basin approach to utility infrastructure maintenance with an emphasis on sediment management (4-25) • Modify the street sweeping program to have an emphasis on water quality (4-26)
Condition Rating & Assessment	The Utility uses condition rating and assessment tools to identify needed maintenance, repair, or replacement of deteriorating infrastructure. Private contractors document the condition of stormwater gravity mains through use of closed circuit television technology while Utility crews perform condition rating and assessment of other stormwater infrastructure via field inspections.	
Public Infrastructure Management	Operations and maintenance related deficiencies identified through an asset condition rating assessment are addressed by Utility crews.	
Private Infrastructure Management	The key work effort is developing a comprehensive database of all private stormwater facilities. The database will be used to enhance the private stormwater maintenance inspection program which is currently limited to facilities built after 2005 as required by the NPDES permit.	
Water Quality Monitoring and Evaluation	The Utility collaborates with Thurston County to sample local streams and contributes funds to a regional monitoring collective that tracks water quality throughout Puget Sound.	
Habitat Monitoring and Evaluation	Utility staff determines priorities for aquatic habitat strategies and capital projects through monitoring and data evaluation. Monitoring tools include mapping, remote sensing, and sampling of aquatic macroinvertebrates.	
Data Management	Because collecting asset data is key to implementing a robust asset management program, managing collected data must occur. Utility crews use ESRI's Collector apps to keep track of inspections, collect field data, signal work orders and organize emergency responses. The Utility is investigating the use of new asset management software.	

Core Service: Technical Review and Support		
Program	Current Program Description	Proposed Core Services Enhancements (Applicable Strategies)
Development Review	Utility staff develops the City's stormwater regulations and works with private developers during the development application plan review process to ensure compliance with the City's regulations.	<ul style="list-style-type: none"> • Improve inter-departmental coordination for implementation of the City's temporary erosion and sediment control inspection and enforcement program (2-2) • Increase Utility staff time devoted to providing development review, technical support and inspections to address low impact development standards (2-16) • Provide focused outreach and technical assistance to private properties containing aquatic and associated habitats (3-14) • Permanently fund staff dedicated to efforts to protect, steward, and restore aquatic and associated habitats (3-16) • Expand inspections beyond NPDES requirements and provide technical assistance to private system managers (4-14)
Internal/External Technical Support	Utility staff frequently provides technical expertise for permitting and regulatory support of City-sponsored projects, including assisting with stormwater infrastructure design, stormwater modeling and temporary erosion and sediment control and environmental permitting requirements.	
Stormwater Operations Problem Solving Team	The STOPS team investigates, evaluates, and prioritizes storm and surface water problems identified by City staff or citizens. Utility staff facilitates the STOPS team which is a collaborative effort of staff from Utility Engineering & Planning, Operations, Environmental Services and Street Operations. All investigations and recommendations originating from the STOPS team are maintained in a database that spans more than a decade.	

Core Service: Flood Prevention		
Program	Current Program Description	Proposed Core Services Enhancements (Applicable Strategies)
Education and Outreach	The Utility's "rake a drain" program encourages residents to keep grates and catch basins clear of leaves and debris. Owners of private stormwater facilities are trained on proper facility maintenance and repairs.	<ul style="list-style-type: none"> • Evaluate possibilities for regional, City-owned detention facilities and support design and construction where determined feasible through basin planning (1-2) • Evaluate the design of legacy stormwater detention facilities to determine whether flow control improvements can be made (1-3) • Expand staffing and equipment within the O&M Division to meet the operational demands created by new LID facilities. (1-7) • Participate in a city-wide sea level rise adaptation program <ul style="list-style-type: none"> ○ Consolidate downtown outfalls to improve manageability (1-10) ○ Install tide gates on downtown outfalls to reduce flood risks (1-11) ○ Consider separation of storm drainage from combined sewers to protect wastewater treatment plant (LOTT) (1-12) ○ Develop structural alternatives to mitigate long-term or projected sea level rise impacts (1-13) ○ Develop and implement a sea level rise response plan (4-17) • Improve management of beaver activity to mitigate flooding risk (3-9) • Transition vegetation and LID maintenance to Operations (4-23)
Stormwater Facility Maintenance	Maintenance of the Utility's infrastructure is important to prevent flooding. Program tasks include maintenance and repair of pipes, structures, ponds and treatment facilities with a focus on managing sediment.	
Storm Event Preparation	Standard operating procedures are in place to respond to storms in flood-prone areas and are reviewed and update frequently. The Utility maintains a "Hot Spot" list of areas prone to localized flooding. Utility crews use a Collector application to help manage these locations. To ensure readiness for emergencies, Utility staff maintains the equipment, materials and skills required to respond to storm events.	

Core Service: Emergency Response		
Program	Current Program Description	Proposed Core Services Enhancements (Applicable Strategies)
Storm Event Response	Once a major storm or other emergency occurs, Utility staff are among the first to responder. Response tasks often include leaf litter and debris removal, pumping of floodwaters, sandbagging and sealing catch basins and manholes.	<ul style="list-style-type: none"> No enhancements for this Core Service
Emergency Response Plan	Utility staff provides key organizational support to the Public Works All Hazards Plan – Public Work’s approach to emergency operations. The goal is to provide for public life, health and safety and to restore essential services to the community.	

Core Service: Pollution Prevention		
Program	Current Program Description	Proposed Core Services Enhancements (Applicable Strategies)
Education and Outreach	The Utility engages the public to prevent non-point pollution, spills and illicit discharges through general and focused educational activities such as storm drain marking, lawn-care seminars and direct outreach to businesses.	<ul style="list-style-type: none"> Expand the Utility’s illicit discharge prevention and investigation programs to ensure consistency with new regulations (2-3) Increase the Utility’s role in managing the current street sweeping program with an emphasis on water quality (2-5) Develop and implement a business pollution prevention program targeted to businesses with the greatest pollution potential (2-6) Ensure pollution prevention plans are developed for all city facilities (2-11) Improve the existing protocol for illicit discharge detection and elimination fecal coliform investigations (2-12) Implement requirements resulting from the second phase of the Deschutes TMDL (2-18) Increase inspection and maintenance of facilities to address low impact development standards (2-19) Develop and implement a sediment tracking system to record sediment removed by type of maintenance activity (2-20) Develop and implement pollution prevention training tailored to field staff (2-23) Expand inspections beyond NPDES requirements (4-14)
Illicit Discharge Prevention	The Utility provides illicit discharge prevention training to other City staff. Training includes spill identification and response, Certified Erosion and Sediment Control Lead training, Road Maintenance training, and field application of best management practices.	
Illicit Discharge Investigation	Illicit discharges and connections to the stormwater system are identified through citizen reporting, inspections and observations reported by City staff. Once identified, the Utility responds within 15 minutes during business hours and within one hour during non-business hours.	
Spill Response	Utility crews respond, clean up, document and report spills of contaminants that enter the stormwater system. The Utility’s spill hotline operates 24 hours per day, seven days a week.	
Stormwater Facility Inspection and Maintenance	Utility stormwater ponds are inspected annually. Those identified as not functioning to as-built conditions are placed on a priority maintenance schedule. Utility catch basins are inspected at least once every two years. During each catch basin inspection, sediment is removed. Private stormwater systems constructed after 2005 are inspected annually.	
Street Sweeping	The Utility’s current street sweeper schedule is designed to target downtown and arterials with bike lanes. Other streets are swept by zone on a rotating basis. The Utility splits funding of the program with the City’s Transportation line-of-business.	
Solids Management	The Utility collects, removes and disposes of more than 400 tons of sediment annually through its stormwater facility maintenance work. The material is stored and dried at the City’s central maintenance facility then hauled to solid waste facility for final disposal.	

Core Service: Habitat Management		
Program	Current Program Description	Proposed Core Services Enhancements (Applicable Strategies)
Education and Outreach	Utility staff provides information, technical assistance, and incentives to private landowners with aquatic habitats on their property. Program activities include workshops on habitat enhancement techniques, citizen science monitoring and other volunteer opportunities and free native trees and shrubs.	<ul style="list-style-type: none"> • Update the City’s integrated pest management plan in coordination with other departments (2-14). • The habitat management program is currently a pilot program. The Utility proposes to make the pilot program permanent <ul style="list-style-type: none"> ○ Increase Utility staff time devoted to collaborating with others on habitat and climate change related activities (3-1) ○ Collaborate with other departments to update the City’s integrated pest management strategy to guide noxious weed control (3-2) ○ Develop and implement vegetation and habitat management plans specific to City-owned properties (3-3) ○ Analyze land for possible protection through acquisition or easements (3-4) ○ Identify and manage invasive species by increasing both removal in city-managed aquatic habitats and landowner education activities (3-5) ○ Identify and manage vegetation in riparian areas by increasing both removal in city-managed riparian areas and landowner education activities (3-10) ○ Expand efforts to monitor the quantity and quality of aquatic habitat (3-11) ○ Increase public education activities related to the important functions provided by aquatic habitat (3-13) ○ Increase efforts to provide technical assistance and incentives to private properties containing aquatic and associated habitats (3-14) ○ Increase Utility staff time devoted to collaborating with internal and external partners on large-scale habitat projects (3-16) • Develop a natural infrastructure asset management program (4-4) • Design and plan capital improvements to complement natural infrastructure (4-7) • Transition vegetation and LID maintenance programs to Stormwater Operations (4-23)
Stewardship Planning	To inform stewardship efforts, the Utility uses remote sensing, on-the-ground surveys, reference sites and historical information to assess the condition of vulnerable habitats on City-managed property, other publicly managed sites. Such data informs stewardship plans prepared to protect, enhance, and restore key habitat areas.	
Restoration and Enhancement	Utility staff works with public (and at times private) landowners on restoration and enhancement projects including managing invasive species and planting appropriate native species in wetlands, placing logs in streams and tree planting. Intensive structural projects such as culvert replacements are budgeted as capital projects.	
Aquatic Habitat Monitoring	Tracking the quantity and quality of aquatic and upland habitats is a key stewardship task. Utility staff uses best available science, methods, and tools to collect data relevant to water quality, flood management, and natural hydrologic function.	
Noxious Weed Coordination	Utility staff coordinates city-wide efforts to comply with County weed board requirements, including managing site weed data and tracking treatments.	
Collaboration with Partners	Utility staff collaborates with other city departments, community groups, outside agencies, and tribes on habitat protection, stewardship, enhancement, and restoration efforts.	

Core Service: Capital Improvements Program		
Program	Current Program Description	Proposed Core Services Enhancements (Applicable Strategies)
Flooding	Capital facilities are publicly funded construction projects. Utility funds support hydrologic evaluation, engineering design, construction management, stormwater planning, and administration. Flooding is typically associated with under capacity stormwater conveyance systems. Flooding problems are addressed by either increasing the conveyance capacity or constructing regional ponds to control peak runoff flows. Capital projects to address flooding associated with rising sea levels will be required in the future.	<ul style="list-style-type: none"> • Model key sub-basins to identify existing and future flow capacity problems (1-1) • Take a basin planning approach when planning for regional detention facilities (1-2) • Evaluate older public stormwater detention facilities to optimize effectiveness(1-3) • Consolidate downtown outfalls (1-10) • Install tide gates on downtown outfalls (1-11) • Protect the LOTT wastewater treatment plant from marine water (1-12) • Develop structural alternatives to mitigate sea level rise (1-13) • Evaluate existing untreated pollution generating infrastructure and prioritize areas to retrofit for treatment (2-8) • Collaborate with other agencies, tribes, and community organizations to support environmental goals (3-1) • Support partners and community efforts to protect, steward, and restore aquatic and associated habitats (3-16) • Align capital project investments to complement and protect the function and condition of remaining aquatic habitat and natural infrastructure (4-7) • Develop a formal protocol for evaluating and ranking capital projects (4-19)
Water Quality	Capital facilities are publicly funded construction projects. Utility funds support hydrologic evaluation, engineering design, construction management, stormwater planning, and administration. The Utility strives to construct at least one capital project each year to provide water quality treatment where none currently exists.	
Aquatic Habitat	Capital facilities are publicly funded construction projects. Utility funds support hydrologic evaluation, engineering design, construction management, stormwater planning, and administration. Capital projects address a variety of habitat issues, including fish passage and access through the construction of culverts and the purchase of land to protect key aquatic habitat.	

Core Service: Utility Administration and Support Services		
Program	Current Program Description	Proposed Core Services Enhancements (Applicable Strategies)
Budgeting	Budgets and rates are developed annually by Utility staff for review and approval by the Utility Advisory Committee and City Council.	<ul style="list-style-type: none"> • Develop a rate structure that provides an incentive to retrofit private stormwater systems to provide higher levels of treatment (2-9) • Annually review the plan’s implementation, specifically: <ul style="list-style-type: none"> ○ Roles and responsibilities between sections ○ Program plans’ performance against performance measures ○ Resource and budgetary needs ○ New regulatory requirements
Staff Management	Staff management tasks include developing programs and work plans, providing staff training and hiring new staff.	
Support Services	Key support services include providing assistance with the following: annual budget establishment, communications and outreach; legal request processing; meeting setup; correspondence; recruiting and training new staff.	