What are the Draft 2017 Plan Strategies?

The Utility's success at resolving flooding problems during the last 30 years has created an opportunity to focus increasingly on water quality improvement, habitat protection, and scheduled replacement of aging pipe systems. Community expectations and regulations for managing stormwater have improved considerably, resulting in a more holistic look at stormwater management and aquatic systems.

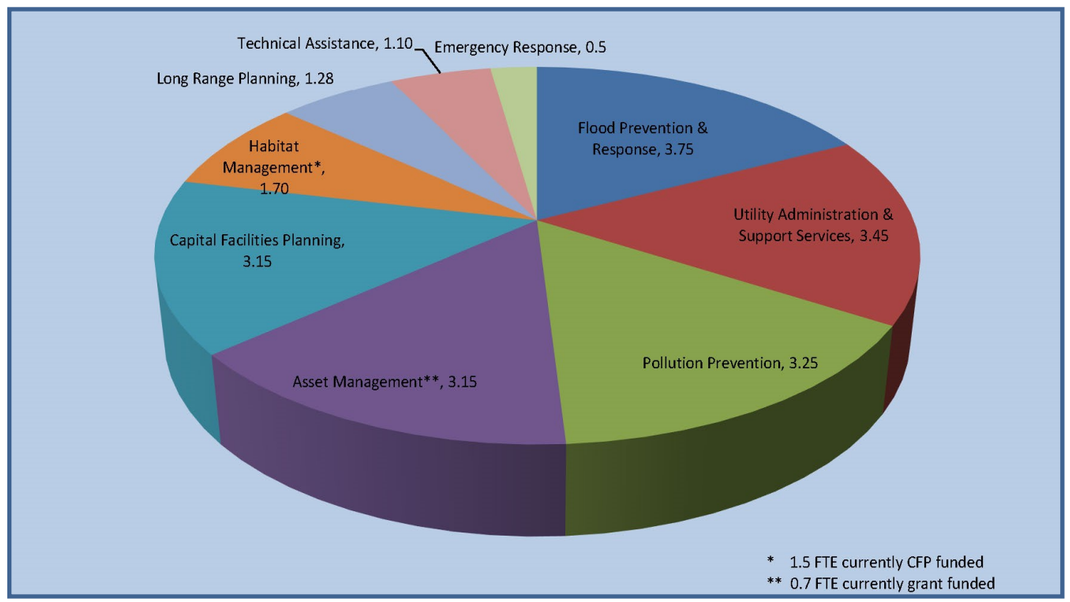
The Utility proposes two types of strategies: those that continue the Utility's core services and those that enhance the Utility's core services.

Key recommendations include:

- Permanently funding the pilot habitat program
- Expanding education and outreach efforts
- Integrating low impact development into inspection and maintenance programs
- Formalizing operating and planning procedures
- Responding to requirements resulting from the Deschutes Total Maximum Daily Load (TMDL) process
- Planning for anticipated impacts of sea level rise
- Improving the asset management program
- Modifying the street sweeping program to have a water quality focus

What are the Utility's Core Services?

The Utility has a total of 21.3 Full Time Equivalent staff organized into the following nine core services.



2017 Draft Storm and Surface Water Plan

How is the 2017 Draft Storm and Surface Water Plan Organized?

The Draft 2017 Plan is organized in three parts, describing the What, Why, and How of the Plan.

What

The first four chapters describe the Plan, the natural and historical context for planning, the Utility's responsibilities, and the natural and built infrastructure for managing storm and surface water.

- **Chapter 1 Introduction** gives a brief introduction to the Utility's purpose, service area, infrastructure, core services and customers; and Plan purpose, planning process, and organization.
- **Chapter 2 Context & Trends** provides the context for the Plan by describing the physical setting of the service area, and its population and land use; and tracing the history of stormwater management in Olympia and the Utility's evolving priorities.
- **Chapter 3 Surface Water Management** outlines the Utility's responsibilities, internal organization, and relationships with other agencies and jurisdictions.
- **Chapter 4 Built and Natural Infrastructure** is an overview of the built and natural infrastructure that, in combination, form the Utility's stormwater system.

Why

Chapters 5 through 8 describe the reasons motivating the need for this Plan and its direction, including the regulatory environment and the challenges of flood mitigation, improving water quality, and protecting aquatic habitat.

- **Chapter 5 Legal and Planning Framework** outlines the complex set of laws and regulations which increasingly define the Utility's operations.
- **Chapter 6 Flooding** reports on the considerable reductions in the severity and frequency of flooding, impacts of flooding, the role of the Utility in enforcing requirements of the *Drainage Design and Erosion Control Manual*, and remaining challenges the Utility faces in mitigating flooding impacts.
- **Chapter 7 Water Quality** describes activities that impact water quality, the current quality of Olympia's water bodies, the Utility's role in implementing Clean Water Act regulations, and remaining challenges the Utility faces in improving surface water quality.
- **Chapter 8 Aquatic Habitat** details existing conditions of Olympia's aquatic environment and habitat, the Utility's role in implementing and supporting habitat stewardship efforts, and remaining challenges the Utility faces in protecting and enhancing aquatic habitat.

How

The last four chapters describe the Utility's recommended approach, including its funding strategy, to address a changing regulatory environment and the challenges of flood mitigation, improving water quality, and protecting aquatic habitat.

- **Chapter 9 Core Services** explains in detail how the Utility is addressing challenges of flood mitigation, pollution prevention, and habitat protection through its nine Core Services.
- **Chapter 10 Strategies** details the strategies proposed, in response to current challenges, to effectively address Utility goals and objectives during the next 10 years.
- **Chapter 11 Capital Improvement Program** presents the Utility's capital projects planned for implementation between 2017 and 2036.
- **Chapter 12 Financial Program** describes the Utility's multi-year strategy for ensuring the revenue required to meet total operating and capital costs of providing storm and surface water management services to its customers.

What are the Draft 2017 Plan Goals?

The following goals are proposed to drive the activities of the Utility for the next 10 years.

- Reduce the frequency and severity of flooding so hazards are eliminated.
- Improve surface water quality.
- Protect, enhance, and restore aquatic habitat functions provided by wetlands, streams, lakes, marine shorelines, and riparian areas.
- Ensure reliable functioning of the built and natural stormwater infrastructure.
- Manage Utility finances responsibly and recover costs equitably.

What are the Utility's Key Challenges?

The Utility has made considerable progress in its first 30 years. As it embarks on its next phase, the Utility will face the following challenges.

General Challenges

- **Equitable and Predictable Rates and Fees.** Creating predictability for customers and developers is difficult in a complex and changing regulatory environment, with fluctuations in the amount of grant money available to fund Utility programs.
- **Legacy Development**. Most of Olympia's stormwater infrastructure was constructed prior to current rigorous storm drainage design regulations. In older developed areas, subdivisions and infrastructure were constructed without stormwater treatment or wetland and stream protection and often lack the capacity to handle the increased runoff resulting from growth. Retrofits of older neighborhoods with modern stormwater control and treatment systems are a logistical and financial challenge, but are often necessary to improve flooding, water quality, and aquatic habitat conditions. The worst remaining legacy flooding problems are on Black Lake Boulevard, the Lakemoor subdivision and along Division Street.
- **Reliance on Choices by Individuals.** The Utility's work is highly influenced by the cumulative impact of individual behaviors. Decisions about the extent of impervious surfaces on a property and care in keeping storm drains clear of debris can impact flooding. Decisions about yard care practices, onsite sewage system maintenance, car care, and driving habits all can impact water quality. Decisions about landscaping, tree planting or removal, and weed control can impact aquatic habitat. This dynamic adds to the complexity of the Utility's work.
- **Land Development Pressure.** To protect agriculture and natural resources, including habitat, Washington's Growth Management Act (GMA) requires population growth to be focused in urban growth areas like Olympia. Urban development continues to increase impervious surfaces, threatening further loss of forests and wetlands, curtailing the functioning of natural systems and impacting surface water quality. Increasing population densities will both create challenges for water quality and provide opportunities to retrofit and concentrate treatment.
- **Climate Change and Sea Level Rise.** Changing climate in the Pacific Northwest likely will influence aquatic habitats due to warmer temperatures, reduced precipitation in the summer, increased precipitation in other seasons, and a rising sea level. Older stormwater infrastructure will be the most vulnerable to overflows associated with more frequent and intense storm events, which could result in more localized flooding. Current science indicates that sea levels in Puget Sound may rise between 20 and 55 inches by 2100. The need for community awareness, education, and response regarding sea level rise will increase in the years to come. In order to make timely long-term decisions, City government and the public need to understand the dynamics of climate change and sea level rise. The Utility has a key role in undertaking the necessary research and strategic planning.

Flooding Challenges

- **Asset Management.** Properly functioning stormwater treatment and conveyance systems help to mitigate the negative impacts of stormwater by moderating flows and removing sediments and pollutants before the stormwater enters water bodies. As facilities age, their functioning can be impacted. Understanding the condition of the Utility's stormwater infrastructure (both built and natural) informs replacement and maintenance decisions and is referred to as "asset management." Although significant staff effort has been dedicated to improving the Utility's understanding of the stormwater infrastructure, additional work is required to fully implement a robust asset management program.
- **Limitations of Low Impact Development (LID).** LID is a land planning and engineering design strategy that uses on-site natural features like bioswales and rain gardens to lessen the impact of development on stormwater quality and quantity, thereby mimicking pre-development conditions. LID practices may benefit water quality, but these are secondary to controlling the flow of stormwater. LID facilities are designed to be smaller and more numerous than centralized stormwater ponds to increase infiltration of rainwater over a larger area. The City's 2016 Drainage Manual requires LID in all new development. The sheer number of such facilities and the intensive maintenance required will likely make LID facilities more complex to manage than past stormwater facility designs.

Water Quality Challenges

- **Increasing Permit Requirements.** Many aspects of the Utility's work are mandated by the federal Clean Water Act. To discharge stormwater into "waters of the United States," the City must maintain compliance with current a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Discharge Permit. Permit requirements are continually being revised and expanded. Because more and more of the Utility's resources are needed to implement the Permit, significantly less discretionary staff time and budget is available for other aspects of the Utility's work.
- **Reliance on Public for Nonpoint Pollution Prevention.** The Utility is challenged in helping people understand their contribution to nonpoint sources of pollutants and the impact individuals have on water quality. The actions of the individual citizen through daily living activities like vehicle maintenance, lawn care, chemical management and pet care can contribute to either improving or degrading water quality.

Aquatic Habitat Challenges

- **Multiple Public/Private Ownership.** Habitat is located within a complex landscape of many large and small parcels, public and private ownership, and developed and redeveloping neighborhoods, commercial districts, and industrial areas. The Utility has limited authority on private property and must rely on voluntary programs, education and outreach, and incentives to encourage stewardship on private properties.
- **Habitat Fragmentation.** Large intact habitat areas are important for both wildlife and protection of aquatic resources. These core areas provide nesting/breeding, foraging, and resting habitat for wildlife, and protect water quality and hydrologic functions. Large habitat areas in Olympia are primarily located on public lands. Maintaining and improving the habitat quality of these areas requires tools and strategies that work across the landscape.
- **Habitat Impacts of Legacy Urban Development.** The changes brought by development of Olympia over the last 100 plus years have had a large impact on aquatic habitat. Budd Inlet was filled and dredged, shoreline armored, sections of streams placed in pipes, wetlands drained, and forests and natural vegetation converted to homes, businesses, roads and other infrastructure. These changes have vastly altered the landscape and hydrology of Olympia. Development is encouraged in cities and urban growth areas rather than rural areas of the State by the Growth Management Act. Working to maintain functional habitat in an urban landscape is challenging and requires creativity and flexibility to protect remaining habitat areas and maintain their health, while working to enhance and restore key habitats where possible.