

Two

Current Trends and Issues in Surface Water Management In Kirkland

More than 10 years have passed since the previous surface water master plan was completed. In that time, demographics of the city have changed, and priorities have shifted at the city, state, and national levels. The purpose of this chapter is to lay out the technical and policy issues that will affect the next 5 to 10 years of Surface Water Utility operation.

2.A Community Vision, Public Awareness and Opinion

Motivation and direction for surface water programs comes from a combination of community interests and state and federal laws and regulations; the ideal program blends what we *want* to do seamlessly with what we are *required* to do by others. To determine community interests regarding water resources, staff have reviewed recent citywide visioning efforts and conducted a public survey on surface water topics.

The Vision Statement in the City's Comprehensive Plan is a "verbal snapshot of Kirkland in the year 2022" (City of Kirkland. 2004). This statement was developed through an outreach program called Community Conversations – Kirkland 2022, in which approximately 1,000 people participated. Responses were summarized into major themes reflecting commonly held desires and formed the basis for the Vision Statement. The following is the environmental element of the Vision Statement that was developed through this process:

"We preserve an open space network of wetlands, stream corridors, and wooded hillsides. These natural systems provide habitat for fish and wildlife and serve important biological, hydrological and geological functions. Streets are lined with a variety of trees, and vegetation is abundant throughout the city. The water and air are clean. We consider community stewardship of the environment to be very important." [City of Kirkland. 2004]

The Surface Water Utility plays a vital role in realizing this vision, through protection and restoration of the city's water resources. All proposed programs of the utility as detailed below will serve to further the vision ideals of clean water, healthy natural systems, and community stewardship.

To gauge public awareness and opinion of surface water issues and to gather opinions about how City resources should be allocated for surface water programs, a public survey was conducted in fall of 2004. The survey was enclosed in the *Kirkland Courier*, which is delivered to each residence and business in Kirkland (some 24,000 in all). Entrance into a random prize drawing was used as incentive for returning the survey. Three hundred and fifty-six surveys, or about 1.8% of those distributed, were returned. A complete report on the survey is included in Appendix A, and a summary of that report is included here.

Most respondents were owners of single-family houses. General awareness of surface water issues and of the utility is high, and most respondents ranked surface water issues as very important. At the same time, most respondents think about surface water less than other City issues such as drinking water, garbage and recycling, and streets and transportation issues. It appears that surface water issues are considered the same amount that sewer issues are considered, and may be viewed in the same light: if things are working well (for example everything is running downhill), there's no need to think about it. This may point to a need to emphasize the role that everyday activities can have on surface water quality and to raise the profile of surface water issues in the community. Just as garbage recycling is now an everyday concern and recycling rates remain high, we should work toward making activities that benefit watersheds everyday habits.

Water quality was far and away listed as the top surface water priority. Specific program interests expressed by respondents included flood prevention; construction site oversight; a campaign to ban harmful lawn and garden chemicals; and educational programs on pesticide use, natural lawn care, stream buffers, and salmon habitat protection.

Most respondents felt that the Surface Water Utility should provide a moderate or high level of service. There was high overall support, as shown in individual comments, on the types and quality of services provided by the utility.

2.B Physical and Demographic Changes in the City

Population and Demographics

In 1994, when the last surface water master plan was written, the population of Kirkland was approximately 41,900. The 2002 population is estimated at 45,790. This steady growth rate of approximately 1.1% annually means that population is expected to reach 55,300 by the year 2022. Under the State Growth Management Act, the City must ensure that zoning and accompanying services are sufficient to accommodate this expected growth. In practical terms, this population growth translates to a potential for 5,840 new housing units and 8,800 new jobs. Land development and increased population can significantly increase pollution in surface waters such as streams and lakes.

Kirkland's population continues to age, with the median age in 2000 being 36.1 years. Another notable trend is a rise in the number of people living in condominiums or apartments. According to 2004 account information, the city contains approximately 5,700 condominiums and about 10,500 units of single-family housing. Apartment homes would add to the total for multi-family housing, potentially making the number of multi-family housing units close to the number of single-family units.

Demographic changes such as those discussed above may have consequences such as the following:

- Increased reliance on parks and other public spaces for green open space, as this becomes scarcer on single-family lots and more people live in multi-family housing that does not have yards.
- Decreased use of pesticides and herbicides on single-family properties as the size of yards and gardens shrinks.
- Increased use of landscaping services for maintenance of yards and multi-family complex open spaces.
- Shift in the number and physical abilities of volunteers available for planting projects, water quality monitoring, etc.
- Potential for shifts in attitudes towards water resources issues, and accompanying need to shift focus of education and outreach activities.

Demographic trends will be evaluated when developing and implementing education and other programs for the utility.

Annexation

The City has not annexed any new area since 1994. A large potential annexation area (PAA) lies directly to the north of the existing city limits. It is likely that this annexation will occur in the next 5 to 10 years given King County's interest in discontinuing local services. A complete water resources needs assessment will be needed to determine the projects and programs that will best serve that area. As the timing of annexation and the geographic boundaries of the PAA are uncertain, this Surface Water Master Plan provides analysis of only area within the existing city limits.

2.C Regulatory Framework

The regulatory environment has changed in the last 10 years to reflect research findings such as the accelerating decline of fish populations, the negative impacts that development can have on the quality and quantity of stormwater runoff, and the cumulative impact that diffuse pollutant sources can have on water quality. Early efforts to regulate clean water focused on "point" sources of pollution such as the discharges from factories or sewage treatment plants. Today there is a growing awareness that everyday activities (for example landscaping and car washing) produce diffuse, or "nonpoint" pollution that has as an impact on water resources that is as great or greater than that caused by "point" sources. Regulatory programs reflect this awareness. Another major trend has been the integration of water quality and habitat issues in the development and implementation of regulatory programs. There is a growing realization that flood reduction, water quality treatment and control, and fish habitat are inseparable and should all be regulated at the watershed level.

Table II.1 presents an overview of regulations and policies that affect surface water planning in Kirkland. The descriptions that follow are highlights of how specific regulations will affect direction and workload for the Surface Water Utility in the next 5 to 10 years. Other laws and regulations may affect utility priorities and workload, but to a lesser degree. Specifics of these regulations are discussed in Chapter IV as they relate to flooding, water quality, and aquatic habitat.

TABLE II.1 Regulatory Framework

Agency	Law	Regulatory Programs	Intent	Specifics
Federal*	Clean Water Act	<p>National Pollutant Discharge Elimination System Phase II Municipal Separate Storm Sewer System Permit (NPDES)</p> <p>National Pollutant Discharge Elimination System Stormwater Industrial Permit</p> <p>Receiving water quality standards (303(d) list)</p> <p>Section 401 and 404</p>	Eliminate discharge of pollutants into the Nation's water, and achieve water quality levels that are fishable and swimmable	<p>NPDES delegates responsibility for the quality of water leaving a system to the permittee, and requires certain actions to protect water quality.</p> <p>Requires those conducting certain industrial activities including construction/land development to obtain a permit and develop a pollution prevention plan for stormwater discharges</p> <p>Requires the State to note water bodies that fail to meet water quality standards (the 303(d) list) and requires development of a Total Maximum Daily Load Plan (TMDL) for each pollutant in each water body that exceeds standards.</p> <p>Requires a permit for activities classified by the U.S. Army Corps of Engineers as constituting discharge of dredged or fill material into Waters of the United States</p>
Federal	Tribal Agreements and Related Case Law		Protect fish populations in traditional fishing grounds of Indian Tribes	Muckelshoot Indian Tribes are party to SEPA review of development proposals and programs
Federal	National Flood Insurance Act, Flood Disaster Protection Act	National Flood Insurance Program	Reduce property damage and public safety threats from flooding	City enacts restrictions/requirements on development in floodplain and residents get reduced flood insurance rates in return
Federal	Endangered Species Act	Listing of Chinook Salmon as a Threatened Species	Prevent further decline of Chinook Salmon populations through prohibition on "take" of the fish or their habitat	City is participating in development of the WRIA 8 Salmon Conservation Plan which is encouraged but not required under ESA. Plan charts path to restoration and eventual de-listing of species.
State	State Environmental Policy Act (SEPA)	City of Kirkland reviews proposals and issues SEPA determinations	Identify and require mitigation of the environmental impacts of proposals and programs	Used to address impacts that are not covered in other City requirements

TABLE II.1 Regulatory Framework cont.

Agency	Law	Regulatory Programs	Intent	Specifics
State	Shoreline Management Act	City of Kirkland Shoreline Master Plan	Protect use and functions (economic, ecological, aesthetic) of shoreline areas. Implemented by Chapter 21 Kirkland Municipal Code	Shoreline Master Plan to be updated by 2006
State	Hydraulic Code	Revised Code of Washington	Set requirements for placement of culverts and other hydraulic devices that may impact fish use	Projects proposing work within the wetted perimeter of a stream must obtain a Hydraulic Project Approval
State	Growth Management Act	City Comprehensive Plan, City zoning and critical areas regulations	Regulate land use to meet growth targets while providing necessary services and protecting sensitive environmental resources	City of Kirkland Comprehensive Plan and supporting municipal code sections
State	Water Quality Protection Act	Puget Sound Water Quality Management Plan	Protect habitat and economic resources (fish, shellfish) in Puget Sound	13 points required for cities. Most overlap with NPDES requirements
City	State Growth Management Act	City Comprehensive Plan	Set vision goals policies and implementation strategies for managing growth within the City over the next 20 years	

Federal Clean Water Act – NPDES Phase II Municipal Separate Stormwater System Permit Program

The federal Clean Water Act is implemented through a variety of regulations and programs. The most significant of these for the City is the National Pollutant Discharge Elimination System (NPDES) permit program for municipal separate storm sewers. Under Phase II of this program, the City must apply for a permit from the U.S. Environmental Protection Agency (EPA) (or in this case the State of Washington, which has been authorized to act as the EPA’s agent) to discharge stormwater from our streets, public facilities, and drainage network into Waters of the United States¹. Conditions of the permit require protection and improvement of water quality through the following “minimum control measures”:

1. Public education and outreach on stormwater impacts
2. Public involvement and participation
3. Illicit (i.e., non-stormwater) discharge detection and elimination
4. Construction site runoff control
5. Controlling stormwater runoff from new development, redevelopment and construction sites
6. Pollution prevention and operation and maintenance for municipal operations

The ultimate goal of the NPDES municipal stormwater program is to delegate to local governments the responsibility to ensure that surface waters in that jurisdiction meet water quality standards. Guidance on specifically what is required to meet each of the six measures, as well as a general municipal stormwater permit, are currently being developed by the Washington State Department of Ecology. A draft general permit was issued in May of 2005 and is expected to be finalized in spring of 2006. The City will then need to apply for coverage under this general permit. Coverage under the general permit provides the City with protection from citizen lawsuits and fines and penalties from regulatory agencies that could be brought under the federal Clean Water Act.

Although the City already conducts activities in all of the categories above, significant effort will be required to document activities and to alter or upgrade programs to comply with the conditions of the permit, once it is written.

2. Federal Clean Water Act – Total Maximum Daily Load Plans

The total maximum daily load (TMDL) provision of the Clean Water Act requires creation of a TMDL plan for each pollutant in each waterbody that fails to meet water quality standards. A TMDL plan sets maximum limits on point and nonpoint sources of pollution that can be discharged to a waterbody without exceeding water quality standards, essentially dividing allowable pollution among responsible parties in a watershed. In Kirkland, for example, Forbes and Juanita Creeks both fail to meet water quality standards for fecal coliforms, temperature and dissolved oxygen. TMDL plans encourage and require participation of all jurisdictions within a watershed in development and funding of actions that will reduce pollutant discharge.

¹ **Waters of the United States** are defined in the Code of Federal Regulations Chapter 40, Section 122.2 as “*All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. All interstate waters, including interstate wetlands. All other waters such as intrastate lakes, rivers, streams, (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce.*”

Federal Endangered Species Act – Listing of Chinook Salmon as a Threatened Species

The Chinook salmon was listed as a threatened species under the federal Endangered Species Act (ESA) in March of 1999. To prevent further decline of the species and to encourage restoration, the ESA prohibits “take”¹ of the species or its habitat. Those agencies or individuals found to be creating take of the species are subject to third-party lawsuits. The outcome of such lawsuits could have severe economic consequences for the region, such as curtailing of development or requirements for specific, potentially costly habitat restoration activities.

Potential impacts to fish habitat arise from both proprietary City activities, such as road maintenance and surface water management, and City-imposed land use regulations. The City has for the last several years been evaluating and altering City activities to minimize impacts to fish habitat and has been evaluating legal liability of our existing land use code. The Surface Water Utility and the Planning Department have taken the lead in these efforts.

To promote the conservation and eventual delisting of the Chinook salmon, the City has participated in development of the WRIA 8 Salmon Conservation Plan (WRIA 8, 2005). WRIA 8 stands for Water Resource Inventory Area 8, a state designation for the Cedar-Sammamish-Lake Washington watershed. This watershed encompasses some 27 county and city jurisdictions and is the most heavily urbanized area in the state of Washington. Fish habitat is the main facet of salmon restoration that is under the control of local governments. Thus, the conservation plan will lay out projects, programs, and land use regulations that will promote habitat restoration.

The WRIA 8 Salmon Conservation Plan is intended to be used as a tool to gain assurances from the federal government regarding legal liability and funding for cities that adopt it. The plan will be forwarded to Shared Strategy for Puget Sound, a nonprofit organization that is coordinating submittal of an overall recovery plan for Chinook salmon in Puget Sound. Federal agencies are required to develop an overall recovery plan under the ESA. Shared Strategy recognizes that a plan developed through local agency cooperation will be more acceptable to the local agencies and thus have a greater likelihood of implementation that will lead to delisting of the species.

Implementation of the WRIA 8 plan will require the City to take steps to protect and improve water quality through both direct and indirect actions; although Kirkland's streams do not currently support Chinook salmon, the quality of the water that our streams deliver to Lake Washington has a significant impact on Chinook populations that use the lake. The plan will be presented to the City Council for adoption in summer of 2005. Negotiation with federal agencies will take place thereafter. Implementation of the plan will likely begin in late 2006.

Tribal Agreements and Related Case Law

Salmon and steelhead fisheries are managed cooperatively by the state of Washington and Indian tribes whose rights were established in treaties signed with the federal government in the 1850s. A 1974 federal court case reaffirmed the tribes' rights to harvest salmon and steelhead and established tribes as co-managers of Washington fisheries. The Muckleshoot Indian Tribe is concerned with natural resource management in Kirkland inasmuch as it affects production and sustainability of fish populations. In short, tribal interests do not allow the City to give up on fish habitat. To honor treaty agreements, we must continue to protect and restore habitat within city boundaries, albeit in a highly urbanized environment.

State Growth Management Act

The purpose of the Growth Management Act is to concentrate and guide development in denser urban areas while protecting open spaces in rural, unincorporated areas. Although the act does require protection of environmentally sensitive areas such as streams and wetlands, this strategy of increased density is often in conflict with surface water management goals such as maintenance of natural runoff patterns and infiltration of water into the soil. The act clearly illustrates the push-pull between strategies that leave open space but encourage car-oriented sprawl and strategies that encourage dense urban development where it is more challenging to manage surface water runoff but preserve open space that may contain more valuable water resources. Techniques to reproduce natural drainage patterns in densely developed areas are not yet well developed and will be key to the success of urban water resources restoration. The challenge to the Surface Water Utility will be to attempt to balance required growth with preservation and restoration of water resources.

Puget Sound Water Quality Management Plan

The first Puget Sound Water Quality Management Plan (PSWQMP) was written in 1987, and subsequently updated in 2000, with the intent of providing a blueprint for protection of the beneficial uses of water and aquatic habitat in Puget Sound. The goal of the stormwater and combined sewer overflow portion of the plan is "to protect and enhance the health of Puget Sound's aquatic species and habitat, natural hydrology and processes, and water quality, and to achieve standards for water and sediment quality by managing stormwater runoff and reducing combined sewer overflows" (Puget Sound Water Quality Action Team. 2000). This element of the plan asks each municipality to develop and submit to the Department of Ecology a comprehensive stormwater program that includes 13 elements ranging from requiring stormwater controls for new and redeveloping sites to identifying and eliminating illicit discharges (i.e., pipes that could carry anything other than stormwater), to providing public education and involvement activities, and conducting watershed planning and monitoring.

² **Take** is defined in the federal Endangered Species Act (50 CFR 17.3) as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct."

The PSWQMP carries no independent regulatory authority. At the same time, it is likely that requirements of this document will be incorporated into the NPDES Phase II General Permit described in Section II.C.1.. The plan elements may also be included in a 4(d) rule concerning the Chinook salmon listing under the Endangered Species Act. The City would then need to comply with the PSWQMP in order to obtain coverage under the rule. Failure to produce a comprehensive stormwater program containing the elements listed in the PSWQMP may also make the City ineligible for state water quality and habitat restoration grant funds.

City Comprehensive Plan

The Kirkland Comprehensive Plan is the tool that the City uses to implement the requirements of the Growth Management Act. The plan includes goals and policies for growth, as well as the chosen level of service for the Surface Water Utility. The following goals and policies from Chapter 5 (Natural Environment) and Chapter 11 (Utilities) of the Comprehensive Plan are most relevant to surface water management:

Goal NE-1:

Protect natural systems and features from the potentially negative impacts of human activities, including, but not limited to, land development.

Policy NE-1.4:

Proactively pursue restoration or enhancement of the natural environment. In addition, require site restoration if land surface modification violates adopted policy or development does not ensue within a reasonable time period.

Policy NE-1.5:

Provide to all stakeholders information concerning natural systems and associated programs and regulations. Work toward creating a culture of stewardship by fostering programs that support sound practices, such as low impact development and sustainable building techniques. Model good stewardship techniques in managing trees, streams, wetland, shorelines, and other natural features and systems in the public realm.

Goal NE-2:

Manage the natural and built environment to achieve no net loss of the functions and values of each drainage basin and, where possible, to enhance and restore functions, values, and features. Retain lakes, ponds, wetlands, and streams and their corridors substantially in their natural condition.

Policy NE-2.1:

Using a watershed-based approach, apply best available science in formulating regulations, incentives, and programs to maintain and, to the degree possible, improve the quality of Kirkland's water resources.

Policy NE-2.2:

Protect surface water functions by preserving and enhancing natural drainage systems wherever possible.

Policy NE-2.3:

Comprehensively manage activities that may adversely impact surface and ground water quality or quantity.

Policy NE-2.4:

Improve management of stormwater runoff from impervious surfaces by employing low impact development practices where feasible through City projects, incentive programs, and development standards.

Policy NE-2.5:

Preserve the natural flood storage function of 100-year floodplains. Emphasize non-structural methods in planning for flood prevention and damage reduction.

Policy NE-2.6:

Regulate development of land along the shoreline of Lake Washington.

Policy NE-2.7:

Support regional watershed conservation efforts.

Goal U-4:

Provide surface water management facilities, programs, and services that provide adequate drainage and minimize flooding while protecting and enhancing the water quality and habitat value of streams, lakes, and wetlands.

The comprehensive plan discusses level of service for the Surface Water Utility in a general way and sets the stage for visionary protection and restoration that go beyond flood protection for human health and safety to sustainable management of watersheds. The Surface Water Utility is a key player in realizing this protection.

In summary, State and Federal agencies dictate a basic framework for surface water management in Kirkland. The City comprehensive plan further shapes this framework by providing a vision for the City's future. This Surface Water Master Plan details a program that combines what we are required to do by others with what we want to do as a community to protect and improve water resources.

2.D Surface Water Management Current Approach and New Technologies

Current Approach to Surface Water Management

Ten years ago, storm and surface water research was sparse at best. Stormwater design was aimed at conveying stormwater efficiently away from the built environment. Stormwater was detained only as necessary to prevent flooding and associated property damage. Streams were treated as part of this efficient drainage network and were often cleared and straightened to increase their conveyance efficiency. The last 10 years have seen a tremendous increase in understanding of watershed processes and a parallel realization that fish populations and water quality are declining with increasing development.

Figures II.1A and II.1.B provide an overview of changes to the hydrologic cycle and to water quality that occur following typical development. Larger quantities of water leave developed watersheds more quickly than under forested conditions. This creates higher peak flows in streams during storm events and leads to lower stream flows during the summer months, as water does not seep into the ground to support streamflow during dry weather. These fundamental changes to hydrology alter watersheds in several ways, including the following:

- The size, shape, and layout of stream channels changes to accommodate the new flow regime, thus changing physical habitat conditions for aquatic species.
- Erosion and sediment deposition that occur as stream channels change to accommodate new flow regimes can impair survival of aquatic species, including salmon.
- Opportunities for soils and vegetation to filter pollutants from stormwater are reduced, leading to water quality degradation.
- Reduced streamside vegetation can lead to increased water temperatures that reduce survival of aquatic species, including salmon.

Figure II. 1A Water budget for predeveloped Puget Sound lowland forests.

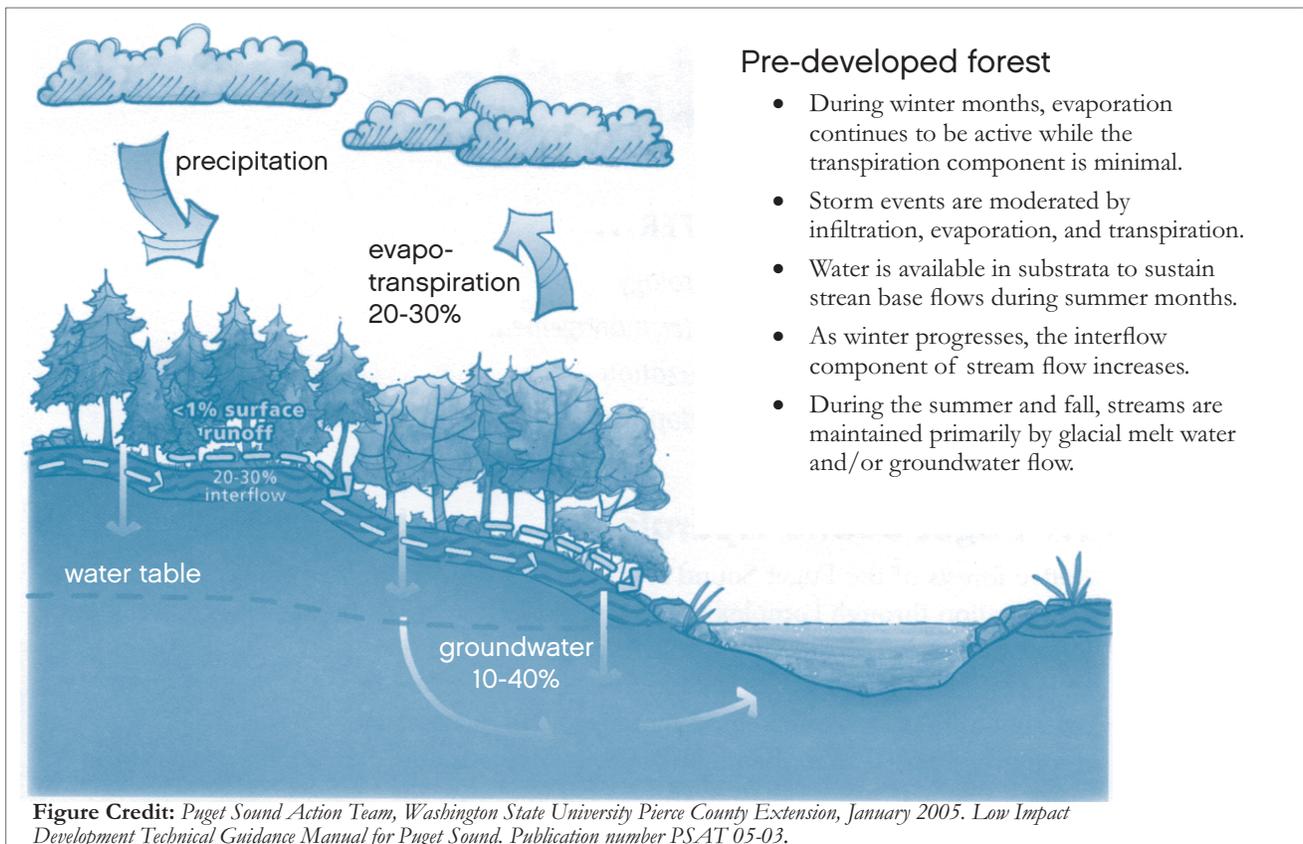


Figure II.1B Water budget for typical suburban development in the Puget Sound Area

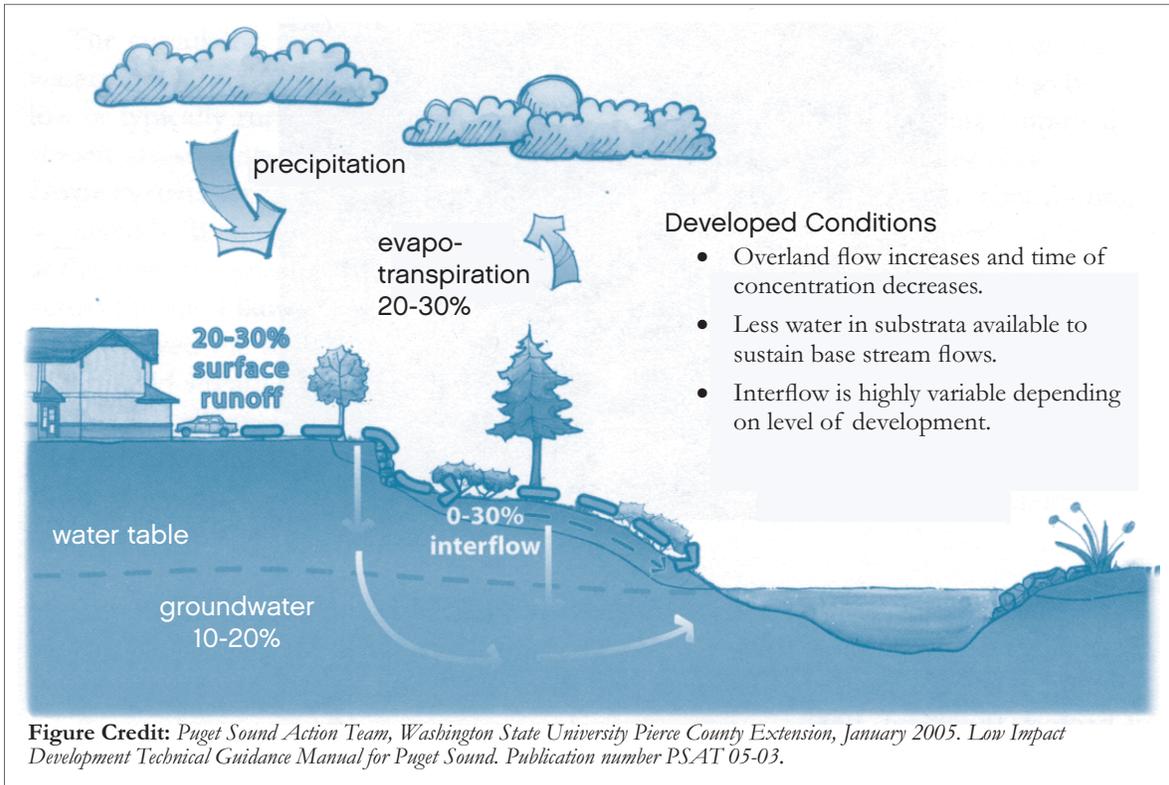


Figure II. A&B Changes in the Hydrologic Cycle that Occur with Development

The effects of increased quantity and altered timing of runoff can be seen in watersheds with as little as 10% acreage of impervious surface. Negative effects such as increased peak streamflows and decreased summer base flows appear at as little as 15% acreage of impervious surface (Horner and May, 1998). All of Kirkland's watersheds exceed 15% impervious surface, as discussed in Chapter III.

The current approach to surface water management is to minimize the effects of development on watershed hydrology, and where possible restore watershed hydrology, while protecting developed areas from the health and safety hazards of flooding. Currently required facilities to detain and treat stormwater help to reduce impacts but cannot completely mitigate the effects of development. These facilities must be augmented by use of methods and techniques that recreate watershed processes. Low impact development (LID) methods reduce the impact of paved surfaces on the environment and provide alternatives to creation of new impervious surfaces. Examples of LID techniques include the following:

- Reducing street width to reduce the amount of impervious surface created with a road.
- Adding compost or other materials to increase the water holding and filtering capacity of soil in the yard of a newly constructed house.
- Creating small bioretention areas in a parking lot to filter, evaporate, and infiltrate stormwater runoff.

LID implementation involves land use regulation, development standards, and City maintenance and development activities. Like many natural resource issues, LID spans the reach of several City departments, and a coordinated effort will be required to realize environmental benefits from its application.

New Technology in Surface Water Management

The last 10 years have seen development of a profusion of new stormwater quality treatment devices. Although the Department of Ecology is taking the lead in evaluating these devices, Kirkland also can play a role in testing, evaluating, and encouraging the use of new and experimental technology. When combined with LID techniques, treatment devices can have a positive effect on water quality. Treatment devices are especially useful in retrofit situations, such as street intersections, where removal of pavement or use of soils to filter stormwater runoff may not be practical.

2.E Interaction and Work with Other City Departments

The Surface Water Utility increasingly works in concert with other City departments and divisions, including Planning, Parks, and other divisions and utilities within Public Works. Coordination is vital to the success of our efforts to create a livable and sustainable community. Land use, for example, affects the quantity and quality of runoff that enters streams. Responsible management of our parks and public lands sets an example that promotes stewardship concepts in the community and directly improves conditions in our watersheds. Street maintenance and design of capital improvement projects by the Public Works Department are now increasingly accomplished in ways that minimize damage to the environment and, where possible, seek to restore water resources. The wastewater utility's efforts to provide sewers in areas currently served by septic tanks could be focused in areas where septic tank failures are causing water quality problems in streams.

Since the last surface water master plan was written, there have been several developments that have fostered communication and teamwork among departments. The most significant of these is the Natural Resources Management Team. This team developed the City's Natural Resources Management Plan in 2003 (City of Kirkland, 2003). Although it does not have regulatory authority, this plan is a policy document that guides the mix of tools that the City will use over the next decade to manage our public lands and regulate use and management of privately owned lands.

Programs and priorities contained in this plan will seek to continually improve coordination and communication between City departments and divisions in order to more effectively manage surface water resources.

2.F Fee-Based Funding Structure

The Surface Water Utility is a fee-based entity. As such, the budget is fixed and is not mixed with general-fund budgets that are tax-based. One of the benefits of this structure is the ability to consistently fund long-term environmental protection and restoration efforts that may in some cases take many years to show results. In times of economic downturn, the utility continues to operate regardless of decreases in tax revenue that may affect other City departments and activities. Because of this unique situation, the City Council has explored funding certain additional general fund programs and activities from the utility in cases where these items are crucial to maintenance and improvement of surface water conditions.

The surface water portion of transportation capital improvement projects is an example of one such item. Mitigation of surface water impacts now often comprises up to 20% of the budget of street projects. Funding this item out of the utility will relieve pressure on the general fund and will allow the utility to organize and plan for these projects on a watershed scale.