

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussing the Update of the 2017-2022 Surface Water Master Plan
DEPARTMENT:	Public Works
PRESENTED BY:	Uki Dele, Surface Water and Environmental Services Manager
ACTION:	<input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input type="checkbox"/> Motion <input checked="" type="checkbox"/> Discussion <input type="checkbox"/> Public Hearing

PROBLEM/ISSUE STATEMENT:

The purpose of this staff report is to discuss and receive guidance on policy issues associated with the Surface Water Utility for completing the 2017-2022 Surface Water Master Plan Update.

Staff are working with consultants, Brown and Caldwell and FCS Group (BC Team), to update the City's 2011 Surface Water Master Plan (2011 Master Plan). The purpose of the 2017 Surface Water Master Plan (Master Plan) is to address drainage and water quality challenges associated with growth, increasing regulations, and aging infrastructure. The Master Plan will guide the Surface Water Utility (Utility) for the next five to 10 years, including recommendations for capital improvements, programs, and a financial plan for long-term asset management.

The issues staff is seeking direction from Council on are:

- Issue 1: Use of Utility Funds on Private Property,
- Issue 2: Private Property Facility Maintenance Enforcement,
- Issue 3: Permitting for the Surface Water Utility, and
- Issue 4: Basis for Chargeable Area for Surface Water Management fees.

RESOURCE/FINANCIAL IMPACT:

With guidance from the Council, staff will develop information on the resource and financial impacts of the policies for incorporation in the Master Plan. The next Council update of the Master Plan is scheduled for July 17, 2017.

RECOMMENDATION

Staff has provided recommendations regarding the various policy considerations and would like Council's feedback for incorporation into the draft 2017 Surface Water Master Plan update.

Approved By: City Manager **DT** City Attorney **MK**

BACKGROUND

Staff are working with consultants, Brown and Caldwell and FCS Group (BC Team), to update the City's 2011 Surface Water Master Plan (2011 Master Plan). The purpose of the 2017 Surface Water Master Plan (Master Plan) is to address drainage and water quality challenges associated with growth, increasing regulations, and aging infrastructure. The Master Plan will guide the Surface Water Utility (Utility) for the next five to 10 years including recommendations for capital improvements, programs, and a financial plan for long-term asset management.

Since the 2011 Master Plan was completed, a number of changes have affected the Surface Water Utility's programs. Some of these changes include:

- Completion of five Drainage Basin Plans that have identified various projects and programs to address flooding, poor drainage and water quality issues.
- Experience with non-compliance with the NPDES permit for the 2013-2018 Permit cycle.
- Inspection and maintenance are now required for Low Impact Development (LID) Facilities on development and redevelopment.
- Required enforcement of stormwater management on private properties.
- Greater regional and local emphasis on sustainability, water quality, and habitat restoration.

The 2017 Master Plan will provide the Surface Water Utility with the guidance on program priorities and levels of service for the next five years. Clear policies will help staff implement the Master Plan, make appropriate decisions and provide clarity and predictability for Utility customers.

DISCUSSION

The following section of this staff report describes each policy question, identifies and compares alternatives, and presents staff recommendations. The issues staff is seeking direction from Council on are:

- Issue 1: Use of Utility Funds on Private Property,
- Issue 2: Private Property Facility Maintenance Enforcement,
- Issue 3: Permitting for the Surface Water Utility, and
- Issue 4: Basis for Chargeable Area for Surface Water Management (SWM) fees.

Issue 1: Use of Utility Funds on Private Property (Outside the Right of Way)

The Utility often receives requests to perform work on drainage systems that cross through private property. These requests may come from the affected property owner or a group of property owners, or others being impacted by the drainage system. Common requests include situations where runoff, from both public and private areas, flows through private property either through natural features (streams) or constructed features (stormwater infrastructure such as pipes and ditches). Many of these drainage systems were constructed prior to City incorporation in 1995. In some cases, the City has easements and the City is responsible for maintenance of these systems. However, in many cases, the City has no easements and these systems are considered

private (i.e., there is a presumption that the system is not publicly owned if there is no easement). It is these properties that are the subject of this policy question.

The challenge then for the Utility is where to draw the boundary between public and private drainage systems, with clearly defined and defensible criteria, in order to expend public funds for public benefit as opposed to private benefit.

Policy Question: Should the Utility spend public funds for drainage systems on private properties?

Alternative 1: Status quo – Public Infrastructure Preservation

One approach is to continue the existing practice of not expending Utility funds on private property unless it can be established that the drainage facilities in question are clearly the responsibility of the City, or instances when public infrastructure such as a road is threatened if action is not taken.

PROS: This approach limits City involvement with private systems, is legally defensible, requires the lowest funding level of any of the alternative approaches considered, and provides clear policy direction.

CONS: This approach may not be satisfactory to property owners who desire the city to take certain actions, and it will not allow city action to respond to situations where there is only a water quality or environmental enhancement opportunity.

Alternative 2: Develop a Program to Acquire Easement or Ownership of Priority Critical Infrastructures that the City Would then Operate and Maintain

This alternative would create a program of inventorying and establishing a list of critical drainage infrastructure on private property through a planning and engineering evaluation process that included public benefit (such as water quality and environmental enhancements) in addition to protection of public infrastructure. The list would be prioritized and a program established to acquire easement or ownership of the priority critical infrastructures that the city would then operate and maintain. Other drainage infrastructure would remain the responsibility of private property owners. This is a similar strategy used by the City of Bellevue's Strategic Initiative for Primary Storm Water Infrastructure.

PROS: This approach provides a program for identifying and acquiring easement or ownership of critical drainage infrastructure on private property, it provides a method to consider requests by the public for city maintenance of private drainage systems where a broader public interest than preservation of public infrastructure may be present, and assures a minimum level of maintenance of those facilities that move into the city maintenance program.

CONS: This approach will need to establish and fund a new program to inventory and prioritize critical drainage infrastructure for easement or ownership acquisition and new ongoing maintenance.

Recommendation

Staff recommends **Alternative 1**, which affirms existing practice.

Issue 2: Private Facility Maintenance Enforcement

This issue focuses on enforcement actions that the City must take with respect to maintaining stormwater systems on private properties. The NPDES Permit requires annual inspections and maintenance, if needed, of all permanent stormwater BMPs/facilities constructed on private properties. The permit further assigns responsibility for enforcement of proper maintenance activity to the City.

Staff anticipates that the majority of new development and redevelopment projects will have to construct new types of onsite stormwater facilities. Over time, virtually all properties will have the potential to come under this new inspection requirement. In July 2015, the City's planning-level redevelopment rate was estimated at 1.5 to 2.5 percent, suggesting that within a 50-year planning horizon, virtually all properties within the City of Shoreline could require annual drainage inspections.

The anticipated increase in the number of inspections and associated enforcement actions suggest that an alternate method be considered.

Policy Question: How should the City inspect and enforce maintenance of the stormwater facilities on private property?

Alternative 1: Status Quo – Use Current Inspection, Notification and Enforcement Mechanisms

The current process of private stormwater facility inspection and maintenance notification and enforcement was established after elimination of the SWM Fee Discount on January 1, 2017, and staff now utilizes the municipal code authority to oversee required Utility private drainage system inspection and enforcement activities.

Under this process, City staff sends a notification and then conducts an inspection of all properties that require inspection to evaluate if storm water facilities are properly functioning. Should the system require maintenance, repairs or other corrective action, property or business owners are sent a "fail notice" letter directing them to perform the required maintenance to the drainage system. After the work is complete, or if staff does not receive a reply, inspectors will then return to the site and inspect the facilities. If the property continually fails to meet maintenance standards a second and "final notice" is sent, followed by a "notice of violation", followed by corrective action.

Corrective action has two paths: where a maintenance covenant exists the City is allowed to perform the maintenance and invoice the property owner, and where there is no covenant, the enforcement process begins under the authority of SMC 20.30.720-790 and the case is sent to the City's Code Enforcement staff.

PROS: This alternative would not require creation of new municipal code for surface water maintenance enforcement, and using the existing code enforcement process is a generally accepted municipal business practice.

CONS: The code enforcement process may take longer than the allowed time for repairs under the NPDES permit (for example, catch basins must be cleaned and repaired within six months of inspection) and result in an NPDES violation.

Alternative 2: Establish a Self-Certification Process

This alternative would establish a process for property owners to conduct inspections and “self-certify” that the surface water system is maintained and operating correctly. This would be mandatory for all new private storm water systems and voluntary for earlier systems. Participation in the self-certification program would require providing a maintenance covenant to the city. Properties with earlier systems that did not volunteer for self-certification would continue to follow Alternative 1 above. The idea is that self-certification will have a higher compliance rate and require less inspections and enforcement.

With this Alternative, all properties in the self-certification program will be required to conduct inspections and submit a self-certification maintenance form to the Utility. The completed form is an affirmation by the property owner, or their duly authorized agent, that the required annual inspection and any required maintenance has been completed. Utility staff will then perform verification inspections on a select number (say five to ten percent) of those properties.

Enforcement of non-compliant properties in the self-certification program would utilize the maintenance covenant where the City is allowed to perform the maintenance and invoice the property owner. This is a similar enforcement mechanism used by King County; although King County’s self-certification program provides facility owners with a SWM fee reduction as an inducement to participate.

PROS: This alternative may result in the need for less staff time for inspection, verifying maintenance actions, and code enforcement; particularly as more facilities come on line overtime.

CONS: This alternative will require new code to establish the self-certification; it relies heavily on property owners and their agents to assess proper functioning of Stormwater systems. There is uncertainty of success in initiating a new program that relies on property owner inspection and self-certification. Without an incentive, existing systems have little reason to join.

Recommendation

Staff recommends **Alternative 2**, as this approach provides property owners the opportunity to be proactive rather than reactively managing their onsite stormwater infrastructure responsibilities.

Issue 3: Permitting for the Surface Water Utility

The City’s Surface Water Utility provides for and operates a Municipal Separate Storm System (MS4) that includes connections by private on-site systems; however, there is no single standard process for permitting on-site stormwater systems and connections to the MS4.

As a result, the City relies on multiple permitting processes for approval and implementation of onsite stormwater infrastructure and connection to the MS4. For example, onsite stormwater systems for residential properties are under the Residential Building Permit, onsite stormwater systems for businesses and multi-family properties

are under the Commercial/Multi-Family Building Permit, and connections to MS4 within the Right of Way (ROW) are administered under the ROW Site Permit.

While the City's NPDES Phase II Permit requires new development and redevelopment to infiltrate on site, there are instances when infiltration is infeasible and onsite storm systems must continue to connect or establish a new connection to the MS4. Additionally, there are instances where a combination of onsite infiltration and connections to the MS4 occur without a single permit to provide overall management these types of connections.

Policy Question: Should the Utility implement a stormwater permit?

Alternative 1: Status Quo – Utilize Existing Permit Process

This alternative will continue to rely on the current process that involves coordinating with up to four permitting processes including Commercial/Multi-Family Building Permit, Residential Building Permit, Site Development Permit and Right-of-Way Site Permits. The recorded actions related to onsite stormwater infrastructure and MS4 connections are located and managed in different permit records. Separate permits are used for tracking assets and private property inspections too.

PROS: No new permit would be required for stormwater.

CONS: Storm drainage reviews using multiple permits requires significant interdepartmental coordination with risk of missing items to ensure stormwater management is meeting regulations and maintenance standards. Information and approvals of stormwater management facilities reside in different documents. Responsibility for stormwater management program success remains dispersed and the potential for a permitting misstep is greater without a single unifying permit.

Alternative 2: Establish a Stormwater Permit

This alternative will consolidate all the onsite and ROW stormwater review activity into a single permit. This permit will support the other permits necessary for the development (e.g. stormwater work in the right of way will have a stormwater permit for the stormwater infrastructure and the permission to construct in the right for way will be included in the right of way permit). It will also provide visible tracking of properties that manage their stormwater onsite, as well as for those properties that connect to the MS4. Staff would develop written criteria for stormwater system permitting, connection approval, inspections, and final approval. With the permit, staff would also develop a process to manage ongoing inspections, operations, maintenance and enforcement of maintenance standards for private drainage systems as required by the NPDES Permit.

Stormwater permit fees could be used to help fund resources to manage the permit process, ensure appropriate in-field system installation and track the needed stormwater system data for on-going inspections, operations and maintenance and NPDES compliance. Examples of Cities that use Utility permits for Stormwater management include the City of Bellevue, City of Puyallup and the City of Auburn.

PROS: This approach will result in improved coordination with other permitting processes for stormwater management. It will also help facilitate a comprehensive

review, approval, implementation and improved maintenance tracking of Surface Water Management infrastructure in development and redevelopment of property within a single document.

CONS: A new stormwater permit process will be required and a new permit fee may be implemented with the permit.

Recommendation

Staff recommends **Alternative 2**, which would implement a single stormwater permit, to ensure required surface water information needed for NPDES compliance is collected and tracked consistently.

Issue 4: Surface Water Management (SWM) Fee Basis (Chargeable Area)

SWM fees are currently based on “impervious surface”. To meet the NPDES Permit requirement, the City now requires properties to reduce their impervious surfaces by implementing Low Impact Development (LID) Practices. In 2016, the Shoreline Municipal Code (SMC) was updated to include LID language that included changing references from “impervious surface” to “hard surface” as defined by the Washington State Department of Ecology (Ecology) with the exception of SMC 3.01.400, the Surface Water Management Fee Schedule. A comparison of the definitions of “impervious surface” and “hard surface” are provided in Attachment A, and an illustration of impervious and hard surface fee calculation is provided in Attachment B.

With the definition of impervious surface, pervious surfaces such as permeable pavements and vegetated roofs will no longer be chargeable areas for SWM Fees. However, these surfaces are included in the Hard Surfaces definition. The City’s level of service for stormwater conveyance requires the same downstream capacity and costs for both “impervious and “hard” surfaces because the system must provide conveyance in the event of permeable surface system overload during storm events and/or permeable surface system failure. Inspections and oversight of on-site stormwater systems will remain the same with either definition.

In addition Surface Water Utility revenues could decline over time as redeveloped properties reduce impervious surfaces by using permeable pavement and vegetative roofs (“hard surface” areas).

Policy Question: Should SWM fees be based on hard surface or impervious surface area?

Alternative 1: Status Quo - Maintain Existing SWM Fees Based on Impervious Surface

With this alternative, the chargeable area will be left as is, and SWM fees will continue to be based on impervious surface.

PROS: This alternative requires no SMC amendments.

CONS: This alternative could result in some revenue loss for development that reduces impervious surfaces through the use permeable pavements or other permeable surface treatments. This alternative could potentially cause some

confusion among ratepayers with the hard surface and impervious surface terms used by Ecology.

Alternative 2: Use Hard Surfaces for SWM Fees

This alternative will replace the term “impervious surface” with “hard surface” for purposes of calculating SWM fees in SMC 3.01.400. It requires an approach for tracking the changes to impervious surfaces more closely to identify parcels with pervious surfaces like permeable pavements. This would ensure a constant revenue stream as permeable, hard surfaces are installed in coming years (e.g. permeable pavements and green roofs). This approach recognizes that the City level of service for stormwater conveyance requires the same downstream capacity and costs for both “impervious and “hard” surfaces because the system must provide conveyance in the event of permeable surface system overload during storm events and/or permeable surface system failure.

PROS: Assures constant revenue stream as hard surfaces replaces impervious surfaces and avoids potential confusion among ratepayers with Ecology’s use of hard surface and impervious surface terms.

CONS: This alternative would require an amendment to SMC 3.01.400 and will require developing and maintaining an up-to-date inventory and tracking process for managing the changes in hard surfaces.

Recommendation

Staff recommends **Alternative 2** for this policy issue. Updating the chargeable area term to hard surface reduces the risk of revenue decay for the Utility.

COUNCIL GOAL ADDRESSED

This Master Plan project addresses City Council Goal #2: Improve Shoreline’s Utility, transportation and environmental infrastructure.

RESOURCE/FINANCIAL IMPACT

Upon receiving direction from Council, the resources and financial impacts of the policies will be incorporated in the Master Plan. Council will be updated as the Master Plan Progresses.

RECOMMENDATION

Staff has provided recommendations regarding the various policy considerations and would like Council’s feedback for incorporation into the draft 2017 Surface Water Master Plan update.

ATTACHMENTS

- Attachment A – Impervious and Hard Surface Definitions
- Attachment B – Example Impervious and Hard Surface Fee Calculation

Attachment A - Definitions of Impervious Surface and Hard Surface

Impervious Surface	Hard Surface
<p>“Impervious surface” means a non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development and causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater.</p>	<p>“Hard surface” means an area which either prevents or retards the entry of water into the soil mantle as under natural conditions, an impervious surface, a permeable pavement, or a vegetated roof.</p>

**Permeable Pavement and vegetated roof are not impervious surface and will not be charged for surface water fees although they may contribute to the city maintained stormwater system*

Attachment B – Impervious and Hard Surface Fee Calculation

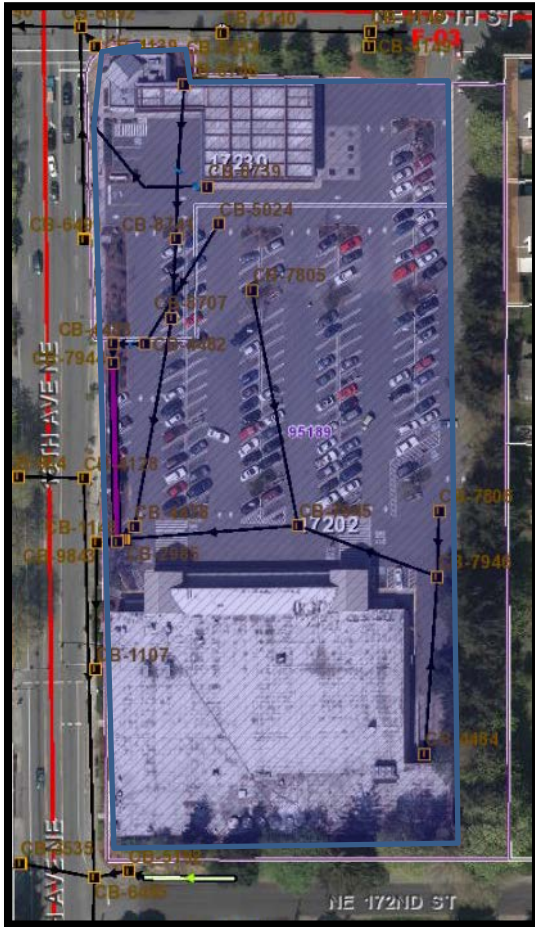


Figure 1 – 3.25 Acre Commercial Property

- Rate Class 7 – Very Heavy
- % Impervious Surface is More than 85%
- SWM Fee is \$8,479/year



Figure 2 – 3.25 Acre Commercial Property with 1.5 Acre permeable pavement parking lot

- Rate Class 4 – Moderate
- % Impervious Surface is More than 20% but less than 45%
- SWM Fee is \$2,629/year

Using the Example Property above, if the commercial property should redevelop with a permeable pavement parking lot, the percent impervious surface will be reduced by almost 50%, which could result in almost 50% less revenue from the property.