Council Meeting Date: May 2, 2011 **Agenda Item: 7(a)**

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Surface Water Master Plan Update – Surface Water Utility Issues
DEPARTMENT:	Public Works
PRESENTED BY:	Mark Relph, Public Works Director Jesus Sanchez, Public Works Operations Manager Brian Landau, Surface Water and Environmental Services Manager

PROBLEM/ISSUE STATEMENT:

The Surface Water Master Plan (SWMP) is being updated this year. The purpose of this staff report is to discuss a few key policy issues associated with the Surface Water Utility. The outcome of this discussion will provide direction to staff for completing the 2011 SWM Plan update.

The City of Shoreline's first SWMP was completed and adopted by Council in 2005. It established a prioritization of capital projects that focused on flooding issues, water quality and habitat restoration. The 2011 update will evaluate the currently planned CIP against current and future surface water needs and determine an appropriate fee schedule to support future CIPs and Maintenance and Operations (M&O).

The update to the SWMP will also be coordinated with the City's Comprehensive planning process. Eventually, the SWMP and the designated projects will be integrated with the Capital Facilities Element of the Comprehensive Plan.

BACKGROUND

The City's original SWM Plan was developed in 2004 and adopted in 2005. It included the development of a Capital Improvement Program (CIP), a fee or rate study, and Maintenance and Operations (M&O) plan to support the City's Surface Water Utility. The SWMP focused on short and long-term needs for the Utility's storm water programs. The initial and critical needs were to address public safety, reduce damage caused by flooding, and meet legal mandates prescribed by Federal and State laws such as the Clean Water Act, plus provide habitat restoration.

Major regulatory drivers that helped guide the initial SWMP were the Federal Endangered Species Act, the Federal Clean Water Act – which includes the Federal National Pollution Discharge Elimination System (NPDES) Phase II rule and the Washington State Department of Ecology's Basic and Comprehensive Stormwater Program.

Since 2005, a number of changes have affected the Surface Water Utility's programs. Some of these include:

- Completion of several capital improvements that have substantially reduced the number of flooding issues, and consequently the number of flooding complaints.
- Institution of educational programs focused on water quality such as the environmental mini-grant programs, recycling and natural yard care, and the Neighborhood Environmental Stewardship Program (NEST).
- Having real-time experience in NPDES permit compliance, helping us to more clearly understand the costs associated with the program.
- Construction of additional surface water management infrastructure that requires a higher level of maintenance (e.g., Aurora Avenue).
- Greater regional and local emphasis on sustainability, water quality, and habitat restoration.

While the accomplishments have been significant, there is much more to be accomplished with managing the City's Surface Water Utility. The 2011 SWMP Update will provide the Surface Water Utility with the guidance on program priorities and levels of service for the next five years. These include capital programs for drainage and water quality, operations and maintenance, regulatory compliance, water quality monitoring, and education/outreach programs. The plan will assess the level of funding needed to implement the recommended programs as well as the Surface Water Utility rates to support this funding. Once a draft of the plan is completed in June, staff will review the level of service options and their associated costs with Council.

As work continues on the SWMP Update, staff seeks direction from Council on some specific policy issues. The overall challenge is how we find the appropriate balance between the Utility rates, the amount of investment for capacity improvement and the level of maintenance for the Utility. This is the first of those discussions.

Issue 1: Repair and Replacement vs. New Capital Facilities

Over the last five years, the City has implemented nearly 95% of all the recommended Priority 1 CIP projects listed in the 2005 SWMP. The 2005 SWMP placed great emphasis on capital projects for the most severe flooding problems as well as immediate stormwater repairs, while having less emphasis on programmatic maintenance and repair of the existing storm system. With the majority of the large flooding projects nearly complete, the City is experiencing fewer calls for flooding assistance during major storm events.

However, a large portion of the City's stormwater drainage system is old and is nearing the end of its useful life (50-75 years). There are also many systems that were not constructed with long-term functionality; an example would be a former roadside ditch gradually converted to a culvert system by various private property owners with different pipe sizes and materials installed using poor construction practices.

To identify aging and substandard infrastructure prior to failure, a condition assessment and engineering or capacity analysis of the existing storm drain system is recommended. The condition assessment would investigate and assess the condition and integrity of the drainage infrastructure in order to identify repair, replacement, or increased maintenance options prior to the risk of failure. Over the next several years, the Utility proposes to do this assessment concurrent with basin planning such that future projects (repair/replacement) can be prioritized in the budget process.

The policy question is: With limited resources, what level of priority should be placed on maintenance through repair and replacement above that of new capital or capacity improvements?

Alternative 1: Repair and replacement would not have a priority over new capital or capacity improvements. The decisions would be made more on an annual basis as each budget is prepared. This approach would be more reactive to problems as they occur.

PROS: This approach provides flexibility to adjust priorities for use of limited financial resources as conditions change.

CONS: This alternative does not place a priority on the resources necessary to provide repair & replacement of the existing infrastructure. A lack of priority would make it difficult to allow for long-term planning of utility maintenance.

Alternative 2: The Surface Water Utility would prioritize maintenance higher than building new capital facilities intended to increase capacity.

PROS: This will improve the efficiency of maintenance and allow for improved short- and long-term planning. This approach would place a financial emphasis on the maintenance of existing assets. The information from an infrastructure condition assessment will improve the predictability of short- and long-term rate impacts.

***CONS*:** If surface water rates are not periodically increased, this approach could require a reduction in capital projects focused on capacity improvements to offset the costs of maintenance priorities. This could result in pushing out any new major capital projects to later years in the CIP.

Recommendation: Alternative 2. Staff recommends a higher priority for maintenance over new capacity improvements. Over the past several years, the larger capacity projects initially identified in the previous SWMP and budgets have been or will be completed in the near term. Projects like Ronald Bog, Cromwell Park detention system, Aurora Avenue, Pan Terra Pump Station and Pump Station 25 have all addressed historic flooding issues. What has not been completed is a basin by basin analysis of the existing infrastructure to understand the condition of facilities and how they perform under certain storm events. This information is necessary to plan for a long-term repair and replacement program that ultimately would maximize the service life of our infrastructure.

Conducting an infrastructure inventory and condition assessment would be one of the first steps in gaining this more comprehensive understanding of maintenance needs.

By taking this approach, rates for the short term should remain generally stable with low or moderate increases. The condition assessment is currently scheduled to start in 2011 and should be completed in 2013. After this work is complete, there will be detailed information on maintenance priorities and it will allow the City Council to make more informed long-term decisions with the Utility.

Issue 2: Rate Credits for Low Impact Development Improvements

Over the last three years, Council has expressed the interest of exploring rate credits as incentives for promoting Low Impact Development (rain gardens and other infiltration systems). There are several questions that would require further discussion, such as:

- What type of low-impact development or best management practices would be eligible (e.g. rain gardens, splash blocks, rain barrels, porous pavement, etc.)?
- What properties are appropriate to receive the credit?
- If a homeowner installs an LID feature such as a bio-retention swale or rain garden to attenuate/detain water on site, whose responsibility is it to continue maintenance, and how shall it be monitored for compliance to receive the rate credit?
- What performance measure is it tied to and how much of a rate credit/reduction would be given?
- How would the rate credit be administered?
- How many property owners would likely be eligible for such a credit?
- How will the increased administrative cost for the program development, inspections, and record keeping be recovered?

The policy question is; should the Utility offer rate credits or should the City promote LID through other options such as discounted rain barrels, grant programs, or possibly one-time rebates?

Alternative 1. The City allows revenue-neutral rate credits to promote Low Impact Development. The Utility's rate structure for residents would be modified to allow for existing properties to receive a rate credit when implementing LID practices. Note that this does not include new development or redevelopment because the City code requires LID. The intent is to provide incentives and encourage existing property owners to implement LID where none are required; new commercial and multi-family developments receive discounted surface water rates under existing city code. For the Utility to maintain a revenue neutral budget, the rate credits would have to be offset by an increase in surface water rates to those properties that do not receive the rate credit or there would need to be a reduction in programs or services to offset the credit.

> ***PROS:*** A rate credit for property owners may provide the incentive for property owners to install LID stormwater systems on their property, thereby reducing impacts to downstream drainage systems and improving water quality.
>
> Successful residential applications could possibly stimulate support and improve public acceptance of LID. Additionally, Shoreline would be in further compliance with the anticipated NPDES permit requirements for basin-wide LID stormwater

management and raise the City of Shoreline as a model for other programs in Western Washington.

CONS: From a ratepayer's perspective, LID rate credits are typically not cost effective. The costs of LID implementation (e.g., installing a rain garden) by the property owner will likely exceed the rate credit received over a 20-year lifetime or more. The establishment and administration of a rate credit program will require financial resources from the Utility, thus reducing or reallocating the existing capital and/or operational budgets to provide the financial resources for program administration. For example, the inspection effort to determine maintenance and effectiveness for such facilities over the long-term could be significant. In addition, if the applications of LID are not installed in the appropriate locations, public acceptance could be compromised.

Alternative 2. The City promotes LID through other options such as discounted rain barrels, grant programs, or possibly one-time rebates.

PROS: Promotion of LID through other incentives may result in a higher level of participation from residents than a rate credit. It also allows for more flexibility and creativity to develop incentives that increase participation and LID implementation.

CONS: The promotion of LID through other means could potentially have high programmatic costs depending on the scope of the program.

Recommendation: Alternative 2. Staff recommends that incentives for low impact development would be better administered through incentives, grant programs, or one-time rebate programs. The Surface Water Utility currently endorses and promotes sustainable programs; therefore, it is important the City continue to encourage property owners to embrace a more sustainable way of life.

The Surface Water Utility, through its outreach programs, could provide a LID incentive program to offer discounted rain barrels, downspout splash blocks, trees, or free do-it-yourself LID design booklets. The Utility could pilot a grant program for residents to install rain gardens or similar features on their properties. Another option may be a rebate program that provides a property owner with a one-time rebate for each square foot of surface water runoff that is detained on their property.

Issue 3: Private Property and Public Drainage Systems

There is uncertainty regarding the City's responsibilities with drainage ways passing through private property. The City has numerous 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). In some cases, the City has easements where the City is responsible for maintenance of these systems. Conversely, in most 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). Many of these systems were constructed long ago, prior to City incorporation in 1995. Some systems can traverse back and forth between public and private property.

Like public drainage systems, private systems can be subject to various problems. Over time, as upstream development has occurred, these systems can be subject to increased peak runoff rates and volumes, which can lead to flooding (if they are undersized or not maintained) and erosion (which can lead to bank failure and/or downstream sedimentation). They can also fail due to aging or corrosion of manmade materials as well as be subject to water quality problems from upstream urbanization.

City staff routinely receives questions from citizens when problems occur on these drainage systems that cross through private property. Most often, a citizen or a group of citizens will request that the City solve a problem that exists on private property. Legally, the City is not responsible for solving problems on private property. However, there may be certain situations where there is an overriding public benefit (such as solving flooding for an entire neighborhood) and the City should consider improvements on private property and, in some cases, taking over the drainage system by obtaining easements. Recent improvements at Ronald Bog are an example.

Conversely, there are other situations where the City has chosen not to provide drainage improvements on private property and it was not considered part of public conveyance. An example is when stream overflows resulted in recurrent flooding of a basement of a single residence. In this case, the Utility chose not to construct improvements, in part because public funds should not be used to aid private property.

The City's current policy for addressing drainage facilities is written in Shoreline Development Code 20.70.060 (Attachment A). The code allows the City to assume maintenance responsibility of privately-maintained drainage facilities such as detention vaults, water quality facilities, etc. that were constructed as part of development. However, most of the stormwater drainage infrastructure in the City was constructed prior to stormwater regulations. As such, stormwater infrastructure crosses private property without City drainage easements. The uncertainty regarding responsibility for this infrastructure can create uncertainty for both the City and the property owner.

The policy question is: should the Utility establish a more defined policy regarding the use of public funds to acquire easements and private drainage facilities in order to improve and/or maintain piped and natural drainage systems that cross through private property?

Alternative 1. The Utility could establish a more defined policy to provide consistent guidance on the use of public funds for the Utility to acquire ownership and thereby improve and/or maintain drainage systems currently on private property. Specifically, a more defined policy would establish criteria (i.e. threats to public infrastructure, public safety, etc.) for surface water management activities for public stormwater that is conveyed through private property. These management activities include maintenance, repair and replacement of existing infrastructure, or new capital projects.

A more defined policy could establish priorities for Utility funds upstream of the private property, before consideration of acquiring the private facilities. This may provide a wider benefit than the initial private facility. An example might be the storm water detention facility at Cromwell Park.

A decision tree such as shown in Attachment B would provide a framework for acquiring drainage easements where none currently exist to perform management activities for piped drainage systems and for natural drainages that receive stormwater such as creeks and wetlands.

PROS: The City receives many inquiries on this issue and the situations can be quite varied (e.g., one to multiple properties, the severity of the problem, whether the problem affects private property only or can also affect public property, etc.). Establishing a more defined policy would provide guidance for when the Utility should construct or maintain drainage improvements on private property. By establishing a clear policy for when to address drainage issues on private property for public benefit, staff can begin developing consistent approaches to maintaining the Utility's drainage systems. This could clarify the City's and the private owner's responsibility for system maintenance. Prior to incorporation, some of the existing stormwater infrastructure was constructed on private property without drainage easements. As this infrastructure begins to fail, the Utility will have a more defined policy (decision matrix) that will provide the framework for addressing stormwater infrastructure problems in which public stormwater is conveyed in piped drainage systems crossing private properties, and along natural drainages that cross private properties.

***CONS*:** Continued inconsistency in addressing storm water management issues within private property. With the acceptance of more drainage facilities comes additional responsibility or liability, plus operational and maintenance costs over time.

Alternative 2. The Utility would not establish such a policy and would continue with the status quo.

PROS: Allows for an evaluation on a case-by-case basis. Requests could be discussed as part of the annual budget process and allow City Council to make a determination based upon the details of the request itself as well as the financial status of the Utility.

CONS: With the current policy focused largely on new development, the Utility cannot ensure consistent approaches to maintaining drainage systems. Long-term planning of Utility funds becomes more difficult, since decisions are made more on a case-by-case basis. In addition, without a clear defined policy uncertainty will continue to persist regarding the private property owner's and the City's responsibilities and may present financial burdens to those property owners as well as potential liability to the City.

Recommendation: Alternative 1. Staff recommends the development of a more defined policy for addressing surface water issues on private property. Utility staff worked with legal counsel to develop an example of a draft policy framework for Council's review (Attachment B). It includes both a decision tree and additional considerations with which to guide decisions.

Issue 4. Non-Commercial Car Washes

The City's National Pollution Discharge and Elimination System (NPDES) permit considers the discharge of car wash water into the City's storm drain illicit, because the permit only allows for the discharge of stormwater in the City's drainage system. The City has made efforts to reduce the illicit discharge from non-commercial car washing fundraisers through multiple outreach efforts and providing car-wash kits that allow for discharge of soapy water into the sanitary sewer. These efforts have been marginally successful at reducing their illicit discharges into the storm drain system and its receiving waters of streams, wetlands, and Puget Sound. Many municipalities around the region and country require permits for such activities.

It is important to note that this issue focuses on fundraising car washing activities. Staff estimates about 20-50 car washes occur annually; it does not include individual private property owners who perform car washing activities on private property. The City addresses these latter type activities through public education, such as promoting the use of commercial car washes or performing car washes on lawn areas. In addition, the City encourages businesses that allow the car washing activities and the fundraising groups to borrow a City-owned car wash kit. This kit, when properly used, pumps the car wash water from an insert in a catch basin to a sink or other receptacle that drains to the sanitary sewer for treatment.

The policy question is: should the City issue permits for non-commercial fundraising car washes?

Alternative 1. The City would issue no-cost permits for non-commercial fundraising car washes as a method to reduce the illicit discharge of these known activities. Prior to implementing a permit system, the City would increase outreach efforts to fundraising groups, businesses, and the community about the new required permits. As part of developing a permit program, the City may require a permit or placard to be shown at the car wash so that residents who are getting their car washed will know the car wash is being performed in an environmentally sensitive way.

PROS: A required permit for non-commercial car wash events could reduce the illicit discharge of car wash water into the City's storm drain system. A permit would require all non-commercial car wash events to demonstrate their activity is discharging the soapy rinse water in an acceptable manner (i.e., into the sanitary sewer, or through infiltration into grass or gravel). The City could provide at no charge car wash packets highlighting best practice requirements to groups that apply for a permit. A permitted activity with enforcement capability will reduce the illicit discharge into the storm drain system from these activities.

CONS: The permits will require an increase in staff time for permit review and enforcement. This would add a process step for these fundraising groups that is currently not required. A more concerted and targeted public education program would be necessary in the early years of this alternative.

Alternative 2. The City would not issue permits for non-commercial fundraising car washes and would continue to rely on voluntary compliance.

PROS: This alternative would not increase staff time and would not place an administrative burden on groups that are trying to raise money. The City would still offer the technical assistance and compliance information to community groups that contact the City.

CONS: The illicit discharge of soapy rinse water into the City's storm drain system would continue, with eventual discharge of this soapy rinse water into receiving streams, wetlands, and Puget Sound.

Recommendation: Alternative 1. City staff recommends that non-commercial car washing events become a permitted activity administered by the Surface Water Utility and the Planning and Development Services department. This is a practice consistent with other municipalities in our region.

For Future Discussion: Financial Policies Including Debt Service Limits

Later this summer, as the rate study results becomes more defined, Utility staff anticipates discussions with Council regarding a series of interrelated Surface Water Management Utility financial topics, including:

- Future levels of capital and repair and replacement spending.
- A policy governing the amount of debt that should be issued to fund Surface Water Utility improvements.
- Projected Surface Water Management fees over the next five years.

Staff is aware of the need to balance some potentially competing objectives such as:

- Maintenance of Surface Water Management infrastructure;
- Completion of capital improvements needed to provide the desired level of Surface Water Management services to the City's customers;
- Maintaining affordable utility rates in both the short and the long-term; and
- Avoid limiting the ability of future Utility managers to respond to future needs because of the long-term financial obligations caused by debt obligations.

Issuing debt to pay for capital improvements is a key policy discussion. Issuing debt allows the Utility to complete critical capital projects in a timelier manner than waiting to accumulate funds over multiple years on a cash basis. However, the debt must be repaid and therefore incorporated into the rate structure. Without clear financial policies this can reduce the Utility's long-term financial flexibility. Utility staff will return to Council later this summer to present Surface Water Utility financial projections. These projections are expected to include alternatives showing the short and long-term financial impacts of issuing debt and a policy discussion regarding recommended debt limits.

RECOMMENDATION

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

Approved By: City Manager ____ City Attorney ____

ATTACHMENTS

Attachment A: Existing Shoreline Municipal Code Stormwater Facility Dedication
Attachment B: Draft Policy Framework

Attachment A: Existing Shoreline Municipal Code Stormwater Facility Dedication

20.70.060 Dedication of stormwater facilities – Drainage facilities accepted by the City.

A. The City is responsible for the maintenance, including performance and operation, of drainage facilities which have formally been accepted for maintenance by the City.

B. The City may assume maintenance of privately maintained drainage facilities only if the following conditions have been met:

1. All necessary upgrades to the facilities to meet City standards have been completed;

2. All necessary easements or dedications entitling the City to properly maintain the drainage facility have been conveyed to the City;

3. The Director has determined that the facility is in the dedicated public road right-of-way or that maintenance of the facility will contribute to protecting or improving the health, safety and welfare of the community based upon review of the existence of or potential for:

a. Flooding;

b. Downstream erosion;

c. Property damage due to improper function of the facility;

d. Safety hazard associated with the facility;

e. Degradation of water quality or in-stream resources; or

f. Degradation to the general welfare of the community; and

4. The City has accepted maintenance responsibility in writing.

C. The Director may terminate the Department's assumption of maintenance responsibilities in writing after determining that continued maintenance will not significantly contribute to protecting or improving the health, safety and welfare of the community based upon review of the existence of or potential for:

1. Flooding;

2. Downstream erosion;

3. Property damage due to improper function of the facility;

4. Safety hazard associated with the facility;

5. Degradation of water quality or in-stream resources; or

6. Degradation to the general welfare of the community.

Copies of this document will be kept on file with the City of Shoreline.

D. A drainage facility which does not meet the criteria of this section shall remain the responsibility of the applicant required to construct the facility and persons holding title to the property for which the facility was required. (Ord. 238 Ch. VII § 2(C-1), 2000).

20.70.070 Dedication of stormwater facilities – Drainage facilities not accepted by the City.

A. The property owner and the applicant required to construct a drainage facility shall remain responsible for the facility's continual performance, operation and maintenance and remain responsible for any liability as a result of these duties. This responsibility includes maintenance of a drainage facility that is:

1. Under a maintenance guarantee or defect guarantee;

2. A private road conveyance system;

3. Released from all required financial guarantees prior to date of this Code;

4. Located within and serving only one single-family residential lot;

5. Located within and serving a multifamily or commercial site unless the facility is part of an approved shared facility plan;

6. Located within or associated with an administrative or formal subdivision which handles runoff from an area of which less than two-thirds is designated for detached or townhouse dwelling units located on individual lots unless the facility is part of an approved shared facility plan;

7. Previously terminated for assumption of maintenance responsibilities by the Department; or

8. Not otherwise accepted by the City for maintenance.

B. Prior to the issuance of any of the permits for any multifamily or nonresidential project required to have a flow control or water quality treatment facility, the applicant shall record a declaration of covenant as specified in SMC 13.10.200, Surface Water Management Code and adopted standards. The restrictions set forth in such covenant shall include, but not be limited to, provisions for notice to the property owner of a City determination that maintenance and/or repairs are necessary to the facility and a reasonable time limit in which such work is to be completed.

1. In the event that the titleholders do not effect such maintenance and/or repairs, the City may perform such work upon due notice. The titleholders are required to reimburse for any such work.

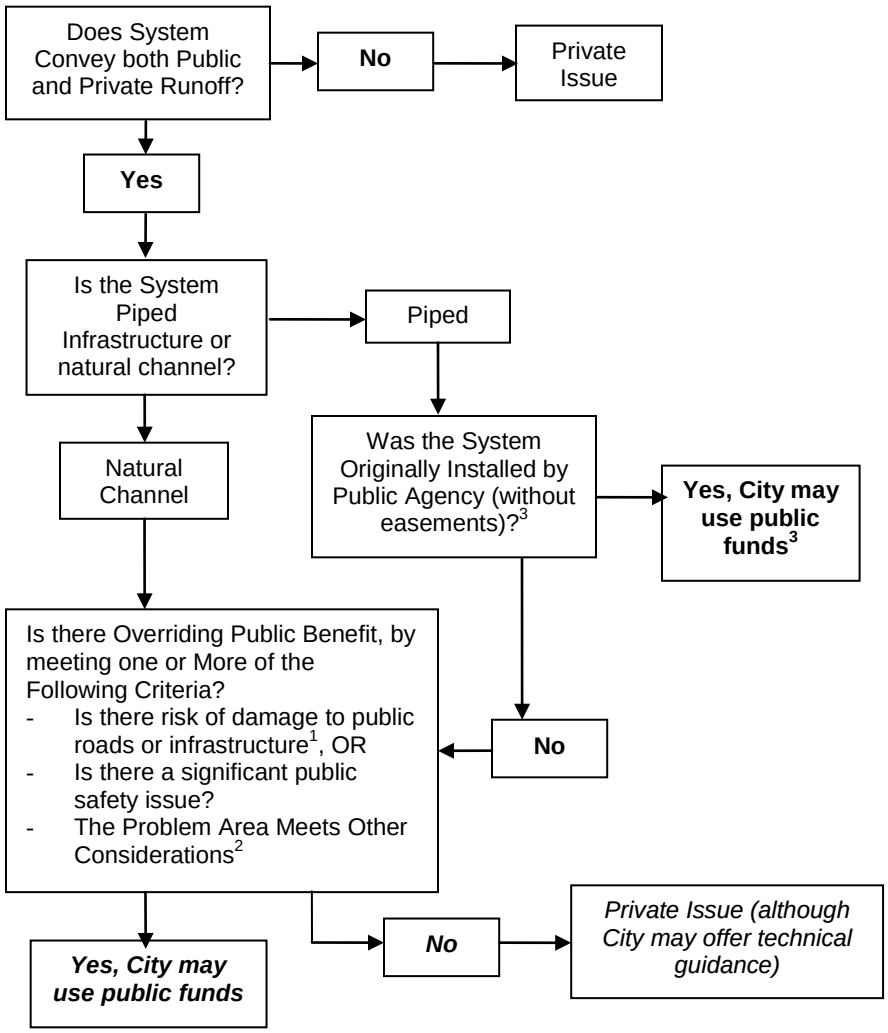
The restrictions set forth in such covenant shall be included in any instrument of conveyance of the subject property and shall be recorded with the county.

2. The City may enforce the restrictions set forth in the declaration of covenant provided in SMC 13.10.200, Surface Water Management Code and adopted standards.

C. Where not specifically defined in this section, the responsibility for performance, operation and maintenance of drainage facilities and conveyance systems, both natural and constructed, shall be determined on a case by case basis. (Ord. 531 § 1 (Exh. 1), 2009; Ord. 238 Ch. VII § 2(C-2), 2000).

Attachment B – Draft Policy Framework for Council Review:

In an effort to provide consistent guidance on use of public funds to improve and/or maintain drainage systems on private property, the following flow chart was developed to provide a framework for policy discussion.



Footnotes:

1. Includes flooding or erosion that results in (or could result in future) damage to public roads, infrastructure, or structures.
2. There may be other considerations that provide additional justification for overriding public benefit, including: the system is a trunk system where failure of system could result in neighborhood problems; there is an NPDES permit driver to meet water quality standards; the problem is causing significant environmental degradation to a stream or wetland; the project to solve a problem provides significant benefit compared to the cost, and meets objectives stated in the City's Surface Water Master Plan; or the problem lies within jointly owned properties (e.g., native growth protection areas) where it would be very difficult for private parties to implement solutions.
3. In some areas, King County constructed improvements without securing easements. In these cases, there may be a legal justification for the City to secure drainage easements and assume maintenance, particularly if it is a trunk system that serves multiple properties. The City may require that the system be brought up to City standards and that the easement be provided to the City at no cost.