

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussion of the 2017 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 report is to discuss project and program recommendations for the 2017 Surface Water Master Plan (Master Plan) within the context of management strategies and to receive guidance on which management strategy to use in developing rates and financial analysis for the 2017 Master Plan.

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 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, long-term asset management, and a financial plan that sustainably supports the Utility.

The Master Plan represents progress on many fronts in developing a comprehensive management plan for the Utility. The Master Plan will help articulate the current activities of the Utility, identify gaps and resources needs to fill the gaps by developing a prioritized list of projects and programs that the Utility will focus on for the next 6 years. As such, a major element of the Master Plan is prioritizing projects and program activities for the Utility and establishing a management strategy for implementing these activities, along with a supporting financial strategy.

Prioritized projects and programs were examined within the context of different management strategies to determine the long-term financial impacts. Projects (capital expenses) and programs (operational expenses) have been packaged into three options reflecting the different management strategies, Minimum, Proactive and Optimum, based on how they address regulatory requirements, system needs, and levels of service.

RESOURCE/FINANCIAL IMPACT:

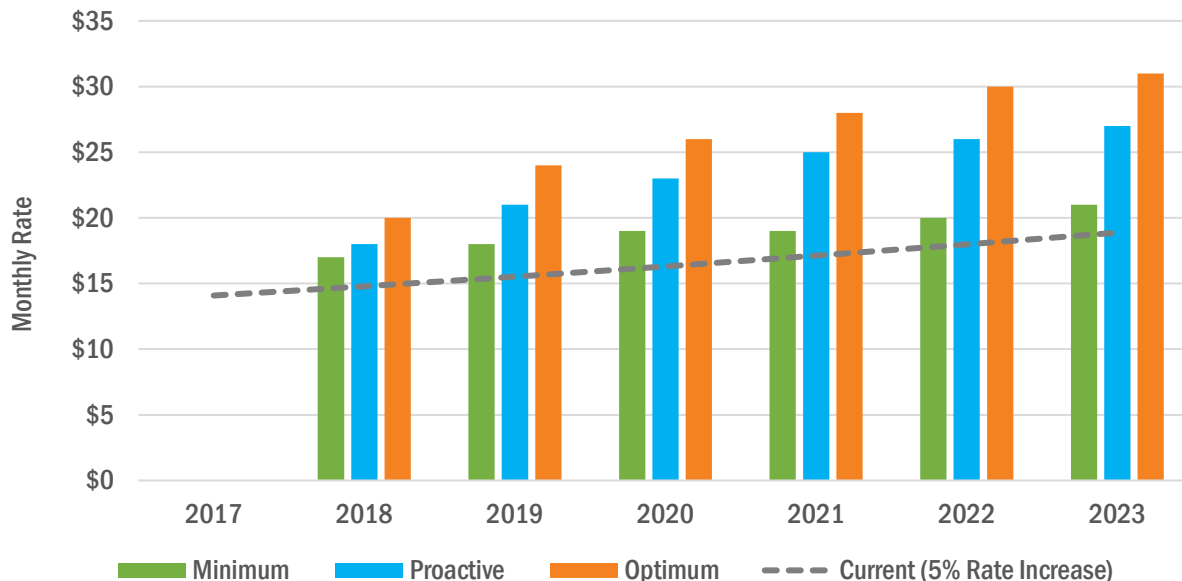
The resource and financial impacts of the projects and programs vary depending on the selected management strategy. The following table and figure summarize the potential impacts to surface water management fees. The shaded 2017 column shows the

current surface water rates. Table 1 shows the rate impacts for the three management strategies. The average monthly for single family SWM fee increase is \$1, \$2 and \$3 for the Minimum, Proactive and Optimum management strategies over the 6-year period, respectively. Similarly, the average annual single family SWM fee increase over the 6-year period is \$13, \$27 and \$35, respectively for the three management strategies. Figure 1 compares the proposed monthly rate impact to Single Family SWM fee with the current 5% rate increase.

Table 1. Proposed 6-Year Rate Impact to Single Family SWM Fee per Management Strategy (includes utility tax)

Management Strategy/ Rate Study Results (Rounded to nearest \$)		Year						Average Increase \$	Average Fee \$	
		2017	2018	2019	2020	2021	2022			2023
Minimum	Monthly SF SWM Fee, \$	14	17	18	19	19	20	21	\$1	\$19
	Annual SF SWM Fee, \$	169	203	213	223	232	239	246	\$13	\$226
	Resulting Revenue, \$M	4.5	5.4	5.7	6.0	6.1	6.3	6.5		
	Proposed Increase	NA	20%	5%	5%	4%	3%	3%		
Proactive	Monthly SF SWM Fee, \$	14	18	21	23	25	26	27		
	Annual SF SWM Fee, \$	169	214	247	271	298	313	329	\$2	\$23
	Resulting Revenue, \$M	4.5	5.7	6.6	7.2	8.0	8.4	8.8	\$27	\$279
	Proposed Increase	NA	27%	15%	10%	10%	5%	5%		
Optimum	Monthly SF SWM Fee, \$	14	20	24	26	28	30	31		
	Annual SF SWM Fee, \$	169	240	288	316	342	359	377		
	Resulting Revenue, \$M	4.5	6.4	7.7	8.4	9.1	9.6	10.1	\$3	\$27
	Proposed Increase	NA	42%	20%	10%	8%	5%	5%	\$35	\$320

Figure 1. Projected monthly single family surface water management fees for Management Strategies and approved rates



RECOMMENDATION

Staff recommends the Proactive management strategy and for rates to be developed to manage the Utility at this level for the next six years.

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

INTRODUCTION

The 2017 Surface Water Master Plan (Master Plan) is a vision document that establishes a management strategy for the Surface Water Utility to help meet the established level of service goals and NPDES permit requirements. It also includes the development of both financial and policy processes for the Utility to implement the strategy.

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 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 Master Plan includes elements to ensure a comprehensive plan that addresses current and future anticipated needs including establishing levels of service and a mechanism for prioritizing existing and future projects and programs to meet the levels of service and provide information for the financial analysis and associated rates to support the Utility.

The purpose of this report is to discuss project and program recommendations within the context of management strategies and to receive guidance on which management strategy to use in developing the Surface Water Utility work plan, financial plan and for the next 5 years.

BACKGROUND

The Master Plan represents a comprehensive plan for the Utility and includes defining levels of service for the Utility and prioritizing projects and program activities in the context of the level of services and establishing a management strategy for implementing these activities within a corresponding financial strategy.

On October 10, 2016, the Council reviewed the draft level of service and levels of service targets used in developing the Master Plan. The staff report documenting the levels of service and levels of service targets can be found at the following link: <http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2016/staffreport101016-8a.pdf>

On July 17, 2017, the Council received updates on the plan progress, reviewed and provided feedback on the prioritization process and management strategy being used in the plan development and financial analysis. The staff report for the update can be found at the following link: <http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2017/staffreport071717-9a.pdf>

As discussed during the July 17TH meeting, one of the tasks of the Master Plan was to assess the 116 recommended projects with a combined estimated cost of \$50 million from previous basin planning efforts within the context of the Levels of Service (LOS) and consistent priorities for the Utility. The initial set of 116 projects were screened and combined where necessary to create a working list of roughly 40 capital projects, six new studies, and 19 new or enhanced programs that address needs beyond existing programs.

The projects, new programs and existing programs were further evaluated through a prioritization process. The prioritizing process included a spreadsheet tool that applies a consistent set of criteria and procedure for scoring. After the projects and programs were scored and ranked, they were then aligned within management strategies with corresponding rate impacts. The results of the alignment are summarized in this report and will help facilitate the discussion of rate and financial impacts for the utility.

DISCUSSION

Projects (capital expenses) and programs (operational expenses) have been packaged into three options reflecting the different management strategies. The management strategies range from Minimum to Optimum based on how they address regulatory requirements, system needs, and levels of service, as well as the long-term financial impacts. The management strategies are described as follows:

- **Minimum:** Projects and programs that meet the minimum in terms of existing system needs and anticipated new regulatory requirements
- **Proactive:** Minimum plus new high-priority projects and new/enhanced programs that address high priority long-term needs, as well as anticipated new regulatory requirements
- **Optimum:** Proactive plus additional priority projects and programs that enhance water quality and aquatic habitat

The following summarizes the recommended projects and program and how they align within the management strategies and financial impacts analysis:

Capital Improvement Projects (Capital Expenses)

Capital improvement projects (CIP) address maintenance of surface water assets, address critical flooding problems and to some extent water quality problems, and aquatic habitat enhancements. As discussed earlier addressing all 40 projects identified in the plan would take significant resources and time. Therefore, the prioritization process was very important in identifying projects for the 6-year CIP. Projects selected for the 6-year CIP were then examined in closer detail with respect to implementation and within the three management strategies. Several projects are divided into phases where pre-design/feasibility studies were needed or engineering and planning must be done well in advance of construction. The projects that are not grouped within one of the three management strategy are recommended for the 20-year CIP.

6 -Year Capital Improvement Projects (CIP)

The projects identified for the 6-year CIP are grouped into the three management strategies as discussed above. Several of the existing projects (noted in **red font** in

Attachment A) in the 2017-2022 CIP ranked high in the prioritization process and are recommended for carrying forward into the 2018-2023 CIP. The recommended project list and the management strategy is provided in Attachment A and summarized below:

- Minimum – Ten projects are recommended in the minimum strategy including six that currently appear on the 2017-2022 CIP. For example, Hidden Lake Dam Removal ranked 5th in the prioritization process and is being recommended for design and construction in the 6-year CIP under the Minimum management strategy. New projects that ranked highest in the prioritization process are recommended for the minimum strategy as they are addressing highest priority needs. The total estimated cost of the projects in the Minimum management strategy is \$6.2 million.
- Proactive – The Proactive management strategy includes all the Minimum projects and additional high priority projects. Twenty three projects are recommended for the Proactive management strategy; several of these projects are recommended for planning/pre-design/studies in the 6-year CIP to allow for development of specific solutions and applicable construction cost estimate where needed. The total estimated cost of the projects in the Proactive management strategy is \$11.1 million.
- Optimum - The Optimum management strategy includes all the Proactive projects, plus some additional priority projects and projects that address water quality and habitat improvements, for example, *#21 Convert Stormwater Conveyance Ditches to Bio-infiltration Facilities in Thornton Creek*. Also note that the Optimum management strategy includes additional phases (i.e., construction) for some of the projects that only had initial phases included in the Proactive list. For example, *#2 Springdale Ct. NW and Ridgefield Rd. Drainage Improvements* is recommended for planning/pre-design/studies in the Proactive but at an Optimum management strategy the project will be funded to construction. The total estimated cost of the projects in the Optimum management strategy is \$16.3 million.

Programmatic Improvements (Operating Expenses)

The Utility programs are designed to meet the NPDES Permit requirement and ensure the continuing functionality of the drainage system. The programs can be grouped into Operations, Maintenance and Public Involvement programs. Enhancements to existing programs and new programs are being recommended to meet the existing regulatory requirements and anticipated regulatory requirements, address system issues identified in the basin plans and to fill historic gaps in utility management. Although the new NPDES Phase II permit (2019-2024) will not be issued until 2019, we have incorporated the anticipated new requirements in the minimum management strategy. The recommended programs are provided in Attachment B (new or enhanced programs shown in **blue font**) and summarized below.

Operations

The Utility operations program include programs that ensure the functionality of the system, including inspections, condition assessment and since the last master plan there has been an increased emphasis on asset management program with the implementation and on-going utilization of Cityworks software.

- **Minimum** - The Minimum management strategy includes the current operations programs which were developed to meet the goals of the 2011 Master Plan and includes an enhancement of the NPDES Compliance program to help meet the anticipated requirements of the 2019 NPDES Phase II Permit. The Minimum management strategy also includes a new Stormwater Permit program which provides the Utility best management practices for drainage system development and record keeping. The estimated average annual increase in cost from current operations to the Minimum management strategy is \$63,000.
- **Proactive** - The Proactive management strategy includes the Minimum programs plus four enhancements to existing programs to reflect best management practices for stormwater utilities and to address increased requirements anticipated in the next NPDES Phase II Permit (2019-2024). The estimated average annual increase in cost from current operations to the Proactive management strategy is \$411,000.
- **Optimum** - The Optimum management strategy includes all the Proactive programs, but no additional operations-based programs were added going from Proactive to Optimum. The estimated average annual increase in cost from current operations to the Optimum management strategy is \$411,000; same as with the Proactive management strategy.

Maintenance

- **Minimum** - The Minimum management strategy includes current maintenance programs which were designed in 2011 in anticipation for the 2013 -2018 NPDES Permit. The current maintenance resources are not adequate to meet the final requirements of the 2013-2018 NPDES Permit which include increased inspection and maintenance. Two new programs and two enhanced programs are needed in addition to the current programs to ensure the City continues to meet the current requirements of the 2013-2018 NPDES Permit. These programs will also help address the anticipated maintenance requirements in the next Permit (2019 NPDES Permit). The estimated average annual increase in cost from current maintenance to the Minimum management strategy is \$551,000.
- **Proactive** - The Proactive management strategy includes the programs from the Minimum management strategy which results in a total of four new programs and five enhancements to existing programs to address increasing requirements anticipated in the next Permit (2019 NPDES Permit). These programs also address the need for continuing functionality of the system. For example, the Surface Water Small Projects (Enhanced) program addresses the backlog of small localized drainage issues that do not qualify for Capital Improvement Project. The estimated average annual increase in cost from current maintenance to the Proactive management strategy is \$1.8 million. Note that Small Works Projects and Pipe Repair and Replacement programs are sizable contributions to this total; both of these programs were previously accounted for under capital projects.
- **Optimum** - The Optimum management strategy includes all the Proactive programs plus an additional program that will address improper connections to the system. The estimated average annual increase in cost from current maintenance to the Optimum management strategy is \$2.4 million. Note that Small Works Projects and Pipe Repair and Replacement programs are sizable

contributions to this total; both of these programs were formally accounted for under capital projects.

Public Involvement

The Public Involvement programs include public outreach and education programs that meet the NPDES permit requirement and address flooding, water quality and aquatic enhancement.

- **Minimum** - The Minimum management strategy includes all the current programs to ensure the City continues to meet the current requirements of the Phase II NPDES Permit for public outreach, education and involvement and one new program, Business Inspection Source Control Program to meet the anticipated requirement of the 2019 NPDES Permit. The estimated average annual increase in cost from current to the Minimum management strategy is \$16,000.
- **Proactive** -The Proactive management strategy includes one new program, Business Inspection Source Control Program. This is a strongly anticipated requirement in the next permit cycle. The estimated average annual increase in cost from current to the Proactive management strategy is \$87,000.
- **Optimum** - The Optimum management strategy includes the Proactive programs plus two new programs that will further enhance water quality and aquatic habitat. These two programs are recommendations from the basin plans to increase public outreach in targeted areas like Thornton Creek and areas with invasive plant species. The estimated average annual increase in cost from current to the Optimum management strategy is \$161,000.

Project and Program Summary

Table 2 provides a project and program cost summary for each management strategy. Table 3 shows proposed rates for 2018 and provides a qualitative assessment of how the management strategies will address levels of service. Note that Table 3 includes “current” information for comparison; however, this information does not represent a viable management strategy because it does not adequately address regulatory requirements and other surface water impacts.

Previously adopted rates as shown in the 2017- Capital Improvement Program (“CIP model”) reflect a 5 percent increase from 2017; however, these rates are not adequate for known obligations as well as to address the mandated regulatory requirements or other essential needs included in the Minimum management strategy. A more detailed version of Table 3 that lists the programs within each management strategy is included as Attachment C.

Table 2. Project and Program Cost Summary by Management Strategy

Management Strategy Summary	6 year -Total Capital Cost	Additional Annual Cost for New or Enhanced Programs			Total Annual Program Cost (plus Existing Program Cost [\$3.66 M])
		Operations	Maintenance	Public Involvement	
Minimum <ul style="list-style-type: none"> Includes 13 projects and 22 programs (7 new or enhanced) Meets current and known future NPDES requirements Implements one new Utility best practice, Stormwater Permit Program 	\$6,200,000	\$63,000	\$551,000	\$16,000	\$630,000 ¹ (\$4,294,000) ²
Proactive <ul style="list-style-type: none"> Includes 26 projects and 24 programs (15 new or enhanced) Meets current and known future NPDES requirements Implements Utility best practices identified to close maintenance and operation gaps 	\$11,100,000	\$411,000	\$1,845,000	\$87,000	\$2,343,000 ¹ (\$6,007,000) ²
Optimum <ul style="list-style-type: none"> Includes 30 projects and 27 programs (18 new or enhanced) Meets current and known future NPDES requirements Implements Utility best practices identified to close maintenance and operation gaps Implements public-focused water quality programs 	\$16,300,000	\$411,000	\$2,444,000	\$161,000	3,016,000 ¹ (\$6,680,000) ²

1. Additional annual program cost.
2. Total program cost including \$3.66 Million current program expense. See notes above.

Table 3. Proposed Rate¹ and Level of Service Impacts by Management Strategy

Management Strategy	Number of Projects and Programs	Projected Monthly Rate ¹ (2018)	Projected Annual Rate ¹ (2018)	Impact to Levels of Service			
				A Surface Water Impacts	B Equitable service	C Communication and outreach	D Regulatory compliance
<i>Current</i>	24 6 projects, 18 programs	\$14 ²	\$160 ²	Low	Medium	Medium	Medium
Minimum	37 13 projects, 22 programs	\$17	\$203	Low	Medium	Medium	High
Proactive	49 26 projects, 24 programs	\$18	\$214	Medium	High	High	High
Optimum	56 30 projects, 27 programs	\$20	\$240	High	High	High	High

1. Proposed rates are based on Single Family Residential Surface Water Management fee rate class.
2. Current rates reflect a 5 percent increase for 2017, as shown in the 2017- Capital Improvement Program.

Rate Analysis

The overall rate impacts for the management strategies are summarized in the Table 4 and also the percent increase of rates and resulting revenue by management strategy. The greatest rate impact occurs in 2018. This is due to the timing of the capital projects and the need to raise sufficient funds through rates to start debt service beginning in 2018. The average monthly for single family SWM fee increase is \$1, \$2 and \$3 for the Minimum, Proactive and Optimum management strategies over the 6-year period, respectively. Similarly, the annual single family SWM fee increase over the 6-year period is \$13, \$25 and \$33, respectively for the three management strategies. Table 4. Figure 1 compares the proposed monthly rate impact to Single Family SWM fee with the current 5% rate increase.

Table 4. Proposed 6-Year Rate Impact to Single Family SWM Fee per Management Strategy

Management Strategy/ Rate Study Results (Rounded to nearest \$)		Year						Average Increase \$	Average Fee \$	
		2017	2018	2019	2020	2021	2022			2023
Minimum	Monthly SF SWM Fee, \$	14	17	18	19	19	20	21	\$1	\$19
	Annual SF SWM Fee, \$	169	203	213	223	232	239	246	\$13	\$226
	Resulting Revenue, \$M	4.5	5.4	5.7	6.0	6.1	6.3	6.5		
	Proposed Increase	NA	20%	5%	5%	4%	3%	3%		
Proactive	Monthly SF SWM Fee, \$	14	18	21	23	25	26	27		
	Annual SF SWM Fee, \$	169	214	247	271	298	313	329	\$2	\$23
	Resulting Revenue, \$M	4.5	5.7	6.6	7.2	8.0	8.4	8.8	\$27	\$279
	Proposed Increase	NA	27%	15%	10%	10%	5%	5%		
Optimum	Monthly SF SWM Fee, \$	14	20	24	26	28	30	31		
	Annual SF SWM Fee, \$	169	240	288	316	342	359	377		
	Resulting Revenue, \$M	4.5	6.4	7.7	8.4	9.1	9.6	10.1	\$3	\$27
	Proposed Increase	NA	42%	20%	10%	8%	5%	5%	\$35	\$320

Figure 2 compares the current monthly surface water rate with the proposed rates of the three management strategies. This figure is a bar chart of the information monthly fee presented in Table 4. Figure 3 compares local area agency surface water rates for 2017 with the management strategy proposed rates for 2018.

Figure 2. Projected increases in monthly surface water management fees

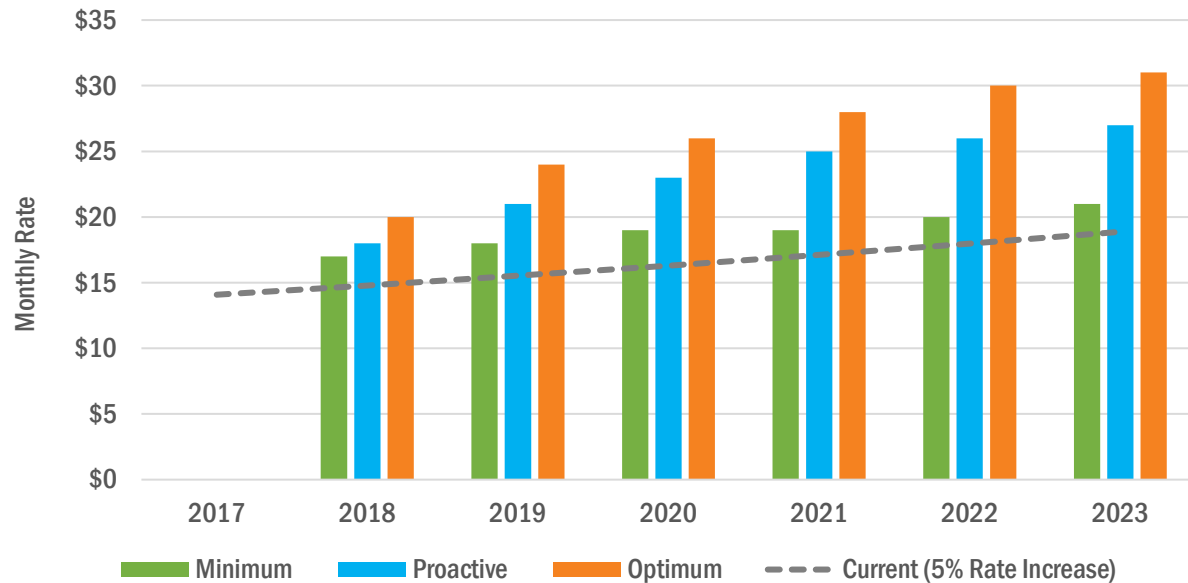
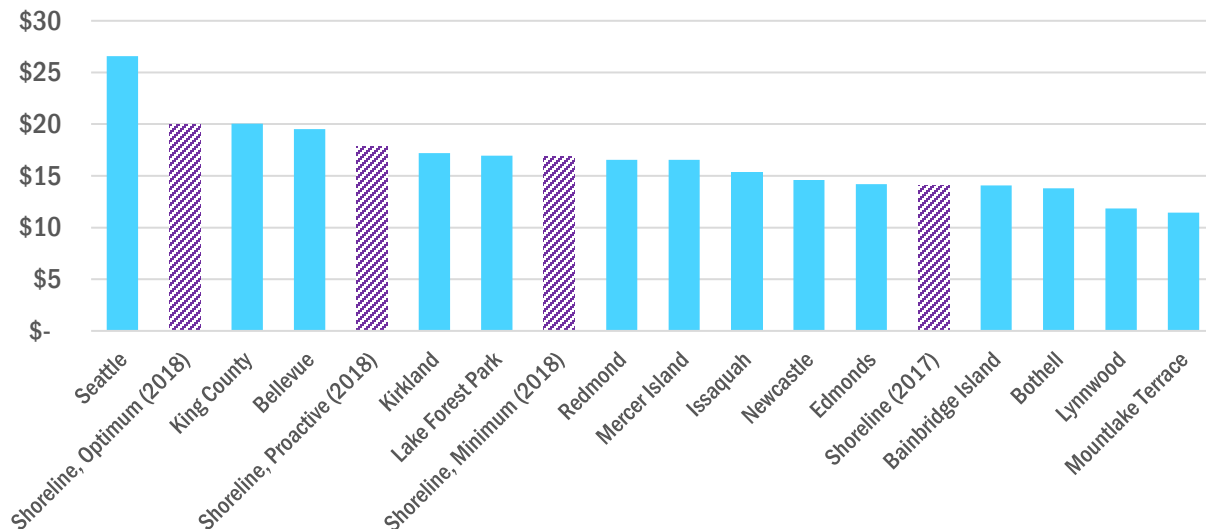


Figure 3. Comparison of Shoreline 2017 and proposed 2018 monthly surface water management fees with other 2017 surface water agencies



Next Steps

Upon receiving direction from Council on a selected management strategy and Project and Programs package, the rates and financial impacts of the management strategy will be further analyzed and a financial plan is scheduled for presentation to Council in October 2017.

The Draft 2017 Master Plan Document is scheduled for presentation for approval to Council in November 2017.

STAKEHOLDER OUTREACH

The first public open house was held on Thursday, September 8th, 2016 when a total of 23 Shoreline citizens attended. In addition, 177 Shoreline residents participated in a web-based survey and the findings from this outreach is being incorporated in developing the project and program recommendations.

The second open house was held on Thursday, July 13th, 2017. A total of 8 residents attended and listened to a presentation on the three different strategies. The residents were also asked to indicate their preferred stormwater management strategy by posting stickers on a display board outlining the three options. 1 indicated minimum, 4 indicated Proactive and 3 indicated Optimum.

In addition, a web based survey was conducted to solicit feedback from the residents on the management strategies from July 5th through July 16th. A total of 129 Shoreline Residents completed the survey and the complete results of the survey are provided in Attachment D. Key findings from the survey include the following:

- 48 % of respondents prefer the “Proactive” management strategy
- 29% agree that City should increase the existing fees to assist with funding, with 27% strongly disagreeing with the city increasing fees.
- 47% rated stormwater issues as a moderate concern
- General concerns were relatively evenly distributed between flooding, water quality/pollution, and impacts to streams and wetlands.

Follow-up Discussion on private facility inspection and maintenance

On May 15, 2017, the Council provided direction on four surface water management policy issues. The staff report documenting the policy issues can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2017/staffreport051517-8b.pdf>. For the Policy Issue 2: Private Property Facility Maintenance Enforcement, Council requested additional information on the staff recommendation for a self-certification program for private facility inspection and maintenance.

Based on continued investigation of other agencies’ self-certification programs and the existing Shoreline program, staff maintains its recommendation to implement a new self-certification inspection and maintenance program for private surface water facilities instead of a staff-only inspection and enforcement program. Initially the new program will include more traditionally inspected facilities and will have a higher cost than the existing inspection program. Overtime, existing facilities will join the self-certification program and the program cost will decrease. The cost will decrease because both the number of inspections and the time to inspect facilities will decrease. Once established (in five to seven years), the self-certification program is estimated to include all new facilities and 70 percent of existing facilities. The established program is estimated to cost roughly 50% less than staff-only program. This estimate is based on the self-certification cost of \$170/facility and the staff-only cost of \$325/facility. As redevelopment occurs the cost of any private facility inspection and maintenance program will increase because new facilities are added to the program. However,

based on the estimated cost per facility, the self-certification program will cost less than a tradition staff-only program.

COUNCIL GOAL ADDRESSED

This Master Plan project addresses City Council Goal #2: Improve Shoreline's infrastructure to continue the delivery of highly-valued public services, Action 9 - Update and begin implementation of the Surface Water Master Plan, Transportation Master Plan and Parks, Recreation and Open Space Master Plan

RESOURCE/FINANCIAL IMPACT

The resource and financial impacts of the projects and programs vary depending on the selected management strategy as noted in Table 1 and Figure 1 in this report.

RECOMMENDATION

Staff recommends the Proactive management strategy and for rates to be developed to manage the Utility at this level for the next six years.

ATTACHMENTS

Attachment A: Draft List of Projects by Prioritization Score and Management Strategy
Attachment B: Draft List of Programs by Management Strategy
Attachment C: Draft Management Strategy with Draft Rates and Levels of Service
Attachment D: 2017 Surface Water Master Plan Management Strategy Survey Results

Attachment A - Draft List of Projects by Prioritization Score, Management Strategy and Capital Cost

P Planning/ Pre-Design/ Study
D Design/Permitting
C Construction

	Management Strategy			20-year CIP	Project Name	Prioritization Score	Project Category	Minimum	Proactive	Optimum	Total Capital Cost
	Minimum	Proactive	Optimum								
1	DC	DC	DC	C	25th Avenue NE Flood Reduction and NE 195th Street Culvert Replacement	620	Flood Mitigation	\$2,674,000	\$2,674,000	\$2,674,000	\$ 8,226,000
2	P	PD	PDC	-	Springdale Ct. NW and Ridgfield Rd. Drainage Improvements	560	Flood Mitigation	\$0	\$545,000	\$2,058,000	\$ 2,058,000
3	PD	PDC	PDC	-	10th Ave NE Stormwater Improvements	515	Flood Mitigation	\$473,000	\$1,788,000	\$1,788,000	\$ 1,788,000
4	P	PD	PDC	-	Heron Creek Culvert Crossing at Springdale Ct. NW	485	Asset Management	\$0	\$226,000	\$855,000	\$ 855,000
5	DC	DC	DC	-	Hidden Lake Dam Removal	480	Aquatic Habitat Enhancement	\$2,097,000	\$2,097,000	\$2,097,000	\$ 2,097,000
6	P	P	P	DC	25th Ave NE Ditch Improvements Between NE 177th and 178th Street	480	Erosion Control	\$141,000	\$141,000	\$141,000	\$ 2,538,000
7	P	PD	PDC	-	Pump Station 26	420	Asset Management	\$114,000	\$320,000	\$891,000	\$ 891,000
8	P	PD	PDC	-	Pump Station 30 Upgrades	420	Asset Management	\$0	\$90,000	\$339,000	\$ 339,000
9	P	P	P	DC	6th Ave NE and NE 200th St Flood Reduction Project	360	Flood Mitigation	\$22,000	\$22,000	\$22,000	\$ 384,000
10	PD	PDC	PDC	-	Pump Station Misc Improvements (Linden, Palatine, Pan Terra, 25, Ronald Bog, Serpentine)	360	Asset Management	\$194,000	\$732,000	\$732,000	\$ 732,000
11	C	C	C	-	NE 148th Street Infiltration Facilities	355	Flood Mitigation	\$393,000	\$393,000	\$393,000	\$ 393,000
12	P	P	PD	C	Boeing Creek Regional Stormwater Facility	315	Water Quality Improvement	\$83,000	\$83,000	\$1,184,000	\$ 9,440,000
13	-	-	PDC	-	Stormwater Upgrades NW 196th Street	310	Asset Management	\$0	\$0	\$146,000	\$ 146,000
14	-	P	P	-	System Capacity Modeling Study	300	Flood Mitigation	\$0	\$300,000	\$300,000	\$ 300,000
15	-	PDC	PDC	-	NW 195th Place and Richmond Beach Drive Flooding	280	Flood Mitigation	\$0	\$747,000	\$747,000	\$ 747,000
16	-	P	PD	C	Stabilize NW 16th Place Storm Drainage in Reserve M	260	Erosion Control	\$0	\$28,000	\$153,000	\$ 500,000
17	-	P	P	DC	Storm Creek Erosion Management Study	250	Erosion Control	\$0	\$80,000	\$80,000	\$ 80,000
18	-	-	P	DC	Flood Reduction in Linden Avenue Neighborhood	245	Flood Mitigation	\$0	\$0	\$45,000	\$ 803,000
19	-	P	P	-	Climate Impacts and Resiliency Study	220	Flood Mitigation	\$0	\$80,000	\$80,000	\$ 80,000
20	-	-	-	PDC	Culvert Improvements Near 14849 12th Avenue NE	205	Flood Mitigation	\$0	\$0	\$0	\$ 347,000
21	-	-	PD	C	Convert Stormwater Conveyance Ditches to Bio-infiltration Facilities	190	Water Quality Improvement	\$0	\$0	\$312,000	\$ 1,178,000
22	P	P	P	DC	Boeing Creek Restoration	180	Aquatic Habitat Enhancement	\$50,000	\$50,000	\$50,000	\$ 7,630,000
23	-	PD	PDC	-	NW 196th Place and 21st Avenue NW Infrastructure Improvements	175	Flood Mitigation	\$0	\$83,000	\$313,000	\$ 313,000
24	-	-	PD	C	Echo Lake Biofiltration Swale	160	Water Quality Improvement	\$0	\$0	\$201,000	\$ 905,000
25	-	P	P	DC	18th Avenue NW and NW 204th Drainage System Connection	150	Flood Mitigation	\$0	\$15,000	\$15,000	\$ 261,000
26	-	P	P	DC	NW 197th Pl and 15th Ave NW Flooding	150	Flood Mitigation	\$0	\$7,000	\$7,000	\$ 119,000
27	-	P	P	DC	Lack of System and Ponding on 20th Avenue NW	150	Flood Mitigation	\$0	\$81,000	\$81,000	\$ 1,458,000
28	-	P	P	DC	12th Ave NE Infiltration Pond Retrofits	140	Flood Mitigation	\$0	\$38,000	\$38,000	\$ 677,000
29	-	P	P	DC	NE 177th Street Drainage Improvements	130	Flood Mitigation	\$0	\$9,000	\$9,000	\$ 152,000
30	-	P	P	PDC	26th Avenue NE Flooding and Lack of System Study	110	Flood Mitigation	\$0	\$0	\$0	\$ 64,000
31	-	-	-	PDC	NW 180th and 8th Avenue Ditch with Unknown Connection	80	Flood Mitigation	\$0	\$0	\$0	\$ 68,000
32	-	-	-	PDC	NE 192nd St Ditch Modifications	60	Erosion Control	\$0	\$0	\$0	\$ 202,000
33	-	-	-	PDC	Bioretention at N 199th St and Wallingford Avenue NE	50	Water Quality Improvement	\$0	\$0	\$0	\$ 524,000
34	-	-	-	PDC	Bioretention at NE 192nd St and Burke Ave NE	50	Water Quality Improvement	\$0	\$0	\$0	\$ 320,000
35	-	-	-	PDC	Hamlin Creek Daylighting	50	Aquatic Habitat Enhancement	\$0	\$0	\$0	\$ 1,611,000
36	-	-	-	PDC	Thornton Creek Course-Grained Sediment Improvements	50	Aquatic Habitat Enhancement	\$0	\$0	\$0	\$ 55,000
37	-	-	-	PDC	Enhance Ronald Bog Wetland Fringe Areas	50	Aquatic Habitat Enhancement	\$0	\$0	\$0	\$ 2,826,000
38	-	-	-	PDC	Westminster Triangle Bioinfiltration Facility	45	Water Quality Improvement	\$0	\$0	\$0	\$ 163,000
39	-	-	-	PDC	NW 194th Place and 25th Ave NW Ditch Erosion	40	Erosion Control	\$0	\$0	\$0	\$ 150,000
40	-	P	P	-	Master Plan Update	620	Water Quality Improvement	\$0	\$500,000	\$500,000	\$ 500,000
Total								\$ 6,241,000	\$ 11,129,000	\$ 16,251,000	\$ 51,920,000

Attachment B - Draft List of Programs by Prioritization Score, Management Strategy with Total Cost and FTE Requirements

	Management Strategy			Program Name	Description	Prioritization Score	Average Annual Total Program Cost		
	Minimum	Proactive	Optimum				Minimum	Proactive	Optimum
1	-	-	-	NPDES Compliance	Supports NPDES regulatory compliance includes Illicit Discharge Detection Elimination(IDDE), Spill Response, coordinating required training and Annual Reporting. Needs enhancement for implementation of the requirements from the new 2019-2024 NPDES Phase II Permit.	540			
2	X	X	X	Floodplain Management	Supports the FEMA NFIP regulatory compliance includes Flood Plain Development Review and implementation of the Flood Plain Development Ordinance	445			
3	X	X	X	Administration and Management	Supports the management of the various utility programs including workload management, budget, policy development, including support from different city departments including engineering, code enforcement, purchasing, human resources	740			
4	X	-	-	Drainage Assessment	Addresses drainage issues beyond operation and maintenance, include detailed engineering, geotechnical, hydraulic and hydrological assessment. Needs enhancement to address backlog and maintain LOS. See Drainage Assessment [Enhancement]	460			
5	X	-	-	Water Quality Monitoring	Supports the Water Quality protection and includes Stream water quality monitoring, Toxic Algae monitoring, King County Lake Stewardship, and Swimming Beach Monitoring for Echo Lake and Hidden Lake.[Existing programs uses 2 Extra Help, Needs enhancement to accommodate FTE and maintain LOS]	625			
6	X	-	-	Asset Management	Addresses asset inventory, tracking of service requests, work orders management and coordinating with other teams on SW infrastructures. Need enhancement to meet Utility Best Management Practices and LOS .See Asset Management Program (Enhanced)	780			
7	X	X	X	Street Sweeping	Support NPDES regulatory compliance and reduces debris and sediment in the System	155			
8	X	-	-	System Maintenance	Support NPDES regulatory compliance and addresses routine maintenance including and maintenance from inspections. Needs enhancement to meet LOS and increase in inspections and requirement for Catch Basin R&R within 6 months. See Pump Maintenance, Catch Basin R&R Programs	825			
9	X	-	-	Small Repairs	Addresses minor repairs for assets not included in other repair programs, including berm repairs and installations	525			
10	X	-	-	Thornton Creek Cond Assessment	2 year condition assessment project to complete system-wide evaluations per recommendation from 2011 Master Plan. Transitioning to Pipe Condition Assessment Program to address cleaning and inspecting previously inaccessible pipes as well as recommended monitoring of critical pipes.	440			
11	X	-	-	SW Pipe Replacement	Supports a proactive repair and replacement of aging pipe assets. Addresses pipe repair and replacement identified during condition assessment. Needs enhancement to address backlog of repair and maintain LOS	300			
12	X	-	-	Surface Water Small Projects	Addresses small projects that do not fall under a CIP Project and reduces localized flooding or surface water related problems at various locations throughout the city. Need enhancement to address backlog of projects and maintain LOS. See Surface Water Small Projects [Enhancement]	300			
13	X	-	-	Private Facility Inspection	Support NPDES regulatory compliance and includes the required inspection of private property owned and operated water quality and flow control BMPs. Need enhancement to address increase in inspection and maintenance enforcement. See Private Facility Inspection and Maintenance	580			
14	X	-	-	System Inspection	Supports NPDES regulatory compliance, includes Catch Basin and Ditch inspections and annual inspection of all ROW - Utility owned and operated treatment and flow control BMPs. Needs enhancement to accommodate the 2018 required frequency of inspection and the increase in BMPs in the ROW	1280			
15	X	X	X	Soak it Up LID Rebate	Supports NPDES regulatory compliance and includes rebates for existing development that implement LID BMPs	1135			
16	X	X	X	Adopt a Drain	Supports NPDES regulatory compliance and includes volunteer opportunity for residents to help care for SW Infrastructures	1185			
17	X	X	X	Local Source Control	Grant funded program that supports NPDES regulatory compliance and includes targeted inspection and outreach to businesses	785			
18	X	X	X	Water Quality Public Outreach	Supports NPDES regulatory compliance for community outreach and includes participation in Earth Day Events, Community and Neighborhood events and car wash event program	950			
19	-	-	X	Aquatic Habitat Studies	The Aquatic Habitat Program improves natural stream aquatic habitat including conducting surveys, removing invasive plants and planting native species along riparian zones.	155	\$ -	\$ -	\$ 54,600
20	X	X	X	Catch Basin Repair and Replacement	The Catch Basin Repair and Replacement Program provides resources necessary to repair or replace catch basins within 6 months of inspection as required by the City existing Phase II NPDES Permit.	720	\$ 354,100	\$ 354,100	\$ 354,100
21	-	X	X	Pump Station Maintenance	The Pump Station Maintenance Program addresses maintenance of pump station equipment (hydraulic, mechanical and electrical), structure and facility access.	260	\$ -	\$ 63,600	\$ 63,600
22	X	X	X	LID Maintenance	The LID Maintenance Program enhances existing maintenance program that requires structural repairs for facilities within one year of inspection as required by the City's existing Phase II NPDES Permit.	525	\$ 53,732	\$ 53,732	\$ 53,732
23	-	X	X	Utility Crossing Removal	The Utility Crossing Removal Program provides resources for coordination with other utilities to remove their lines and repair storm drains that have been damaged because of crossings.	320	\$ -	\$ 18,400	\$ 18,400
24	-	-	X	Improper Connection Repair	The Improper Connection Removal Program fixes non-standard or improperly installed stormwater drains not included in other capital project planning by adding properly designed structures.	220	\$ -	\$ -	\$ 60,520
25	-	X	X	Pipe Condition Assessment Program (Enhanced)	The Pipe Condition Assessment Program continues the existing inspection efforts by initiating the final basin wide inspection project (Thornton Creek Basin) and then cleaning and inspecting previously inaccessible pipes as well monitoring critical pipes.	480	\$ -	\$ 160,340	\$ 160,340
26	-	X	X	Asset Management Program (Enhanced)	The Asset Management Program enhances the existing program with activities ranging from coordination and communication to developing risk policy and asset templates.	400	\$ -	\$ 69,200	\$ 69,200
27	X	X	X	Private Facility Inspection and Maintenance (Enhanced)	The Private Facility Inspection and Maintenance Enforcement Program is a proposed self certification program for facility inspection and maintenance.	580	\$ 62,192	\$ 62,192	\$ 62,192
28	-	X	X	SW Pipe Replacement Program (Enhanced)	The Stormwater Pipe Replacement Program repairs and replaces the failing stormwater pipes identified during the condition assessment video inspections.	480	\$ -	\$ 651,520	\$ 953,600
29	-	X	X	Surface Water Small Projects (Enhanced)	The Surface Water Small Projects Program reduces localized flooding or surface water related problems at various locations throughout the city.	480	\$ -	\$ 400,000	\$ 500,000
30	X	X	X	System Inspection (Enhanced)	Catch basin inspection and factoring frequency increasing from every three years to every other year as per current NPDES permit beginning 2018.	1480	\$ 47,021	\$ 47,021	\$ 47,021
31	-	X	X	Drainage Assessment (Enhanced)	The Drainage Assessment Program investigates flooding and drainage problems based on customer service requests and evaluates the need for easement acquisition or system relocation to the right-of-way.	460	\$ -	\$ 175,640	\$ 175,640
32	X	X	X	Stormwater Permit	The Stormwater Permit Program provides a single standard process for permitting on-site stormwater systems and connections to the MS4 and an opportunity for improved information recording and communication.	555	\$ 47,840	\$ 47,840	\$ 47,840
33	X	-	-	NPDES Compliance (Enhanced, Minimum Effort)	The NPDES Compliance (Minimum Effort) provides initial and minimum resources for coordinating the requirements from the new 2019-2024 NPDES Phase II Permit. Supports NPDES regulatory compliance includes Illicit Discharge Detection Elimination(IDDE), Spill Response, coordinating required training and Annual Reporting.	560	\$ 15,320	\$ -	\$ -
33	-	X	X	NPDES Compliance (Enhanced)	The NPDES Compliance provides resources for coordinating the requirements from the new 2019-2024 NPDES Phase II Permit. Supports NPDES regulatory compliance includes Illicit Discharge Detection Elimination(IDDE), Spill Response, coordinating required training and Annual Reporting.	560	\$ -	\$ 32,480	\$ 32,480
34	-	-	X	Thornton Creek Stewardship	The Thornton Creek Stewardship Program provides a watershed-based public involvement and stewardship program for one of the City's most degraded waterways.	170	\$ -	\$ -	\$ 19,900
35	X	-	-	Business Inspection Source Control (Minimum Effort)	The Business Inspection Program (Minimum Effort) provides initial and minimum resources for the inspection for 20 percent of the city's businesses for detection and correction of potential pollution sources as part of the new 2019-2024 Phase II NPDES Permit.	500	\$ 15,641	\$ -	\$ -
35	-	X	X	Business Inspection Source Control	The Business Inspection Program provides resources for the inspection for 20 percent of the city's businesses for detection and correction of potential pollution sources as part of the new 2019-2024 Phase II NPDES Permit.	500	\$ -	\$ 86,780	\$ 86,780
36	-	X	X	Water Quality Monitoring (Enhanced)	Supports the Water Quality protection and includes Stream water quality monitoring, Toxic Algae monitoring, King County Lake Stewardship, and Swimming Beach Monitoring for Echo Lake and Hidden Lake.[Existing programs uses 2 Extra Help, Needs enhancement to accommodate FTE and maintain LOS]	500	\$ -	\$ 85,470	\$ 85,470
37	-	-	X	O&M for Optimum CIP	Operation and maintenance activities needed to support new CIP projects identified for the "Optimal" management strategy; averaged per year over 6 year period.	1480	\$ -	\$ -	\$ 171,000
38	-	X	-	O&M for Proactive CIP	Operation and maintenance activities needed to support new CIP projects identified for the "Proactive" management strategy; averaged per year over 6 year period.	1480	\$ -	\$ 33,867	\$ -
39	X	-	-	O&M for Minimum CIP	Operation and maintenance activities needed to support new CIP projects identified for the "Minimal" management strategy; averaged per year over 6 year period.	1480	\$ 33,867	\$ -	\$ -
Current	17	7	7			Total	\$629,713	\$2,342,182	\$3,016,415
New	8	16	19			Additional FTE	1.38	3.29	3.57
Total	25	23	26						

Note: Blue font indicates new or enhanced program

Attachment B1 - Draft List of Programs by Management Strategy with Total Cost

Program Category		Management Strategies			
		Current	Minimum	Proactive	Optimum
Operations	Programs	NPDES Compliance	NPDES Compliance (Min Effort Enhanced)	NPDES Compliance (Enhanced)	NPDES Compliance (Enhanced)
		Floodplain Management	Floodplain Management	Floodplain Management	Floodplain Management
		Administration and Management	Administration and Management	Administration and Management	Administration and Management
		Drainage Assessment	Drainage Assessment	Drainage Assessment (Enhanced)	Drainage Assessment (Enhanced)
		Water Quality Monitoring	Water Quality Monitoring	Water Quality Monitoring (Enhanced)	Water Quality Monitoring (Enhanced)
		--	Stormwater Permit	Stormwater Permit	Stormwater Permit
		Asset Management	Asset Management	Asset Management (Enhanced)	Asset Management (Enhanced)
	Total Additional Cost per Year	\$0	\$63,160	\$410,630	\$410,630
Maintenance	Programs	Street Sweeping	Street Sweeping	Street Sweeping	Street Sweeping
		System Maintenance	System Maintenance	System Maintenance	System Maintenance
		Small Repairs	Small Repairs	Small Repairs	Small Repairs
		Condition Assessment	Condition Assessment	Condition Assessment (Enhanced)	Condition Assessment (Enhanced)
		SW Pipe Replacement	SW Pipe Replacement	SW Pipe Replacement (Enhanced)	SW Pipe Replacement (Enhanced)
		Surface Water Small Projects	Surface Water Small Projects	Surface Water Small Projects (Enhanced)	Surface Water Small Projects (Enhanced)
		Private Facility Inspection	Private Facility Inspection/Maintenance (Enhanced)	Private Facility Inspection/Maintenance (Enhanced)	Private Facility Inspection/Maintenance (Enhanced)
		System Inspection	System Inspection (Enhanced)	System Inspection (Enhanced)	System Inspection (Enhanced)
		--	Catch Basin R&R	Catch Basin R&R	Catch Basin R&R
		--	LID Maintenance	LID Maintenance	LID Maintenance
		--	--	Pump Maintenance	Pump Maintenance
		--	--	Utility Crossing Removal	Utility Crossing Removal
		--	--	--	Improper Connection Repair
	Total Additional Cost per Year	\$0	\$550,912	\$1,844,772	\$2,444,505
Public	Programs	Soak-it-Up LID Rebate	Soak-it-Up LID Rebate	Soak-it-Up LID Rebate	Soak-it-Up LID Rebate
		Adopt-a-Drain	Adopt-a-Drain	Adopt-a-Drain	Adopt-a-Drain
		--	--	--	Thornton Creek Stewardship
		--	--	--	Aquatic Habitat
		Local Source Control	Local Source Control	Local Source Control	Local Source Control
		--	Business Inspection Source Control (Min Effort)	Business Inspection Source Control	Business Inspection Source Control
	Water Quality Public Outreach	Water Quality Public Outreach	Water Quality Public Outreach	Water Quality Public Outreach	
Total Additional Cost per Year	\$0	\$15,641	\$86,780	\$161,280	
Total Additional Cost per Year	\$0	\$629,713	\$2,342,182	\$3,016,415	

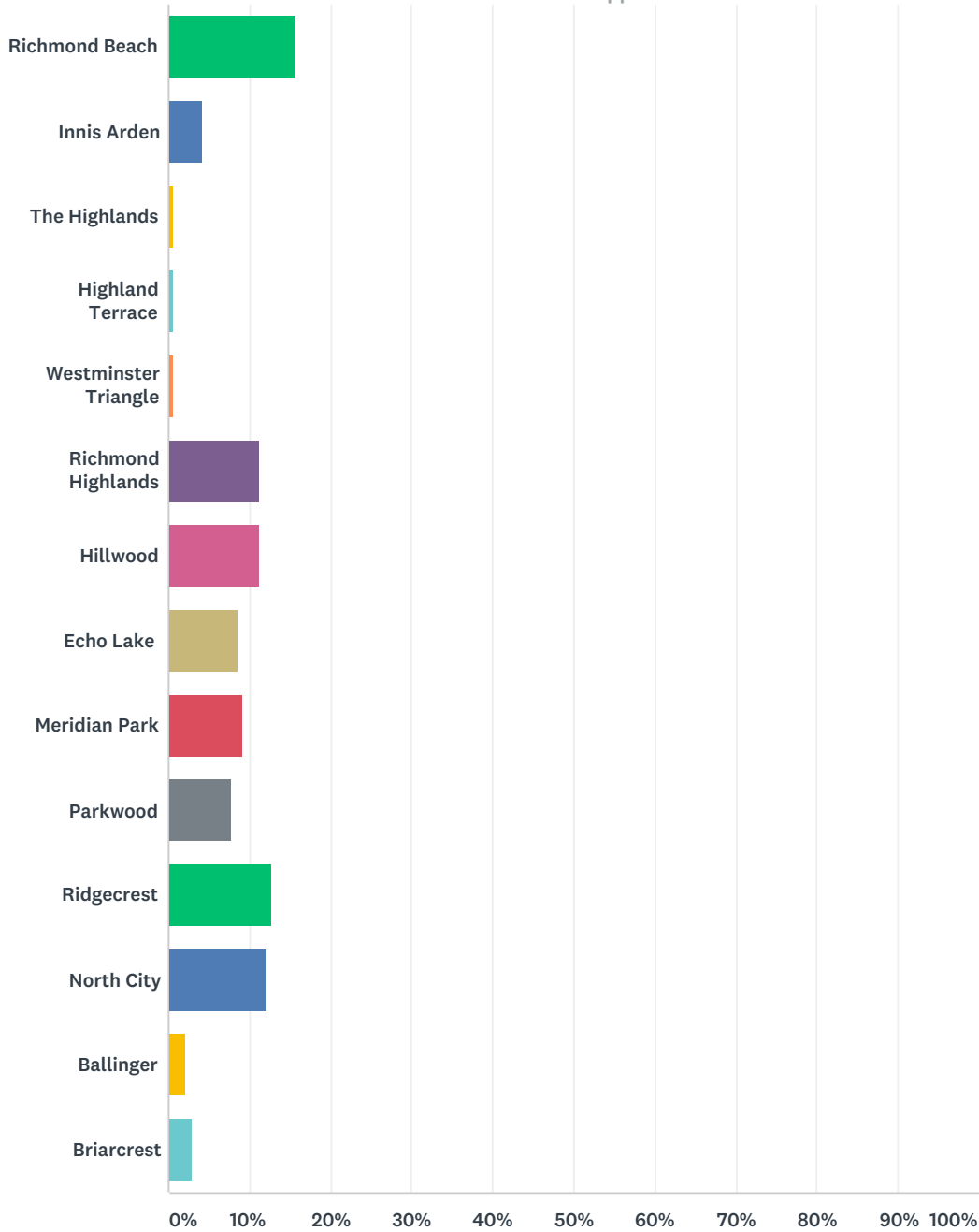
Note: Blue font indicates new or enhanced program.

Attachment C - Draft Management Strategies with Draft Rates and Levels of Service

						Levels of Service					
		Projects (Capital Expenses)	Programs (Operating Expenses)			Projected Monthly Rate (2018)	Projected Annual Rate (2018)	1	2	3	4
Management Strategies		Capital Project	Operations	Maintenance	Public			Surface Water Impacts <i>Manage public health, safety and environmental risks from impaired water quality, flooding, and failed infrastructure</i>	Equitable Service <i>Provide consistent, equitable standards of service to the citizens of Shoreline at a reasonable cost, within rates and budget</i>	Communications and Outreach <i>Engage in transparent communication through public education and outreach</i>	Regulatory Compliance <i>Comply with regulatory requirements for the urban drainage system</i>
Minimum	Same as Current plus new NPDES regulatory requirements	Continue and complete ongoing projects that were identified as highest priorities during basin planning; continue with pre-design and feasibility studies for major ongoing projects.	Continue with current operational activities to support ongoing programs; no increased effort in asset management activities. Add: - Stormwater Permit - NPDES Compliance (Enhanced, Minimum Effort)	Continue current programs. Address newest but current permit regulatory requirements. - Private Facility Maintenance Enforcement - Catch basin R&R - LID Maintenance - System Inspection (Enhanced) - Minimum CIP Asset Maintenance	Continue current activities that address regulatory requirements for public outreach. - Soak it Up LID Rebate - Adopt a Drain - Water Quality Public Outreach - Local Source Control - Business Inspection Control (Minimum Effort)	\$14	\$203	Low	Medium	Medium	High
Proactive	Same as Minimum plus new reasonably certain regulatory requirements, new high-priority projects, proactive asset management, and long-term planning	Add new high-priority projects including pump station repairs and known system deficiencies. Provide Utility engineering support for ongoing capital improvement projects (capitalized costs included within project estimates). Plus studies: - System Capacity Modeling - 5-year Master Plan Update - Storm Creek Erosion Management Study - Climate Impacts and Resiliency Study	Continue with Minimum operational activities to support ongoing programs. New or enhanced programs include: - NPDES Compliance (Enhanced) - Drainage Assessment (Enhanced) - Water Quality Monitoring (Enhanced) - Asset Management (Enhanced)	Proactively address repairs and maintenance of aging assets with new and enhanced programs. - Condition Assessment (Enhanced) - Pump Maintenance - Utility Crossing Removal - SW Pipe Replacement (Enhanced) - SW Small Projects (Enhanced) - Proactive CIP Asset Maintenance	Proactively implement known future NPDES requirements. - Business Inspection Source Control	\$18	\$214	Medium	High	High	High
Optimum	Same as Proactive plus additional improvements to address water quality	Add new projects to improve water quality.	Same as above	Optimum CIP Asset Maintenance - Improper Connection Repair	Increase public outreach and studies to address known issues in Thornton Creek watershed. - Thornton Creek Stewardship - Aquatic Habitat Program	\$20	\$240	High	High	High	High
Current	Current required maintenance and outreach with primarily reactive approach to system improvements	Continue and complete ongoing projects that were identified as highest priorities during basin planning; continue with pre-design and feasibility studies for major ongoing projects. Provide Utility engineering support for ongoing capital improvement projects (capitalized costs included within project estimates).	Continue with current operational activities to support ongoing programs; no increased effort in asset management activities. - NPDES Compliance - Floodplain Management - Management and Administration - Drainage Assessment - Water Quality Monitoring - Asset Management	Continue current levels of maintenance and postpone addressing new regulatory requirements; reactive approach to maintenance for aging infrastructure. - Street Sweeping - System Inspection - System Maintenance - Small Repairs - Condition Assessment - SW Pipe Replacement - SW Small Projects - Private Facility Inspection - Current CIP Asset Maintenance	Continue current activities that address regulatory requirements for public outreach. - Soak it Up LID Rebate - Adopt a Drain - Water Quality Public Outreach - Local Source Control	\$14	\$169	Low	Medium	Medium	Low

Q1 What neighborhood do you live in?

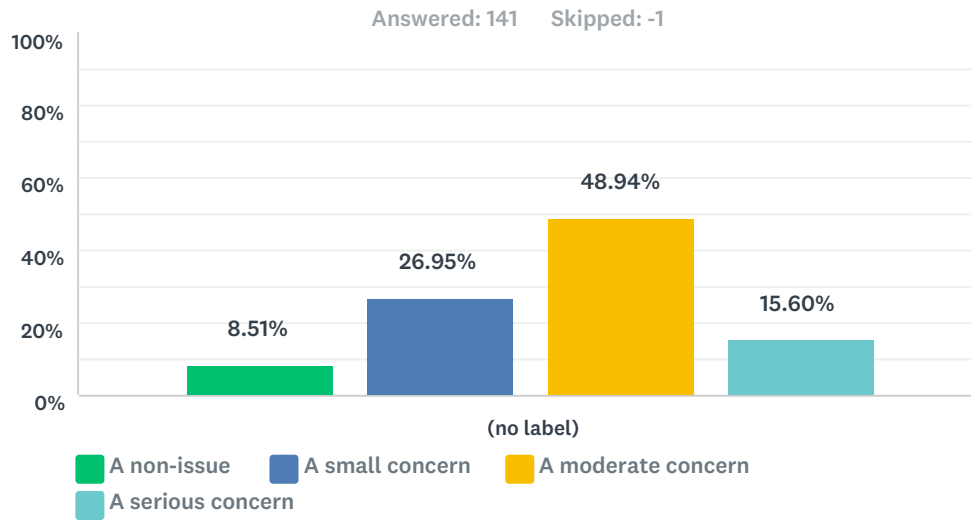
Answered: 141 Skipped: -1



Answer Choices	Responses
Richmond Beach	15.60% 22
Innis Arden	4.26% 6
The Highlands	0.71% 1
Highland Terrace	0.71% 1
Westminster Triangle	0.71% 1
Richmond Highlands	11.35% 16

Hillwood	11.35%	16
Echo Lake	8.51%	12
Meridian Park	9.22%	13
Parkwood	7.80%	11
Ridgecrest	12.77%	18
North City	12.06%	17
Ballinger	2.13%	3
Briarcrest	2.84%	4
Total		141

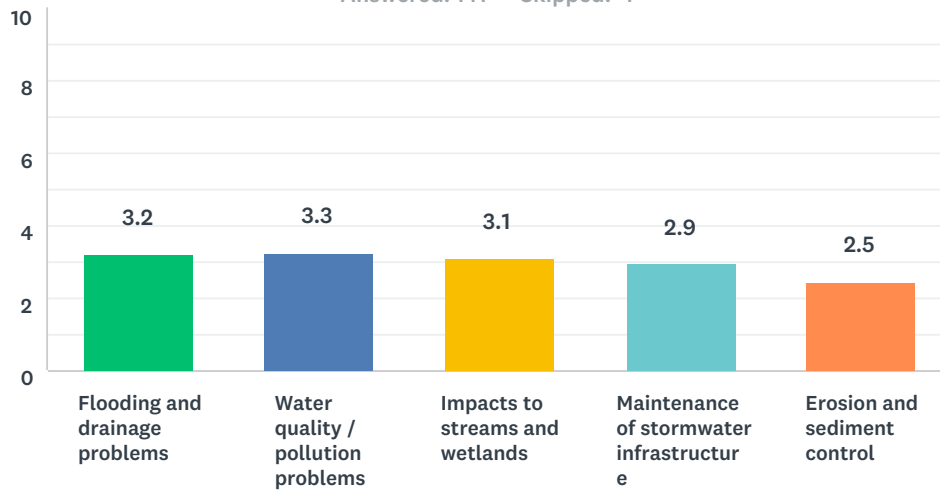
Q2 How would you rate stormwater issues in the City of Shoreline as a whole?



	A non-issue	A small concern	A moderate concern	A serious concern	Total	Weighted Average
(no label)	8.51% 12	26.95% 38	48.94% 69	15.60% 22	141	2.72

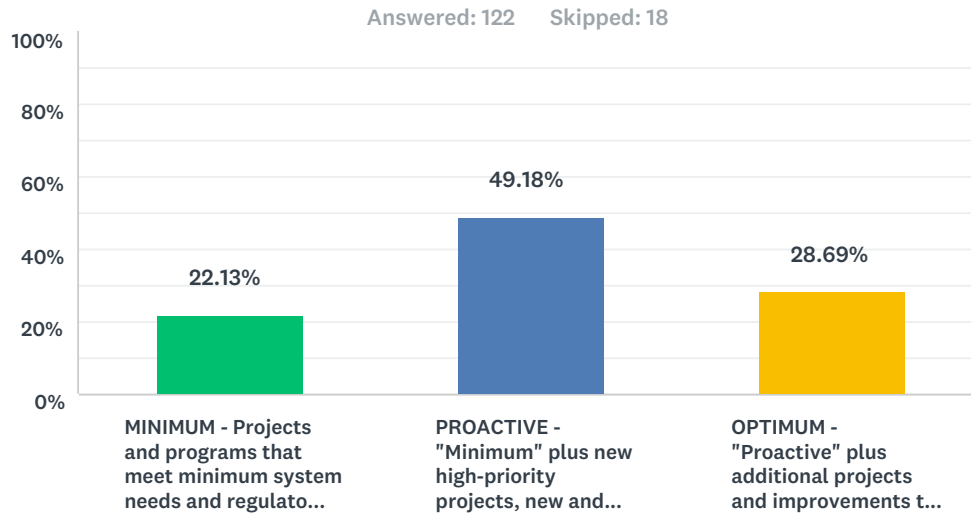
Q3 Please rank your concerns regarding stormwater management. (Using 1 for most important and 5 for least important)

Answered: 141 Skipped: -1



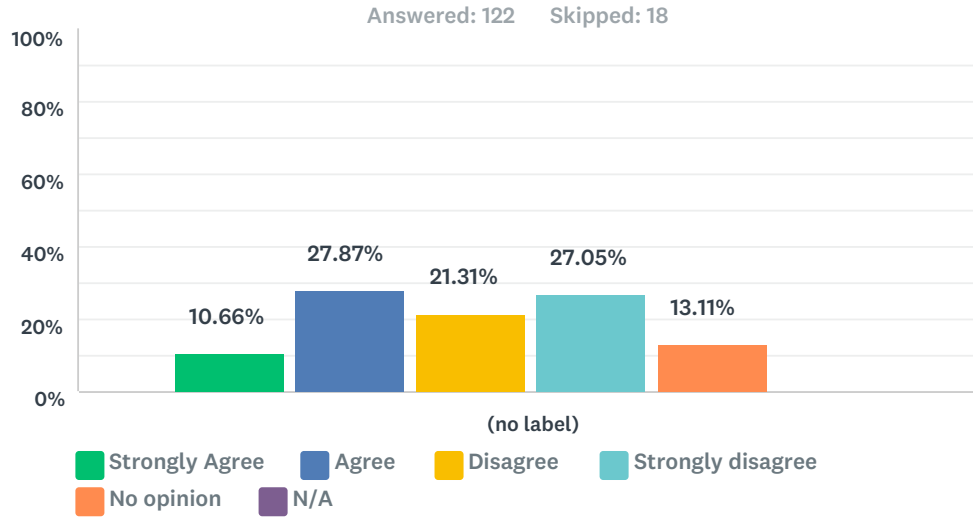
	1	2	3	4	5	Total	Score
Flooding and drainage problems	31.21% 44	19.15% 27	11.35% 16	15.60% 22	22.70% 32	141	3.21
Water quality / pollution problems	20.57% 29	27.66% 39	22.70% 32	16.31% 23	12.77% 18	141	3.27
Impacts to streams and wetlands	20.57% 29	21.28% 30	21.99% 31	21.28% 30	14.89% 21	141	3.11
Maintenance of stormwater infrastructure	17.02% 24	12.06% 17	32.62% 46	24.82% 35	13.48% 19	141	2.94
Erosion and sediment control	10.64% 15	19.86% 28	11.35% 16	21.99% 31	36.17% 51	141	2.47

Q4 A key objective of the Master Plan is to identify improvements that will help the Utility meet levels of service that reflect the expectations of customers and that are appropriately in line with stormwater fees. What management level would you recommend for the stormwater strategy is you area?



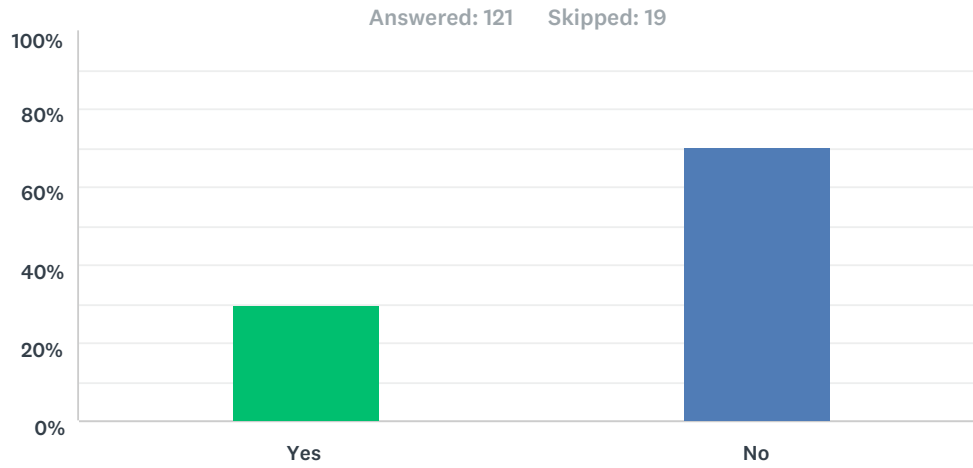
Answer Choices	Responses
MINIMUM - Projects and programs that meet minimum system needs and regulatory requirements	22.13% 27
PROACTIVE - "Minimum" plus new high-priority projects, new and enhanced on-going programs that address high priority long-term needs and anticipated regulatory requirements	49.18% 60
OPTIMUM - "Proactive" plus additional projects and improvements to address water quality and aquatic enhancement	28.69% 35
Total	122

Q5 To implement improvements of the City’s stormwater management, the City should increase the existing stormwater fees to assist in the funding of the services provided.



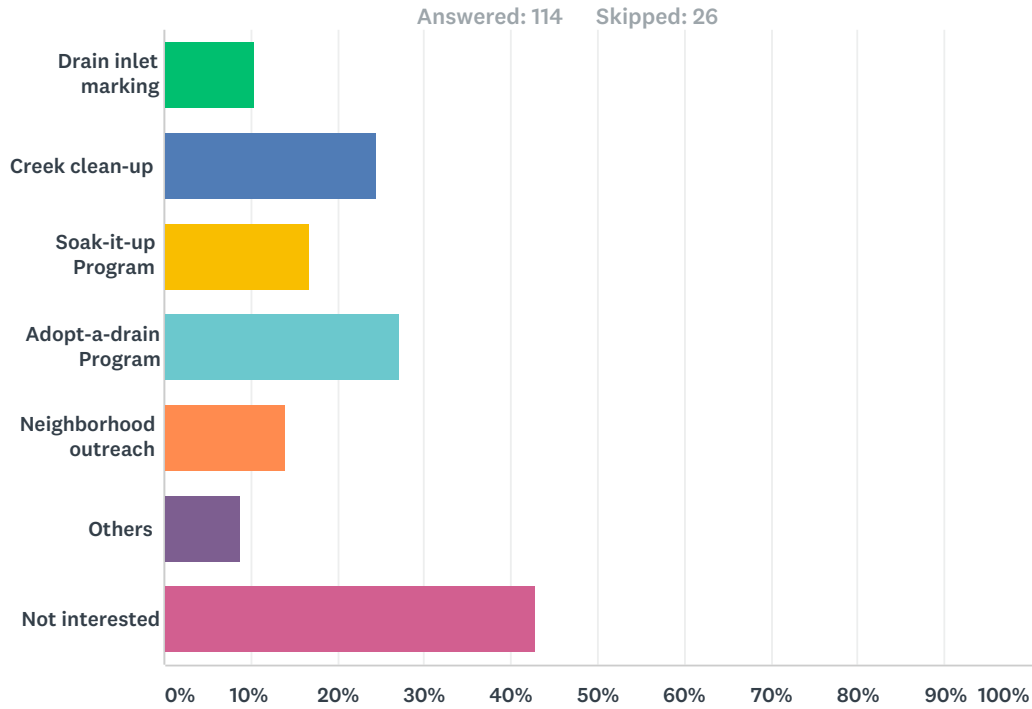
	Strongly Agree	Agree	Disagree	Strongly disagree	No opinion	N/A	Total	Weighted Average
(no label)	10.66% 13	27.87% 34	21.31% 26	27.05% 33	13.11% 16	0.00% 0	122	2.39

Q6 Are you interested in volunteering or participating in any of the City of Shoreline stormwater management programs or activities?



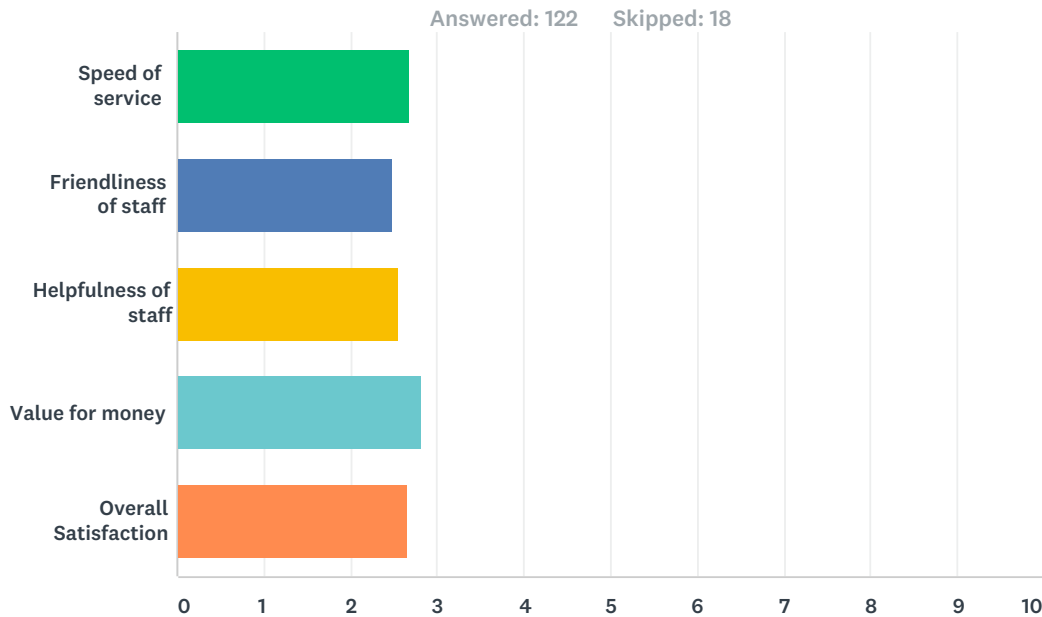
Answer Choices	Responses	
Yes	29.75%	36
No	70.25%	85
Total		121

Q7 What kinds of programs are you interested in?



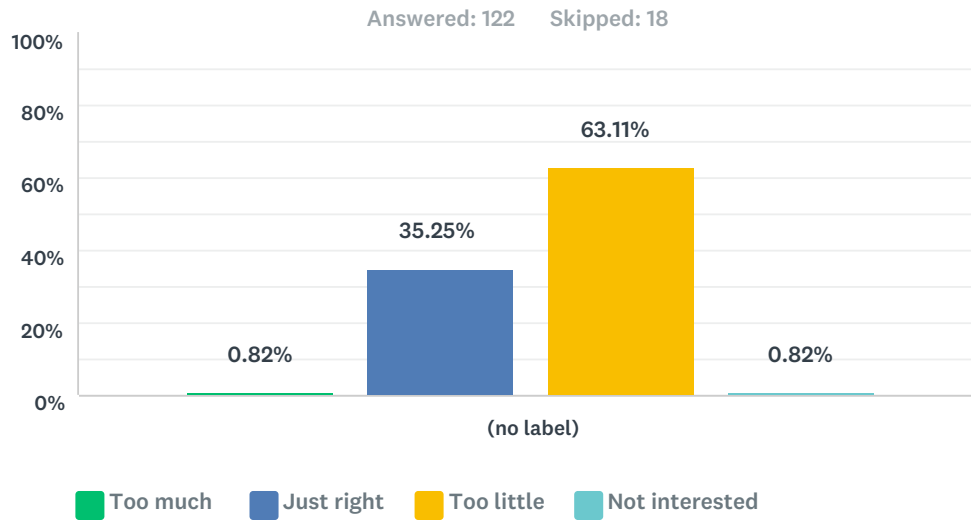
Answer Choices	Responses
Drain inlet marking	10.53% 12
Creek clean-up	24.56% 28
Soak-it-up Program	16.67% 19
Adopt-a-drain Program	27.19% 31
Neighborhood outreach	14.04% 16
Others	8.77% 10
Not interested	42.98% 49
Total Respondents: 114	

Q8 How satisfied are you with the following aspects of our stormwater services?



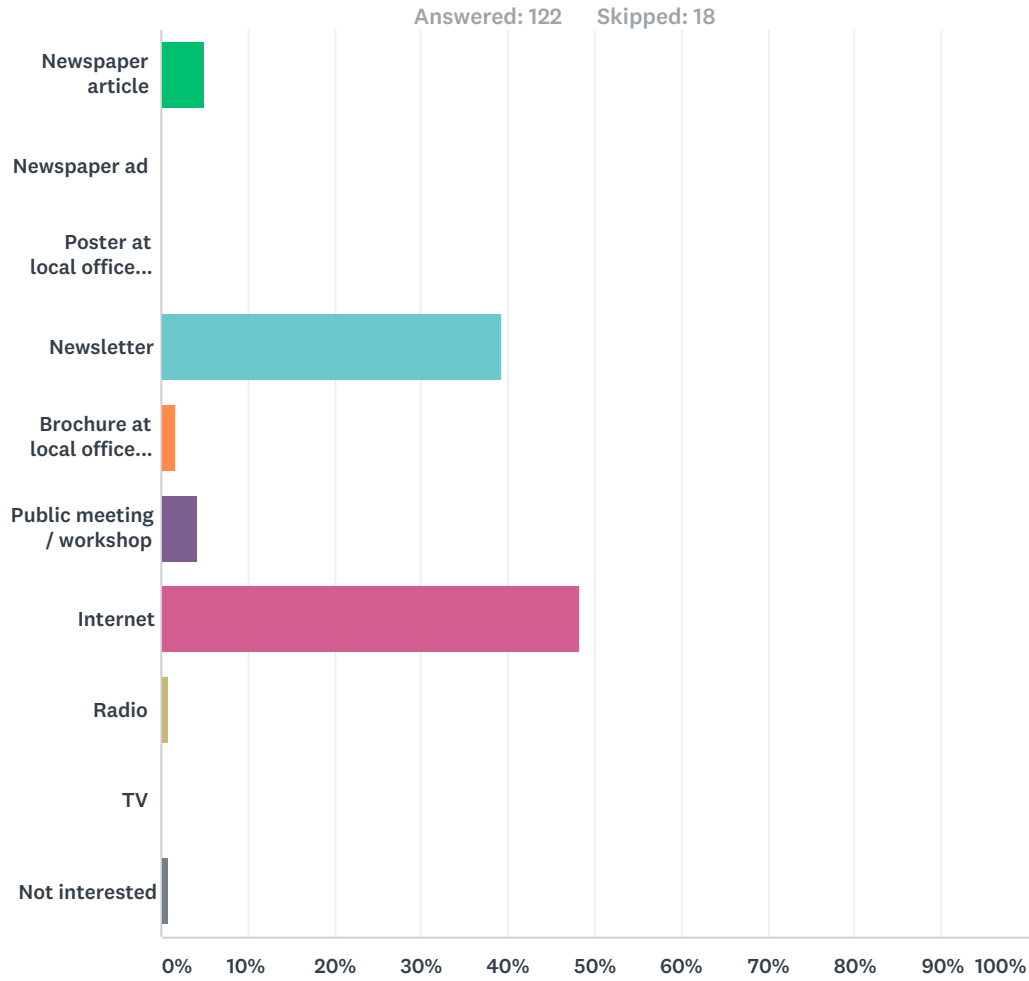
	Very Satisfied	Somewhat Satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Very Dissatisfied	Total	Weighted Average
Speed of service	19.01% 23	14.05% 17	53.72% 65	6.61% 8	6.61% 8	121	2.68
Friendliness of staff	25.21% 30	10.92% 13	56.30% 67	5.04% 6	2.52% 3	119	2.49
Helpfulness of staff	21.37% 25	13.68% 16	56.41% 66	5.98% 7	2.56% 3	117	2.55
Value for money	12.50% 15	17.50% 21	50.00% 60	15.00% 18	5.00% 6	120	2.83
Overall Satisfaction	13.93% 17	25.41% 31	46.72% 57	9.02% 11	4.92% 6	122	2.66

Q9 The amount of information I received about stormwater issues in the City of Shoreline is:



	Too much	Just right	Too little	Not interested	Total	Weighted Average
(no label)	0.82% 1	35.25% 43	63.11% 77	0.82% 1	122	2.61

Q10 What is the best way to inform you about stormwater issues?



Answer Choices	Responses	Count
Newspaper article	4.92%	6
Newspaper ad	0.00%	0
Poster at local offices or businesses	0.00%	0
Newsletter	39.34%	48
Brochure at local offices or businesses	1.64%	2
Public meeting / workshop	4.10%	5
Internet	48.36%	59
Radio	0.82%	1
TV	0.00%	0
Not interested	0.82%	1
Total		122

Q11 Do you have any additional stormwater service concerns or suggestions?

Answered: 43 Skipped: 97

#	Responses	Date
1	It does not appear that the City is implementing enough complete the streets projects that would offer opportunity to improve stormwater. In general, stormwater has the appearance of being a low priority of the City. Connecting it with transportation may be a way to get more support and complete more projects.	7/18/2017 11:39 AM
2	Our neighborhood smells of sewage several times a year. The City is worthless when contacted about flooding or drainage and does nothing to maintain the infrastructure. You make too many regulations, try and restrict property owners' use of their property, but you have neglected basic maintenance, like drains and grading of roads, that would solve the problem without stupid restrictions on how much of your land can be covered with something you consider permeable. Very unhappy with my City about this. And no taxing me more is not the answer. Do your jobs with the money already paid you.	7/15/2017 5:42 PM
3	The trees along Meridian Ave. N are contributing to blockage of drains every Fall as leaves clog things up. They are plainly and simply too large.	7/15/2017 12:02 PM
4	more public land needs to be converted into wetlands. Buy the Dargey property (former Denny triangle) and make that into a wetland to absorb all the runoff from the Sears-Central Market complex.	7/15/2017 11:54 AM
5	No	7/15/2017 11:24 AM
6	Stormwater should be filtered before reaching the sound.	7/15/2017 7:59 AM
7	Put a moratorium on building permits inside the two planned action rezones until you have done a lot by lot examination of the surface water infrastructure in those areas, made the necessary repairs to the system needed to support current use and determine the cost and who will pay for the upgrade needed to support the redevelopment under the new zoning. This must include notifications to the property owners and opportunities for the public in Shoreline to participate in a review of any redevelopment before the permit applications can be approved.	7/15/2017 7:53 AM
8	Create an educational program for elementary students	7/15/2017 7:36 AM
9	Yes, we have drains in the 155th to 160th and people don't keep them free of debris	7/15/2017 6:22 AM
10	We all pay the bill, but most people don't really know what you do or how it affects us. We don't see you around the neighborhood, just know where your office is.	7/15/2017 6:15 AM
11	City of Shoreline's monthly "Channels" newsletter is the best way to inform citizens of issues. I believe additional fees on new construction and subdivision of existing lots is the best way to obtain more funding. It is paving over additional ground that causes additional problems. This option was not given. I think this is a poor survey.	7/15/2017 5:33 AM
12	The outlet from Echo Lake gets clogged in storms. The water backs up in the lake and threatens lakeside condos. A neighbor used to clean the drain in storms but he moved. Now no one is maintaining it.	7/14/2017 11:57 PM
13	thanks	7/14/2017 11:20 PM
14	Not at this time.	7/14/2017 9:37 PM
15	It is important to remind people that stormwater drainage carries whatever toxins are in the environment into the lakes, streams and the Salish Sea. Also, and consequently, that we should all be very careful with our use of chemicals, motor oil, and other pollutants, and should avoid pesticides and herbicides whenever possible.	7/14/2017 9:06 PM
16	I feel badly that I am a poorly informed on these issues	7/14/2017 9:05 PM
17	Live on 25th border to Lake Forest Park - drain way below street level; paving driveways above has caused more runoff, drain way below street level in gravel driven on all the time	7/14/2017 8:53 PM
18	adopt & enforce low impact development	7/14/2017 8:26 PM

19	You made me spend nearly \$100,000 to handle my own stormwater. I should get a break on fees as a result.	7/14/2017 8:15 PM
20	Not at this time.	7/14/2017 7:58 PM
21	Maintain what we have	7/14/2017 6:29 PM
22	The ranking of the 1-5 priorities is difficult because all of the choices should be number 1 with proper maintenance flooding is easier to control the water makes it through the treatment plan lessening the pollution but all the other choices are equally important with multiple points for each	7/14/2017 6:23 PM
23	The people who build homes in vulnerable locations are the ones who should pay for any infrastructure upgrades. There should be a fee for new home builds to pay for those impacts.	7/14/2017 5:45 PM
24	Cost is too high.	7/14/2017 5:01 PM
25	Don't dismiss the concerns of constituents.	7/14/2017 4:57 PM
26	No	7/14/2017 4:44 PM
27	There needs to be better maintenance of city built raingardens.	7/14/2017 4:42 PM
28	With new development on 8th Ave NW I have flooding in my back yard during heavy rain. I did not have this prior to the new homes on 8th	7/14/2017 4:36 PM
29	Did not realize we were having issues with this.	7/14/2017 4:21 PM
30	Several of the priorities you list above are inter-related not either/or concerns. If we have proper storm drain infrastructure, it lessens the impact of runoff in terms of flooding, landslides, pollution, etc. We know Point Wells, for example, is in a dangerous Osso-like slide area, and yet the City of Shoreline supports it. My basement has flooded twice in the last seven years (after no flooding since 1987) because of lax Shoreline policies. This shows great disregard and disrespect for Shoreline residents.	7/14/2017 4:20 PM
31	Monitor drainage with new/recent construction. Create buffers.	7/14/2017 4:19 PM
32	you need to be WAY more proactive in explaining what you do and why - not many people even know there is a stormwater utility at all...	7/14/2017 4:18 PM
33	The fees went up and I still have a flood zone in front of my house	7/14/2017 4:14 PM
34	No	7/13/2017 6:03 PM
35	people dumping stuff into protected creeks and storm drains	7/12/2017 11:23 AM
36	At the end of 197th Place off of Wallingford there is flooding every fall and winter. Wish we could correct this. There is a drain on the north side of the street and we keep it clear but it does not help.	7/9/2017 10:28 AM
37	Good Job. Don't let the city screw it up!	7/6/2017 9:26 PM
38	Let's not find a way to raise taxes or fees, please.	7/6/2017 8:47 AM
39	Concern: every new construction project increases stormwater issues in neighboring properties as there is little to no requirement for proper stormwater management.	7/5/2017 9:12 PM
40	I don't know what the issues are. Maybe when sending the survey you also send a link to inform is with more details so we can make informed decisions. I might approve higher fees if I knew what it would be used for and why money is needed. Everyone's out for more money but can't articulate why.	7/5/2017 4:37 PM
41	I think there should be more of a focus on perpetual problems (that are perhaps gray areas, as in ours or theirs?), for example, the constant clogged drain and resulting flood-puddle at 145th St and 1st on the Seattle Golf Club side of the road. Just fix it!	7/5/2017 1:54 PM
42	My neighbors are I would like to see ditches/ROW paved over with sidewalks on 12th Ave NE between NE 145th St and NE 155th St	7/5/2017 1:52 PM
43	The wonderful raingarden at the northeast corner of N. 188th and Linden Ave N is threatened by development. It would be a waste of resources to remove this effective project. It could so easily connect to a garden pathway along Firlands Way.	7/5/2017 1:43 PM