

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussion and Update 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:

Staff are working with consultants, Brown and Caldwell and FCS Group (BC Team), to update the City's 2011 Surface Water Master Plan (2011 Master Plan). The purpose of the 2017 Surface Water Master Plan (Master Plan) is to address drainage and water quality challenges associated with growth, increasing regulations, and aging infrastructure. The Master Plan will guide the Surface Water Utility (Utility) for the next five (5) to 10 years including recommendations for capital improvements, programs, and a financial plan for long-term asset management.

One of the first tasks in developing the Master Plan is to refine and clarify the levels of service the Utility is to provide to its customers. Draft levels of service and corresponding level-of-service targets have been developed through a series of internal workshops with City staff, and have been presented to the public for review and comment. Moving forward, the BC Team will be working with City staff to identify specific measures and indicators for evaluating and tracking Utility performance against these levels of service. This will be one of the main outcomes the current effort to revise the City's Surface Water Utility Asset Management Program. The BC Team will continue to work with City staff and refine the levels of service as the master planning process moves into technical evaluations, rate studies, and financial planning.

The purpose of this report is to inform and receive feedback from Council on a preliminary set of levels of service and level-of-service targets, as well as outline next steps for public outreach and continued plan development. The preliminary levels of service and levels of service targets presented in this report may be further refined throughout the master plan development process. Staff will provide Council with another update in May of 2017 as the Master Plan develops.

RESOURCE/FINANCIAL IMPACT:

Levels of service lay the groundwork for customer expectations and the associated targets and performance measures will guide Utility activities such as maintenance frequency, inspection techniques, and capital improvement sizing. Specific impacts to Surface Water fees and staffing needs will be evaluated as the Master Plan progresses.

RECOMMENDATION

Staff requests that the Council review and provide comments on the draft levels of service and levels of service targets for continued work on the Master Plan. Additional information regarding actions and performance measures for the levels of service will be provided in May 2017 after City staff have begun developing specific actions, preparing associated cost and staffing resources needed to meet the levels of service.

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

INTRODUCTION

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

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The purpose of this report is to inform and receive feedback from Council on a preliminary set of levels of service and level-of-service targets, as well as outline next steps for public outreach and continued plan development. The preliminary levels of service may be adjusted and further refined during subsequent tasks, so updates will be provided to Council in May 2017.

BACKGROUND

The Surface Water Utility provides stormwater, water quality, and environmental services to the residents of Shoreline. The Utility is funded through the Surface Water Utility Fund, which generates revenue through annual Surface Water management fees. The Utility provides for capital improvements and operational activities that reduce flooding and drainage issues, water quality programs to meet the NPDES Phase II permit requirements, as well as stream and wetland enhancement within the City.

Master Planning

The City's first Surface Water Master Plan was adopted with the 2005 Comprehensive Plan. The 2005 Master Plan identified and prioritized Surface Water projects and programs for development. An updated Surface Water Master Plan was adopted in 2011. The 2011 Master Plan established a prioritized schedule to prepare and implement Basin Plans for each of the City's 11 surface water basins. The 2011 Master Plan was intended to serve as a management plan for approximately five years, or until all the Basin Plans were completed.

Since 2011, the Utility has accomplished several advances in the way surface water is managed in the City. Significant accomplishments include condition assessments associated with each of the Basin Plans and establishing a method to prioritize the capital improvement projects and activities identified in the Basin Plans. In recent years,

the Utility has also completed capital improvement projects that were not identified in the 2011 Master Plan. Most notably, the ongoing Stormwater Pipe Repair and Replacement program has addressed critical pipe repair work, consistent with recommendation contained in completed Basin Plans. In addition, Small works and Greenworks projects that apply low impact development (LID) techniques to reduce runoff and improve water quality through infiltration and bioretention have been completed.

On June 6, 2016 the Council authorized the City Manager to execute a professional services agreement with Brown and Caldwell to provide an update to the Master Plan. The staff report regarding execution of the agreement can be found at the following link: <http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2016/staffreport060616-7b.pdf>. This updated Master Plan will guide the Utility for the next five (5) to 10 years including establishing new levels of service, development of an Asset Management Program framework, project recommendations for inclusion in the Capital Improvement Program (CIP), and a financial plan for long-term utility management.

The Master Plan scope consists of major components necessary to develop a comprehensive Master Plan, including defining levels of service for the Utility, consolidating information from the completed or ongoing basin plans and condition assessment plans, preparing the Utility for anticipated requirements related to compliance with the 2018-2022 NPDES Phase II permit, providing recommendations for future CIP projects, developing rate structure and financial planning recommendations, and developing policy recommendations for Council consideration where existing policies may need to be updated or do not exist.

Levels of Service

A key objective of the Master Plan is to match the levels of service provided by the Utility with the expectations of customers. This requires a clear understanding of customers' needs, expectations and preferences. Levels of service will be used to:

- provide customers with an understanding of the services offered
- assess suitability, affordability, and equity of the services offered
- focus asset management activities needed to deliver the levels of service
- measure performance and track progress of the Utility
- identify the costs and benefits of the services offered

Draft levels of service have been developed; however, refinement of the levels of service will continue throughout the master planning process. After Council provides comment on the draft levels of service, the BC Team will continue to work with City staff to identify the best practices and asset management activities needed to meet defined level-of-service targets, including the development of key performance indicators (KPIs). KPIs measure the engineering, technical, and operational success of the activities performed by the Utility. One or more KPIs will be defined for each level-of-service target. While levels of service link directly to the customer expectations, KPIs are more specific and measurable, which will help the Utility determine whether levels of service are being met.

DISCUSSION

The Surface Water Utility is currently relying on the 2011 Master Plan to manage utility activities. The levels of service described in the 2011 Master Plan focus primarily on the regulatory requirements that were anticipated in the 2013–2018 NPDES Phase II Permit. The plan evaluated major components of the Utility with respect to two levels of service defined as follows:

- *Level of Service 1* is defined as providing the current levels of service, plus meeting the 2013 – 2018 NPDES Phase II permit requirements and placing a greater emphasis in asset management and maintenance of the existing system.
- *Level of Service 2* is defined as exceeding the 2013 – 2018 NPDES Phase II permit requirements plus expanding Utility programs to provide a higher level of service, particularly in the area of protection and improvement of water quality.

City Staff and the BC Team reviewed the current Surface Water Master Plan (2011), the City’s Comprehensive Plan, and the 2015-2017 City Council Goals and Work Plan to determine the recommended level of service provided to customers in terms of asset management practices. The BC Team then prepared a Level of Service matrix with suggested language for the levels of service and associated level-of-service targets. As the Master Plan and Asset Management Program progress, this matrix will be expanded to include actions and performance measures. Through several workshops with City staff, draft levels of service and level-of-service targets were developed, as shown in Table 2 below.

Table 2. Draft Levels of Service and Level-of-Service Targets for Matrix Development

Level of Service		Level-of-Service Target
1	Manage public health, safety and environmental risks from impaired water quality, flooding, and failed infrastructure	No verifiable health and safety issues or environmental damage caused by the stormwater services outside of risk tolerance
2	Provide consistent, equitable standards of service to the citizens of Shoreline at a reasonable cost, within rates and budget	Meet the levels of service as measured by customer satisfaction and rate and revenue projections.
3	Engage in transparent communication through public education and outreach	Maintain a communication plan to inform the community on utility goals and progress
4	Comply with regulatory requirements for the urban drainage system	Meet or exceed regulatory requirements for NPDES Phase II and federal, state, and local regulations affecting surface water management

Next Steps for the Master Planning process will involve the BC Team working with City staff to identify KPIs for evaluating and tracking Utility performance against the draft levels of service and levels of service targets. This will be one of the main outcomes of the current effort to revise the City's Surface Water Utility Asset Management Program. The BC Team will continue to work with City staff and refine the levels of service as the master planning process moves into technical evaluations, rate studies, and financial planning.

STAKEHOLDER OUTREACH

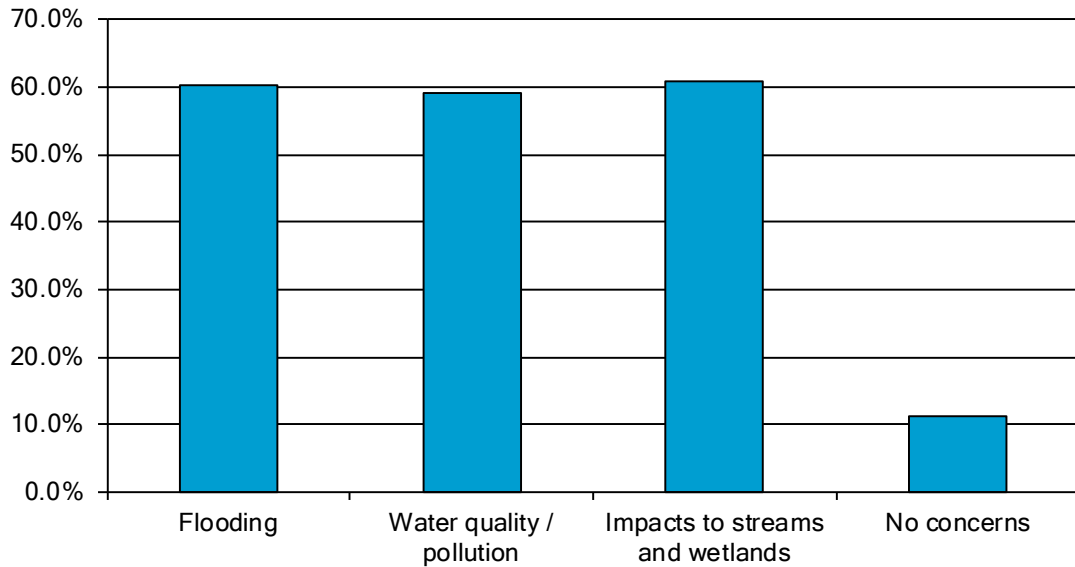
Public outreach is an important way to match customer expectations with the levels of service defined for the Utility. To gather this input, a Public Open House was held at City Hall on Thursday, September 8th, 2016. A total of 23 Shoreline citizens attended and listened to a short presentation on the surface water master planning process and the development of levels of service. The presentation was followed by many questions from the attendees, ranging from general discussion of surface water to specific drainage problems experienced by Shoreline residences. After the question and answer portion of the meeting, residents were encouraged to visit each of the two work stations set up in the back of the room. The first work station focused on general surface water topics and planning process. The second work station exhibited draft levels of service for the Utility and attendees interactively posted stickers indicating—in their view—the priorities of the Utility. Questions, comments, and priority notes from the Open house have been compiled and used to inform the levels of service and level-of-service targets recommended to Council.

Public Survey

Along with the Open House, City staff conducted a public survey to solicit feedback on the draft levels of service and gain a better understanding of current customer expectations for surface water services. The web-based survey was distributed in advance of the open house and through various avenues including Shoreline Alerts, Shoreline Area News, the City's website and neighborhood associations. The survey was also available at work stations during the open house and the online from September 2ND through September 16TH. A total of 171 Shoreline residents completed the survey; complete results of the survey are provided in Attachment A. Key findings from the survey include the following:

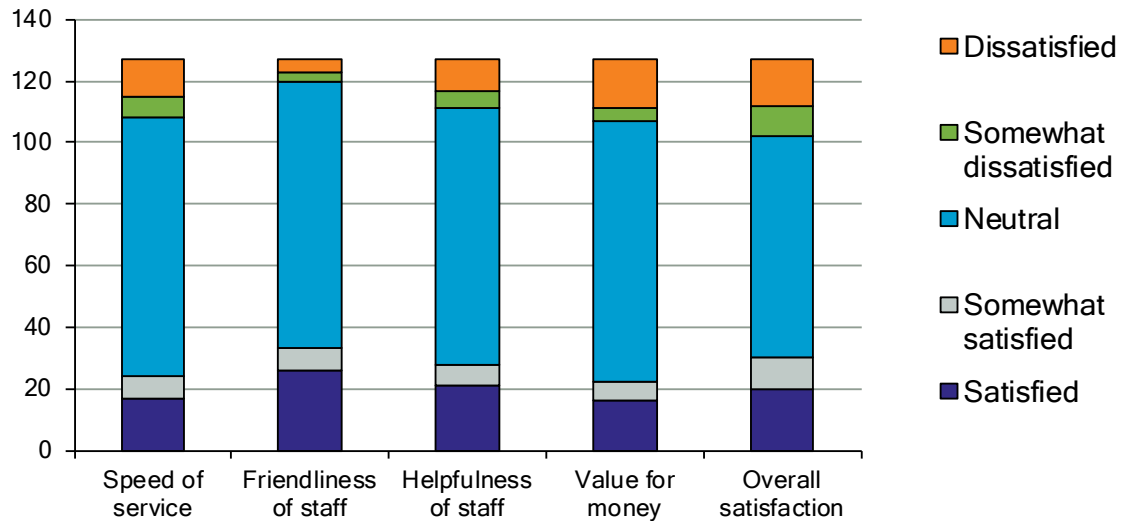
- 63 percent of respondents are not familiar with the Surface Water Utility or the services it provides.
- 58 percent of respondents have some concerns with stormwater services, such as “drains, ditches or outfalls, being properly maintained in your area.”
- General concerns were relatively evenly distributed between flooding, water quality/pollution, and impacts to streams and wetlands (see Figure below).

What are your concerns with stormwater? Check all that apply.



- Respondents were generally neutral when asked about their satisfaction with surface water services. Of the non-neutral responses, “value for money” had the highest level of dissatisfaction, while “friendliness of staff” had the highest satisfaction (see Figure below).

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



- 46 percent of respondents provided written comments regarding their concerns (see Attachment A).
- 31 percent of respondents provided general comments or suggestions (see Attachment A).
- For the recommended levels of service, Respondents ranked “Manage public health, safety and environmental risks from impaired water quality, flooding, and failed infrastructure” as the highest priority.

- For the recommended levels of service, Respondents ranked “Engage in transparent communication through public education and outreach” as the lowest priority.

COUNCIL GOAL ADDRESSED

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

RESOURCE/FINANCIAL IMPACT

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RECOMMENDATION

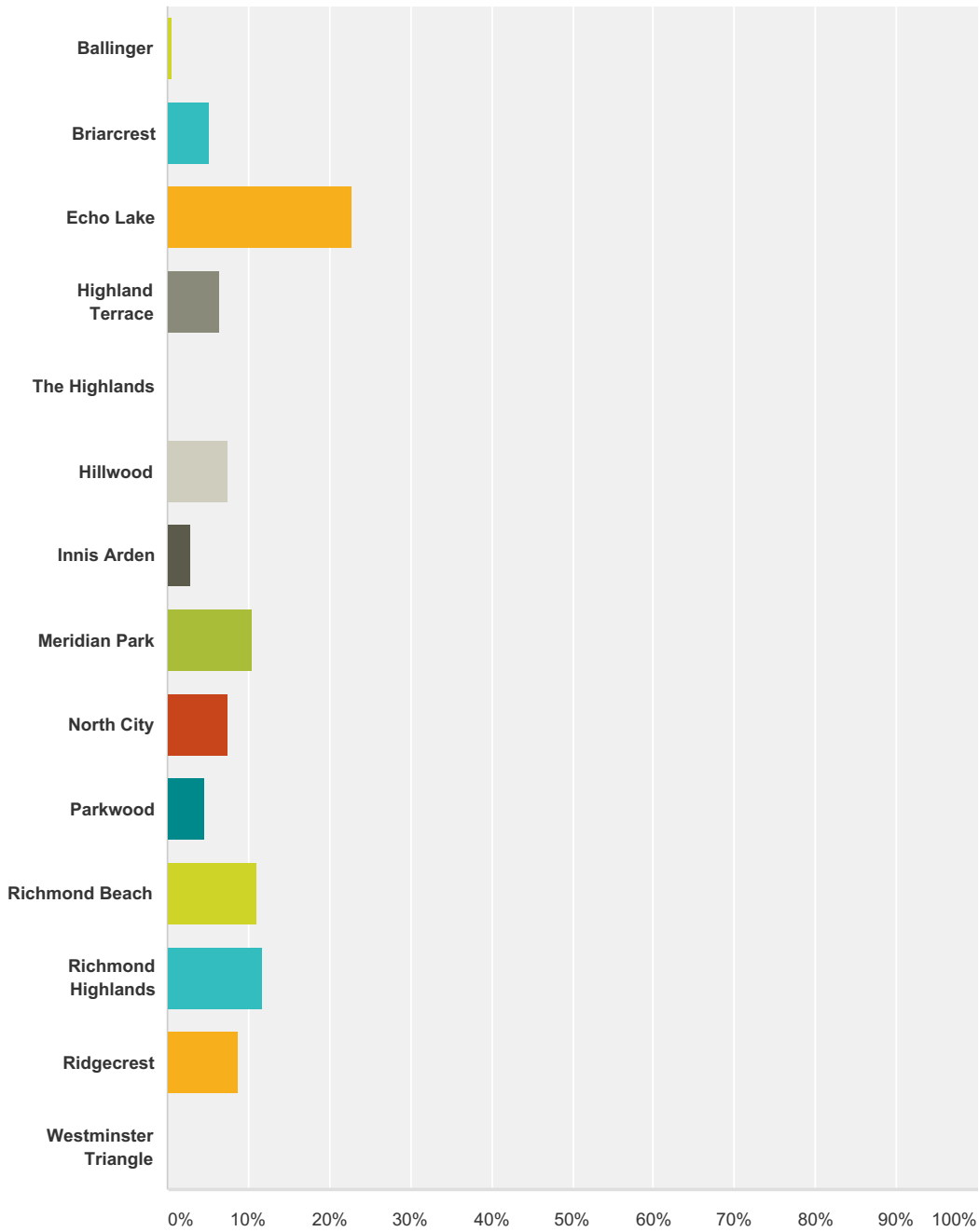
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ATTACHMENTS

Attachment A: 2017 Surface Water Master Plan Level of Service Survey Results

Q1 What neighborhood do you live in?

Answered: 171 Skipped: 0

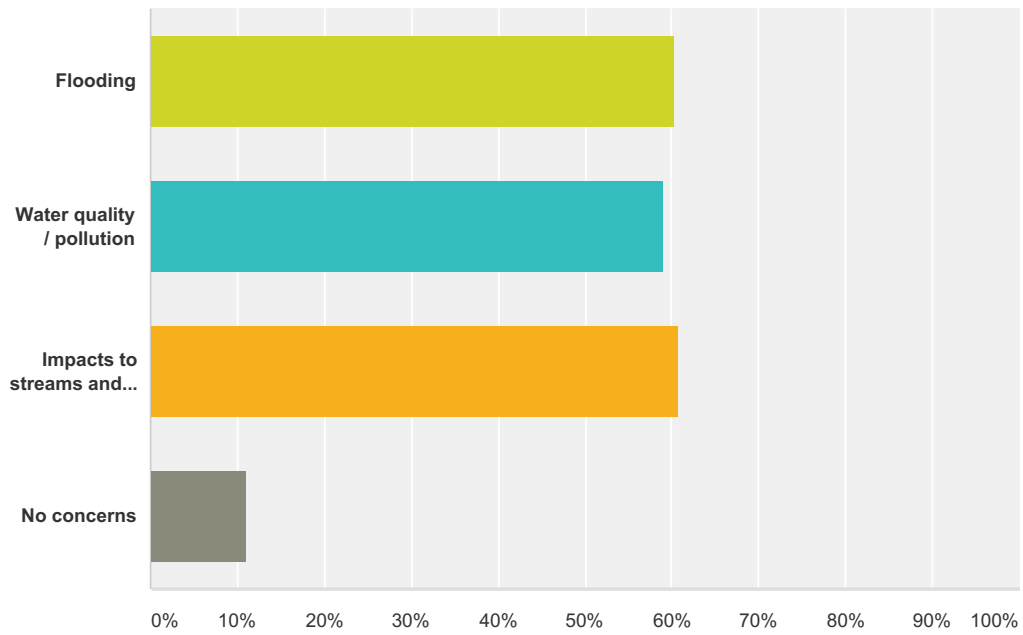


Answer Choices	Responses
Ballinger	0.58% 1
Briarcrest	5.26% 9
Echo Lake	22.81% 39
Highland Terrace	6.43% 11
The Highlands	0.00% 0

Hillwood	7.60%	13
Innis Arden	2.92%	5
Meridian Park	10.53%	18
North City	7.60%	13
Parkwood	4.68%	8
Richmond Beach	11.11%	19
Richmond Highlands	11.70%	20
Ridgecrest	8.77%	15
Westminster Triangle	0.00%	0
Total		171

Q2 What are your concerns with stormwater? Check all that apply.

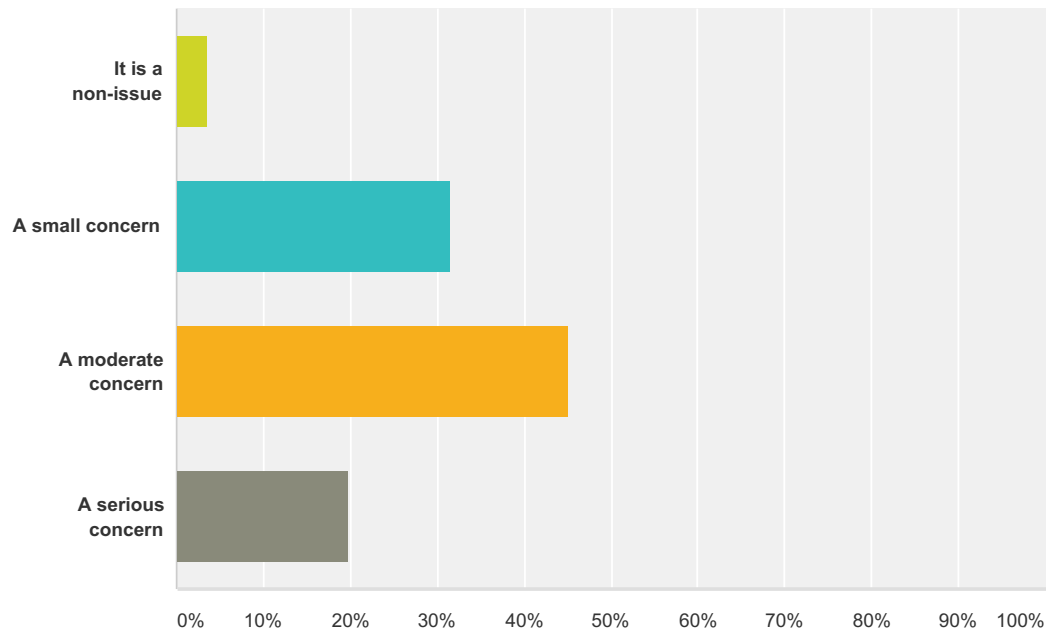
Answered: 171 Skipped: 0



Answer Choices	Responses
Flooding	60.23% 103
Water quality / pollution	59.06% 101
Impacts to streams and wetlands	60.82% 104
No concerns	11.11% 19
Total Respondents: 171	

Q3 How would you rate stormwater issues in Shoreline, as a whole?

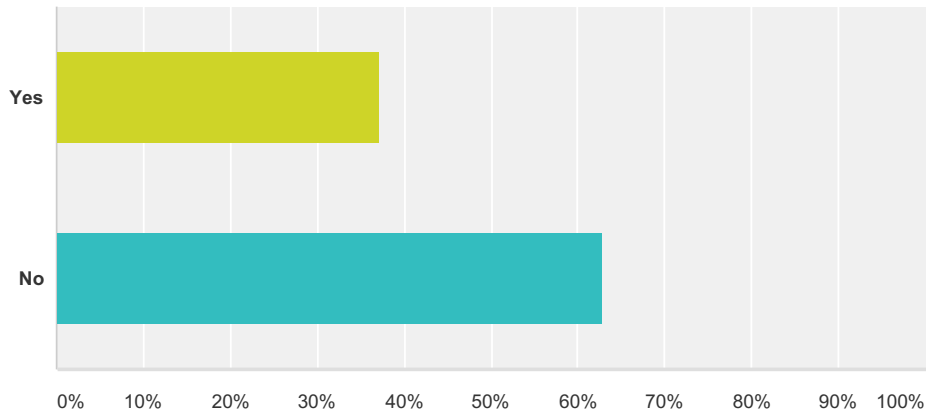
Answered: 171 Skipped: 0



Answer Choices	Responses
It is a non-issue	3.51% 6
A small concern	31.58% 54
A moderate concern	45.03% 77
A serious concern	19.88% 34
Total	171

Q4 Are you familiar with the Surface Water Utility and what it does?

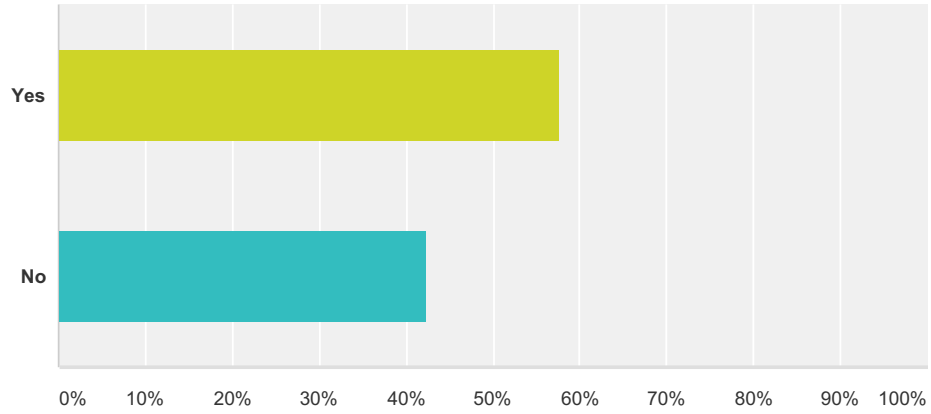
Answered: 170 Skipped: 1



Answer Choices	Responses
Yes	37.06% 63
No	62.94% 107
Total	170

Q5 Do you have any concerns with stormwater services, such as drains, ditches or outfalls, being properly maintained in your area?

Answered: 170 Skipped: 1



Answer Choices	Responses
Yes	57.65% 98
No	42.35% 72
Total	170

Q6 You answered "yes" to having concerns with stormwater services such as drains, ditches or outfalls, being properly maintained in your area. Please describe your concern below:

Answered: 78 Skipped: 93

#	Responses	Date
1	Specifically the on and off ramps for I-5 and 175th. There has been flooding here multiple times in the last year, coming close to swamping lower-clearance cars.	9/15/2016 3:17 PM
2	Cromwell Park is an eyesore and now we have Mosquitos that we did not have before the retention pond.	9/15/2016 10:36 AM
3	We had an 8' deep sink hole develop right next to our house a few years ago. There is a large storm drain that runs there. A 1963 pipe failed during a big November rain. It runs down a steep hill from there. If a pipe up top failed, I worry about the condition of the rest of the line.	9/14/2016 11:07 PM
4	Keeping drains clear, and making sure ditches are clear of debris	9/14/2016 8:49 PM
5	Flooding usually near the corner of 1st and 179th after a rainfall.	9/14/2016 4:01 PM
6	The city has told me it only maintains the ditch once every two years. Neighbor blows needles and other debris into the ditch (though he denies it), which can cause clogging.	9/14/2016 3:23 PM
7	When there is a heavy downpour, part of my street floods. Additionally, there is always debris clogging the drains on Fremont, causing standing water during heavy rains	9/13/2016 8:35 PM
8	Overflowing storm drains flood our property. The city has done little to manage their water on our property. This storm drain is not prepared for major weather events.	9/13/2016 8:29 PM
9	Drains--so far so good, and I'd like to be able to continue saying that.	9/11/2016 11:47 PM
10	The drains are never cleaned or cleared on our street. We do it ourselves	9/10/2016 3:40 PM
11	The ditches and culverts in front of our house and other houses along Greenwood Ave N should be inspected, it appears some are clogged up so the water may not move south-north.	9/10/2016 9:51 AM
12	I have no idea what if anything you will do. I never heard of you before.	9/9/2016 6:22 PM
13	Drain is not level with road- road needs resurfacing	9/9/2016 4:02 PM
14	The area along the street in front of my property that is county property that I have to maintain is very wet and muddy especially when some one drives on it and makes a large rut which makes it hard for me to mow.	9/9/2016 1:28 PM
15	Concerned about Echo Lake water levels and water quality, particularly since Aurora Corridor project. Seems that it's worse, and not 'as good or better.'	9/9/2016 11:08 AM
16	We have runoff from the QFC shopping center coming through our property. very year when the leaves come down we worry about the neighbor yard being flooded? We have to be vigilant to make certain the leaves are removed to avoid flooding	9/9/2016 11:06 AM
17	Streets are ok but concerned about where it is going. Sensitive areas like echo lake has drainage issues. Not solved - auroras done now. Harmful Vegetation has grown in	9/9/2016 10:58 AM
18	Water draining into echo lake	9/9/2016 10:55 AM
19	Regulations are complete and precise enough to be applied to actual conditions reliably.	9/9/2016 10:54 AM
20	High water table, new structures make increased standing water. Getting worse.	9/8/2016 7:30 PM
21	Storm water being directed thru culver behind the ymca is loaded with oils and sediment from aurora. Their is inadequate filtration and holding tanks for the volume of water entering Echo Lake during a moderate storm.	9/8/2016 1:25 PM
22	This has been a concern since I bought property 35 yrs ago. Everybody passed the problem around. Street always floods, drains slow and we keep leaves etc our	9/8/2016 12:41 AM

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23	I live on Echo Lake. And there have been times the drain at the north end of the lake gets clogged, the water level rises, and is frightening. Once it got within 18 inches of the door. If it had not been for a volunteer who knew where the drain was and cleared it, we would have had real problems.	9/7/2016 9:50 PM
24	The city right of ways - alleys especially are not being addressed. New construction down hill from our property was put in and they were allowed to raise the alley. Thus, the flow from all the houses upstream from us dumps into our backyard and we have had major damage due to this. After several phone calls and visits to us and our neighbors from the city, no one is responding or taken any responsibility. We will need to spend thousands of dollars to take care of this water that is not coming from our property.	9/7/2016 9:38 PM
25	I am not sure if my culvert has been inspected along with the with pipes that feed it. There also doesn't seem to be a concerted effort to notify homeowners that the stormwater covers/grates should be kept clear of debris.	9/7/2016 7:19 PM
26	When the sidewalk was installed in front of my home, several years ago, it wasn't level and there is a dip where rain water pools. It's gotten worse over time. I reached out to the Shoreline Public Works supervisor continuously, for 2 years. He finally replied, just last month, to say that it wouldn't be repaired (but on one or two occasions over those 2 years, had led me to believe they would).	9/7/2016 6:35 PM
27	I live right n N 185th St. The leaves clog the drains unless someone pulls them out. Street cleaners don't go by often enough. Perhaps the crew in orange jumpsuits can be put to work pulling leaves out of the grates on a regular basis during the Fall & Winter.	9/7/2016 4:44 PM
28	alleys that are considered city R.O.W. but that are not maintained by the city and allow water migration off of and then allows excess water to drain onto properties which causes flooding to residences.	9/7/2016 4:32 PM
29	We live in a slope and our basement has flooded in the past. I want to make sure storm water drains are maintained so the runoff doesn't end up in our basement.	9/7/2016 4:20 PM
30	Water from surrounding properties and from the street flows onto our property, causing flooding of crawl spaces, necessitating a sump pump that runs most of the winter. Each individual property (and the city) should be required to manage their own stormwater and prevent runoff onto surrounding properties.	9/7/2016 4:07 PM
31	drain between homes gets clogged and drain by bus stop backs up	9/7/2016 4:00 PM
32	I often see clogged drains due to leaves, etc. on the arterials in our neighborhood. I'm especially concerned with standing water in front of Meridian Park elementary school. This is a hazard to drivers, students, and other pedestrians.	9/7/2016 3:56 PM
33	Needs more maintenance	9/7/2016 3:47 PM
34	Excess surface rain water runs down Densmore N. near 155th. Small berm seems only a temporary solution.	9/7/2016 3:42 PM
35	Standing water at corner of 183rd Street and Meridian Ave N. Homes that have asphalt covering entire area from property to street causing more run off downhill.	9/7/2016 1:08 PM
36	There is a ditch at the bottom of my property next to the street. I honestly don't know if it's my responsibility or the city's to maintain that area, so I do it - clean up dead leaves and debris. I also clear out debris from the large drainage pipe that runs from the ditch under my driveway. The city never cuts the weeds/grass here, although I see it being done in other areas. So I do it to the best of my ability.	9/7/2016 11:14 AM
37	Drains are plugged which causes rainwater to flood the street. Pollution enters through the open system. Outfalls create erosion of soils.	9/7/2016 11:01 AM
38	My concerns are: - Road construction is impacting stormwater drainage. When the 175th Ave was redone 10/15 years ago, water started backing up in backyards. - Additional development of buildings that will cover more of the soil and end up with more runoff water. The extreme flooding that happen this year in the south of the country happened to places that are not subject to floods but the heavy construction created a dangerous path for water flooding.	9/7/2016 10:18 AM
39	Maintenance and cleaning of storm drain catch basins on private property such as Condominiums and Homeowner Associations.	9/7/2016 10:06 AM
40	My basement was destroyed by flooding. I spent \$30K to repair it and to put in a drainage system. Makes me wonder what the city is doing.	9/7/2016 9:59 AM
41	have never seen any work being done on the ditches and drainage in our area	9/7/2016 9:52 AM
42	My garage at 17327 1st Ave NW is the default drainage for the neighborhood, dependent on one storm drain, which gets clogged with leaves etc. from upper sections of the street.	9/7/2016 9:35 AM
43	Some drains get clogged with leaves and debris. We try to watch out for it, but it tends to happen in the winter, when we are rarely home during daylight hours.	9/7/2016 8:30 AM

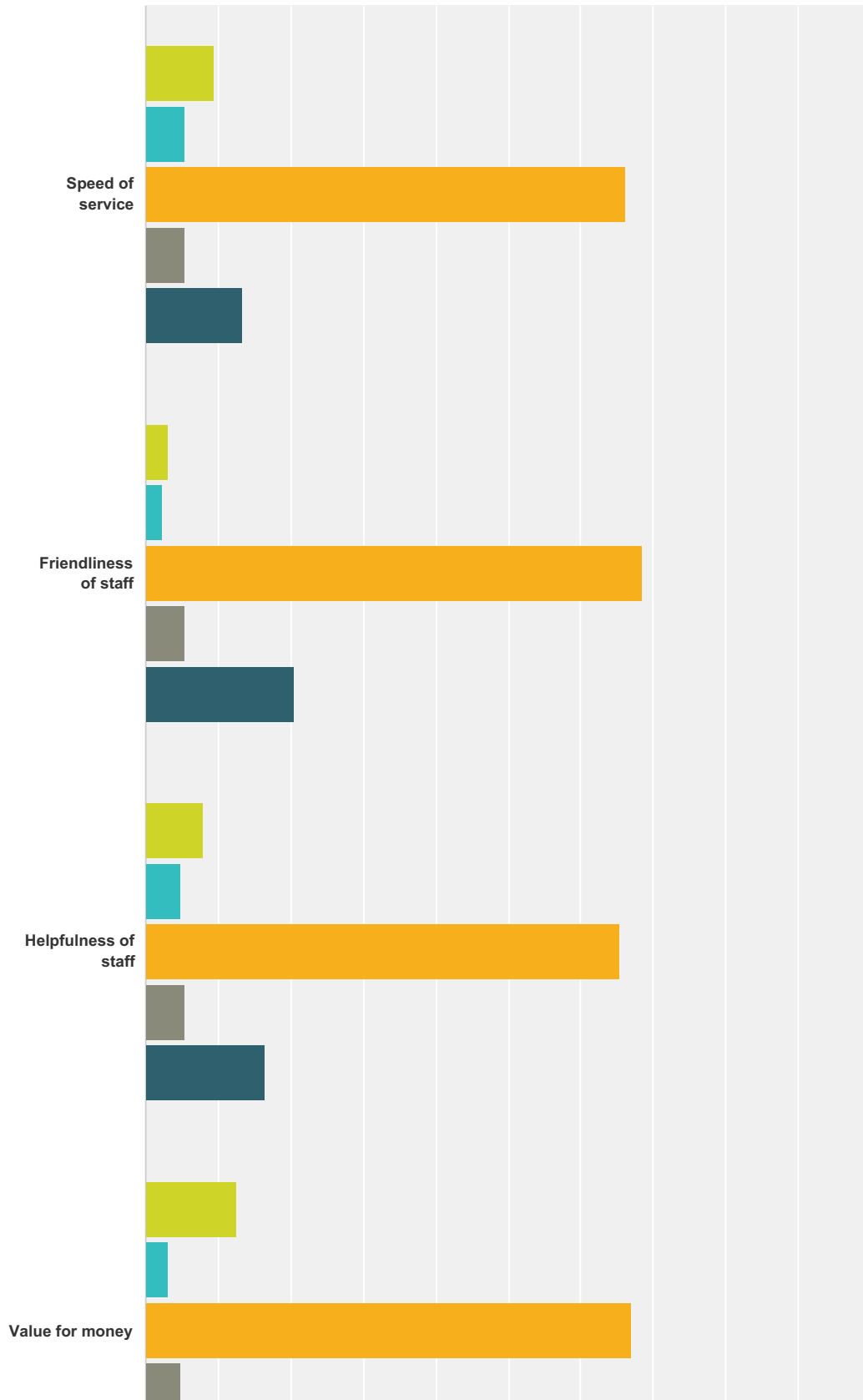
44	Our ditches are over grown and almost completely filled in. There is no place for the water to go. Neighbors over the years have filled in the ditches for parking.	9/7/2016 8:20 AM
45	-	9/7/2016 8:12 AM
46	That neighbors and homeowners continue to keep street drains clear by their driveways, especially during the fall and winter months.	9/7/2016 7:56 AM
47	Blocked drains, Old or unknown drainage systems on private property diverting water in unexpected ways. High Groundwater flooding basement during wet season.	9/7/2016 7:56 AM
48	Rainwater accumulates in areas where the street has slumped, so it pools instead of flowing to drains.	9/7/2016 7:52 AM
49	Drains are often clogged with tree debris in the Fall. Storm drain locations are inadequate to capture water runoff flowing down streets and into driveways.	9/7/2016 7:51 AM
50	when it rains I have water from my neighbor's back yard I have to have sand bags along fence also installed sump pump in front yard my house is the only one that floods in my cul de sac, my back yard has been sinking in one corner before my house was built this land was a lake full of water then filled to build a house I have contacted seattle water, ronald waste water many times & no response if I sell my house I have to disclose this so lam not happy with city of shoreline	9/7/2016 7:25 AM
51	there is no storm sewer on my block - water won't run uphill to the nearest outlet, so it has to evaporate in the street, and might be making the adjacent ground soft	9/7/2016 7:15 AM
52	My parking strip floods during heavy rains making any visitor parking extremely inconvenient. (I am not familiar with your agency, thus my answers in #7).	9/7/2016 7:12 AM
53	There are spots on Ashworth Ave N where water collects when it rains.	9/7/2016 7:05 AM
54	Surface water structures not connected to the City system in areas where high density residential has been proposed. Steep slopes in areas of high density rezone.	9/7/2016 6:16 AM
55	Flooding in our back yard and in front of our house because neighbors drain into street	9/7/2016 12:09 AM
56	Ever since my road was slurried, water pours down my driveway, overcomes the drain I have and present a real problem of flooding the basement thru a below grade window. The street needs to be leveled so water id channeled into the drain system that is there.	9/6/2016 11:22 PM
57	I really don't think people are aware that the drains need to be kept clear and debris in front of their house will wind up floating down with the rain. Educational letters might help? In the past 2 years there have been more pine needles and plant debris due to the drought conditions and it has caused issues on my block with water flow.	9/6/2016 10:27 PM
58	Open ditches can fill and overflow. Shrubs growing in open ditches, plants/shrubs/weeds/ivy/trees drink water but also impede flow of water.	9/6/2016 6:49 PM
59	There are a series of ditches along 5th NE that need work and maintenance as well as the runoff from the road that runs in front of my house. I think the project along Ashworth should be modeled for this street. The ditches fill with debris and garbage and that gets washed into the drainage system. I also think more could be done to enlist residents to help make sure street drains are clear to receive runoff.	9/6/2016 6:10 PM
60	Our condo area is flooded by properties north of here.	9/6/2016 4:32 PM
61	Surface water management in Innis Arden and much of Richmond Beach is non-existent or inadequate with roadside flooding or water coursing down and/or across roadsides in many areas during significant rains. Some areas have no ditches or catch basins and many catch basins are at an elevation above the pavement so that water does not flow into them, creating huge puddles or channeling the run-off into other areas. Shoreline has authorized massive tree-cutting of significant trees without requiring planning and mitigation for the additional run-off generated as a result of tree removal.	9/6/2016 4:24 PM
62	Primarily centered around drain at NW corner of 178th and Wayne. Heavy rainfall or during winter it doesn't drain so water accumulates. I have gone out with a rake to clear it when the puddle forms.	9/6/2016 4:07 PM
63	Current infrastructure doesn't seem to be capable of handling existing runoff. The recent rezone will only make matters worse. Also jurisdiction is an issue. The Shoreline community Center storm drains aren't under the managing entity.	9/6/2016 3:27 PM
64	Neighbors mow lawn, blows into the street...then the rain takes it into the storm drains and plugs them.....chemicals in lawns etc.	9/6/2016 3:15 PM
65	Surface drains need to be cleared of clougs	9/6/2016 3:00 PM
66	The infrastructure is a problem throughout America. Fortunately, Shoreline's sewer is newer than most. RE: the next set of questions - how would I know?	9/6/2016 2:42 PM

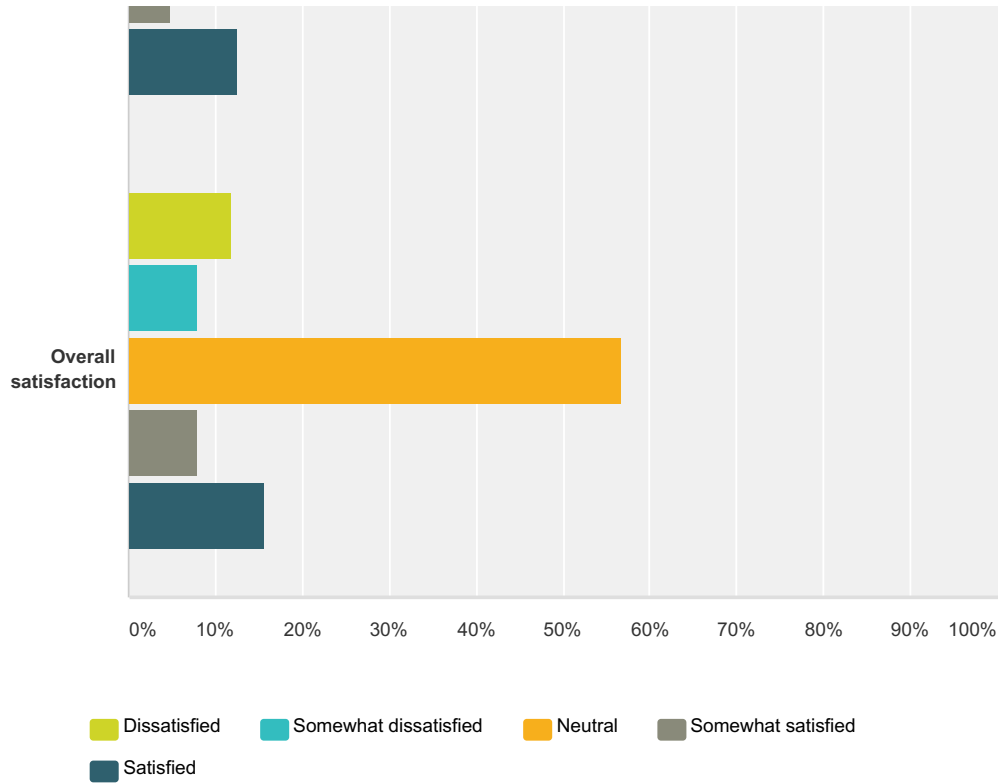
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67	Ditches in our neighborhood, not tied in to storm water sewers	9/6/2016 2:40 PM
68	Boeing Creek washed out banks and trails is concerning. Also not excited about the plan to breach Lost Lake dam but understand the prohibited costs of dredge. Wish there was a cost effective way to keep the lake without the need to dredge.	9/6/2016 1:32 PM
69	We had a mainline burst in front of our property.	9/6/2016 12:53 PM
70	There are too many 'ditches' which do not allow people to walk without going into the street and traffic. The city should address this.	9/6/2016 12:42 PM
71	Failing culverts under private driveways, ditch maintenance, inventory of drainage pipes not correct or classified properly.	9/6/2016 12:41 PM
72	They hardly seem to be maintained at all. When something was done the result was so bad the neighbors filled the ditch back it.	9/6/2016 11:58 AM
73	Some drains have been built higher than the street and are useless. An example of this is on the corner of Richmond Beach Road and 3rd NW. There are also drains placed within 2 feet of each other--total waste. There are many open ditches in our neighborhood that do not flow with water, even during heavy rainstorms. These should be filled in and covered with sidewalks to make walking along streets more safe.	9/6/2016 11:48 AM
74	I hae concerns of flood events and it's impact on water quality on Echo Lake. I also have concerns on maintainenanc of open ditches along streetsides..as they become deposits for litter and invasive weeds.	9/6/2016 11:42 AM
75	When the lake is high and the rain is falling hard and fast our yard starts to flood and comes closer and closer to my patio	9/6/2016 11:37 AM
76	Clear the ditches and drains	9/6/2016 11:37 AM
77	As a pedestrian I often notice pools of water on the side streets that do not drain - an example is on 183rd and Meridian. When there is a lot of rain or a downpour this can be a safety issue having so much water in the street or path.	9/6/2016 11:34 AM
78	The ditches are dangerous for people and cars. They become a litter bin - and cannot be casually cleaned. The grass grows so high that in some places you cannot see over it, or you cannot see there is a ditch there. The Echo Lake exit is not well maintained. It gets clogged with debris - a neighbor used to maintain it in storms but he has moved.	9/5/2016 11:23 PM

Q7 How satisfied are you with the following aspects of our stormwater services?

Answered: 127 Skipped: 44

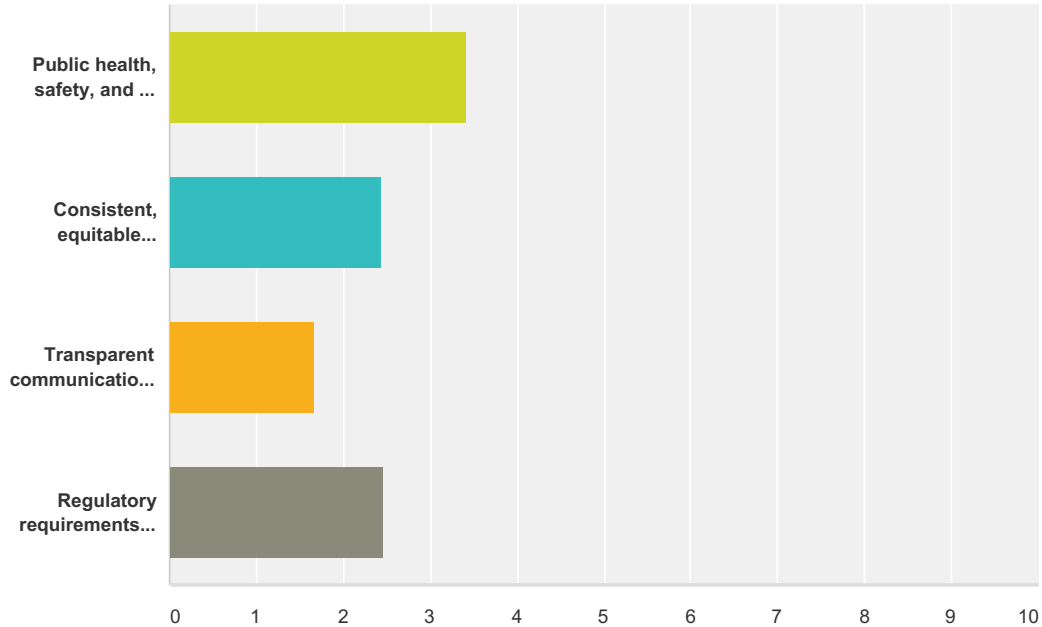




	Dissatisfied	Somewhat dissatisfied	Neutral	Somewhat satisfied	Satisfied	Total
Speed of service	9.45% 12	5.51% 7	66.14% 84	5.51% 7	13.39% 17	127
Friendliness of staff	3.15% 4	2.36% 3	68.50% 87	5.51% 7	20.47% 26	127
Helpfulness of staff	7.87% 10	4.72% 6	65.35% 83	5.51% 7	16.54% 21	127
Value for money	12.60% 16	3.15% 4	66.93% 85	4.72% 6	12.60% 16	127
Overall satisfaction	11.81% 15	7.87% 10	56.69% 72	7.87% 10	15.75% 20	127

Q8 *Please rank the following Levels of Service in the order of most importance to least importance (using 1 for most important and 4 for least important).

Answered: 127 Skipped: 44



	1	2	3	4	Total	Score
Public health, safety, and the environment Manage public health, safety and environmental risks from impaired water quality, flooding, and failed infrastructure.	61.42% 78	25.20% 32	7.09% 9	6.30% 8	127	3.42
Consistent, equitable standards of service Provide consistent, equitable standards of service to the citizens of Shoreline at a reasonable cost, within rates and budget.	14.96% 19	28.35% 36	43.31% 55	13.39% 17	127	2.45
Transparent communication and education Engage in transparent communication through public education and outreach.	3.94% 5	15.75% 20	22.83% 29	57.48% 73	127	1.66
Regulatory requirements compliance Comply with regulatory requirements for the urban drainage system.	19.69% 25	30.71% 39	26.77% 34	22.83% 29	127	2.47

Q9 Do you have any additional stormwater service concerns or suggestions?

Answered: 53 Skipped: 118

#	Responses	Date
1	Thanks for asking.	9/14/2016 11:07 PM
2	A storm water outlet near the NE corner of the Dale Turner YMCA is about 4 to 5 feet across and during heavy rain discharges over 1 million gallons of water within a 24 hr. period several times a year which goes into Echo Lake. How can this possibly be filtered properly before it enters the lake? My calculations made from data taken from King Co records.	9/13/2016 3:37 PM
3	this is the first time I heard of Surface Water Utility	9/11/2016 11:47 PM
4	It would be great to have community education on residential and commercial pollutants, so people are using environmentally friendly or no chemicals on their lawns, gardens, and rooftops.	9/10/2016 9:51 AM
5	No. This is all new to me.	9/9/2016 6:22 PM
6	Not at this time.	9/9/2016 4:13 PM
7	I am concerned that the report on the Lake quality will take too long.	9/9/2016 11:08 AM
8	Put cisterns at the QFC Rite Aid parking lots to end the water coming through my private property.	9/9/2016 11:06 AM
9	Concerns about echo lake. Encourage ymca to help	9/9/2016 10:58 AM
10	Concerned goals and regulations will be ignored by developers and no effective action will be taken.	9/9/2016 10:54 AM
11	New buildings need to address their impact and not make it worse.	9/8/2016 7:30 PM
12	Pump the culver behind the ymca 4x a year of sludge, street sweep aurora at night to cut oils and heavy metals. Cut the invasive weeds at the s end of Echo lake and get rid of the drug users living in the bushes and replant with native plants and make a bird sanctuary. Re due the ditch between Echo Lake and the culver; it is loaded with sluge.	9/8/2016 1:25 PM
13	In general I'm concerned about the water quality of Echo Lake, but am unsure of the root cause of deteriorating water quality.	9/8/2016 12:59 PM
14	Fix the flooding problem on our streets 167th and Linden	9/8/2016 12:41 AM
15	I don't really know much about it; sorry. I do appreciate the concern about wetlands.	9/7/2016 9:50 PM
16	Please contact me with a solution for the major water run off from the alley that lands on my property in Richmond Beach. Thank you, Diane Schultz 206-542-4928	9/7/2016 9:38 PM
17	As a homeowner, perhaps a "homeowners stormwater guide" with helpful tips and basic steps showing what we all can all be doing also to improve storm water quality on our properties.	9/7/2016 8:10 PM
18	No	9/7/2016 7:19 PM
19	Since I'm not sure what the Surface Water team provides, I couldn't answer #7. If they are the Public Works group, my answers would be "dissatisfied".	9/7/2016 6:35 PM
20	Several neighbors on my street spent a good amount of time discussing water issues that have been problematic for MANY years with a gentleman from the city (I would have to research on another computer to find the email communications and I will when necessary). I was actually shocked at how fast they came by to check it out and just as fast to discuss what could be done. Well, that was a couple of years ago and have not heard a word since. I would be happy to get into more details. gruwelfam@comcast.net	9/7/2016 4:53 PM
21	The zoning to allow more buildings along N 185th St. area & bring in a larger population is absolutely insane. We have standing water, underground streams, swampy yards and yet the City Council thinks it's a great idea to build, build, build. More people = more waste water & pollution. Stop the growth. If we wanted to live in the "city" we'd be in downtown Seattle among all the concrete!	9/7/2016 4:44 PM
22	Keep up the good work!	9/7/2016 2:31 PM
23	What are the bright green areas inside the different neighborhoods.	9/7/2016 1:43 PM

24	All of us are remiss in not making the natural environment a top priority. But ultimately, accomodating nature's ways is a critical goal.	9/7/2016 11:44 AM
25	Proposed construction of townhouses at 18339 Wallingford Ave N will increase flooding of homes just south of that address (including our home!).	9/7/2016 11:01 AM
26	too expensive, city regularly doesn't protect wetlands	9/7/2016 8:12 AM
27	Any power generation possibilities? Turbine at outfall?	9/7/2016 7:56 AM
28	Needs better outreach with public.	9/7/2016 7:56 AM
29	Storm water flowing down hills is not captured by drains and diverts down our driveway, causing pooling of water in front of our garage and occasional flooding into our garage.	9/7/2016 7:51 AM
30	answer my questions that I addressed in survey	9/7/2016 7:25 AM
31	This survey doesn't really address actual concerns of me as a resident, but asks me to rate an agency I know little about, since Shoreline's "customer svc" rep I dealt with goes out of his way to disappoint and find excuses for not providing service for my neighborhood.	9/7/2016 7:15 AM
32	Would love to see sidewalks, curbs, and proper drains on Ashworth!	9/7/2016 7:05 AM
33	I have seen hard working Shoreline employees clearing drains! Keep up the great work!	9/7/2016 6:35 AM
34	City needs to work with private residents to get a better understanding of where the system is broken or absent. Complete assessment of each lot in any up zone areas with moratorium on any permits until this is done.	9/7/2016 6:16 AM
35	See the above pertaining to Greenwood PI N	9/6/2016 11:22 PM
36	I do and am currently in contact with Shoreline Public Works department regarding the issues on 26th Ave. I believe home to home education on prevention and possibly additional drain(s) would help the issues my neighbors and I have been experiencing. Please note that my answers for # 7 are neutral, as I am not familiar yet with the storm water services, but would like and now plan to be. Thank you for asking! :)	9/6/2016 10:27 PM
37	Cover or enclose ditches to prevent overflow. Upgrade to larger stormwater runoff pipes. With all of the new construction in our area, there is more cement, fewer trees and shrubs to absorb the water so the entire system needs to be enlarged to handle the increased flow that does not absorb into the ground. Water retention and detention systems in new developments should be a requirement and the developers should pay for them as well as for upgrades to the surrounding communities/neighbors/and down stream stormwater systems.	9/6/2016 6:49 PM
38	Question 7 is difficult to answer as I have had no personal experience or interaction with the stormwater services. Question 8 is problematic in that some of the responses rank equally and are not necessarily more important than the other. I would rank them all fairly high and would assume that they go hand in hand.	9/6/2016 6:10 PM
39	No	9/6/2016 3:27 PM
40	Have neighborhoods take responsibility for their storm drains	9/6/2016 3:00 PM
41	My heavens, you have gone too far with questions 7 & 8.	9/6/2016 2:42 PM
42	No	9/6/2016 2:40 PM
43	Bury all the open ditches and cover drain pipes with sidewalks.	9/6/2016 1:32 PM
44	How does under ground water effect storm water especially with new construction digging foundation walls that block under ground water paths. Is this what is creating the water table to rise?	9/6/2016 12:47 PM
45	If there is an issue on my street again I will never talk to city about it in fear that crews will come and destroy property while making things worse.	9/6/2016 11:58 AM
46	Someone should survey drainage ditches during rainstorms. If the ditch is not in use (i.e., no water flowing through it) then the ditch should be covered for pedestrian safety.	9/6/2016 11:48 AM
47	Not the biggest issues the city faces. drug use, homeless, crime are much more of a concern than a little water a few times of the year. If folks get off their ass and clean up the drains and such already in place, much of this can be eliminated.	9/6/2016 11:38 AM
48	Don't raise property taxes to cover more city expenses. You're impacting property owners in Shoreline. Please keep it affordable to live and work here.	9/6/2016 11:38 AM
49	plans for lowering lake levels when necessary	9/6/2016 11:37 AM
50	Stay within the budget, and keep the drains clear.	9/6/2016 11:37 AM

51	Don't make all of your survey questions required. As someone who is new to Shoreline, I cannot accurately answer #6 yet. When you make every survey question required, you get more bad data.	9/6/2016 11:34 AM
52	A huge concern is the cost for infrastructure in Shoreline.	9/6/2016 11:34 AM
53	We need to be responsible for areas downstream from us - Lake Forest Park and North Seattle and not contribute to their surface water problems.	9/5/2016 11:23 PM