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Questions about Urban Stormwater Runoff

1. What is urban stormwater runoff?

In a natural setting such as a forest, rain falls on trees and soaks into the soil. In a developed area, rain often falls onto hard surfaces such as road and rooftops that prevent the water from soaking into the ground. The water runs off of these impervious surfaces often carrying pollutants creating "stormwater runoff."

2. What is impervious surface?

An impervious surface is any surface that prevents water from infiltrating into the ground. Impervious surfaces include roofs, pavement, patios, roadways, parking lots, sidewalks, and highly compacted soil, such as nonpaved surfaces that are subject to vehicular traffic.

3. Why is there a concern about stormwater runoff quantity and quality?

Stormwater quantity refers to the increased volume of stormwater runoff and the higher flow rates that occur when vegetation is removed and replaced by large amounts of impervious surface. The higher stormwater flows can damage aquatic environments in our urban creeks by eroding stream banks and down-cutting channels. These higher flows can also cause flooding that can damage property and create risks to public health and safety. Additionally, the pollutants deposited on impervious surfaces can be carried off by stormwater runoff into our streams, lakes, and the Willamette



Figure 1. Most stormwater runoff is sent directly into our creeks, lakes, and the Willamette River without treatment. Runoff contains pollutants that can damage the environment. High runoff flows and volumes can erode creek banks and cause flooding.

River. The water quality of streams, lakes, and rivers is affected by the introduction of pollutants. These pollutants, which include dirt, toxic chemicals, oils, nutrients, soap, and bacteria, can come from a variety of sources including vehicles, landscaping chemicals, pets, certain business practices, and construction activities (see Figure 1).

Questions about our Stormwater Program

4. What do our stormwater programs do?

Salem's stormwater management programs are implemented by the Public Works Department and are designed to address both stormwater quantity and stormwater quality. The programs encompass a service area of more than 48 square miles that includes



Figure 2. Stream cleaning is one example of the many stormwater programs conducted by Salem Public Works.

13 urban creek watersheds. The stormwater collection system that must be maintained consists of more than 85 miles of ditches, 90 miles of streams, 420 miles of pipe, 900 detention basins, and 22,000 storm drainage structures. Salem's stormwater programs include a variety of activities and projects, such as stormwater system operation and maintenance, stormwater quality and monitoring, public education and involvement, street sweeping, stream cleaning, spill response, municipal regulations, stormwater complaint response, inspections, capital projects, and much more.

One example of the stormwater programs conducted by Public Works is stream cleaning, which has removed more than 585,000 pounds of trash from Salem's streams between 2000 and 2011, and since 2000 has conducted a series of stream restoration projects to enhance the natural functions of the streams (Figure 2).

5. What is an NPDES MS4 Permit?

Many facets of our stormwater program are mandated by the Federal Clean Water Act, which requires cities like Salem obtain a permit to discharge runoff from our municipal stormwater system. Known as a National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit, the permit is administered on behalf of the Federal Environmental Protection Agency (EPA) by the Oregon Department of Environmental Quality (DEQ).

6. Will mandated federal and state requirements expand over time?

Over time, the requirements contained in Salem's NPDES MS4 Permit will continue to expand, requiring increasing investment into our stormwater programs and projects.

7. How much does our stormwater program cost?

Salem has been investing approximately \$10 million each of the past three years toward its stormwater programs.

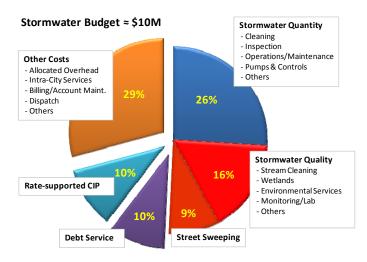


Figure 3. Approximately half of the \$10M Salem invests each year on stormwater programs is for stormwater quality and stormwater quantity programs.

Approximately half of this amount is directed toward programs that address issues related to stormwater quantity and stormwater quality concerns. An additional 10 percent is directed toward constructing new capital improvement projects (CIP) and 10 percent pays debt of service of past CIPs that manage stormwater quantity and quality. The remaining program budget is dedicated to operating costs such as contingency funds, insurance, billing, information technology, dispatch services, and others. An overview of the cost breakdown is also shown in Figure 3. As a result of increasing state and federal regulations, the scale and scope of Salem's stormwater programs and projects are expected to continue to increase over time.

Questions about our Stormwater Utility

8. Why is Salem pursuing implementation of a separate stormwater utility?

Currently, a portion of every customer's wastewater fee is used to fund Salem's stormwater programs, which is an antiquated and inequitable funding method that cities, counties, and states have been moving away from since the late 1970s. Wastewater rates are a function of winter water usage, and there is no relationship between the amount of water a customer uses and impacts their property has on stormwater quantity or quality. The purpose of implementing a separate stormwater utility and fee is to ensure Salem's stormwater programs (and

The overall outcome of decoupling stormwater funding from wastewater rates will be that wastewater ratepayers will only pay for wastewater services and stormwater ratepayers will pay for stormwater services.

wastewater programs) are funded in a manner that is fair, understandable, implementable, and sustainable. This requires that we more closely align the stormwater rate that each residential, business, institutional, or industrial property owner pays with the impacts their property has on Salem's stormwater system and on our creeks, lakes, and the Willamette River.

9. Why implement a stormwater utility and fee now.

In the past, the City's stormwater program funding was a relatively small percentage of the total wastewater fund. This percentage has grown, and because of increasing state and federal regulatory requirements, is expected to continue to increase over time. Based on all these factors, it is both timely and appropriate to evaluate ways to improve the manner in which wastewater and stormwater services are funded. Without a separate stormwater fee, any increases in stormwater costs over time would be borne by our wastewater ratepayers.

10. Is this a new stormwater service and is it a new fee?

By creating a stormwater utility the City is not creating a new service, but only changing the manner in which our existing stormwater programs are funded. It is also not a "new"

fee in that the existing stormwater programs are currently being funded as part of wastewater fees and paid for by ratepayers through their wastewater bills.

11. Is creating a separate stormwater utility and fee required by the federal government?

The City's municipal stormwater discharge permit, which is issued by DEQ under the Federal Clean Water Act, mandates the programmatic content and establishes performance measures for our stormwater program. The permit requires Salem to fully fund a comprehensive stormwater program, but the permit does not mandate how the program is to be financed.

12. Will the new stormwater utility fix drainage problems created by new development?

Every developer in Salem is currently required to provide all the drainage improvements necessary to manage the runoff generated by that development. The City will continue to address drainage problems throughout Salem as our resources allow, but creating a stormwater utility does not create new programs and is not a new funding source. Therefore, no significant changes should be expected since no new revenue is being provided.

13. Who will be charged for stormwater services?

The stormwater fee will be charged to customers with utility accounts that serve developed property within the Salem city limits, including single family and multifamily residential properties, businesses, industrial facilities, public buildings, and facilities of nonprofit organizations. City-owned streets and streets designed to City standards that are within planned residential developments will not pay a stormwater rate, although a portion of the stormwater base fee accounts for the impervious surface of public streets. In conformance with long-standing City Council policy, property owned and operated by the City of Salem will not be subject to a stormwater rate.

14. How will stormwater rates be determined?

The stormwater fee will have two components.

The first component of the new stormwater fee is a stormwater base fee that will be paid by all ratepayers regardless of the amount of impervious surface. This base fee supports stormwater programs such as dispatch services, street sweeping, and account maintenance. The base fee also accounts for the impervious The Stormwater fee will have two components:

- A stormwater base fee paid by all customers.
- An impervious surface charge that depends on each customer's impervious surface.

surface area of public streets and a portion of the mandated parking on commercial and institutional properties. By the time the stormwater utility is fully implemented in

January 2016, the stormwater base fee is expected to be between approximately \$10 and \$12 per account each month.

The second component of the new stormwater fee is an impervious surface charge that will be assessed based on the amount of impervious surface of each ratepayer's property. For non-single family residential properties, this amount will be between approximately \$5 and \$6 per month for every 3,000 square feet of impervious surface by the time the stormwater utility is fully implemented in January 2016. Most single family residential (SFR) customers will also pay an impervious surface-based rate of between \$5 and \$6 per month. Those SFR properties that have significantly more or less than 3,000 square feet of impervious surface will pay a rate that is slightly higher or lower than this value.

15. How is the stormwater fee calculated?

The methodology for calculating the stormwater rate consists of the following six steps:

- 1. Determine the stormwater base fee by calculating the total cost of stormwater programs to be funded by the base rate (includes dispatch services, street sweeping, account maintenance, impervious area for public parking and streets, and others) and divide that value by the total number of stormwater accounts.
 - For example, if the total annual cost for base rate-supported stormwater programs is \$5 million and there are 41,000 stormwater accounts, the base rate would be 55,000,000 per year \div 41,000 accounts = \$121.92 per year. This value would equal \$10.16 per month.
- 2. Determine the remaining stormwater program costs that must be supported by the impervious surface (i.e., EDU-based) charge.
- 3. Determine the impervious surface area for an average single family residential (SFR) property and set this value equal to one Equivalent Dwelling Unit or EDU. This value has been determined in Salem to be 3,000 square feet.
- 4. Measure the impervious surface area for all non-SFR properties and convert each area into a corresponding EDU value. For example, a non-SFR property with 30,000 square feet of impervious surface is equivalent to 30,000 ft² ÷ 3,000 ft² per EDU, or 10 EDUs.
- 5. Determine the total number of EDUs. In Salem, when all the SFR and non-SFR EDUs are combined, there is a total of approximately 100,000 EDUs.
- 6. Determine the dollar value per EDU by summing the total number of EDUs (i.e., SFR plus non-SFR properties) and dividing this value into the remaining, EDU-supported costs for Salem's Stormwater Program.
 - For example, if the annual stormwater program costs to be supported by the impervious surface charge is \$5 million and there are 100,000 EDUs citywide, then

the dollar value per EDU would be \$5,000,000 per year \div 100,000 EDUs = \$50/EDU per year. This value would equal to \$4.17/EDU per month.

16. Has this stormwater fee approach been used anywhere else?

Many communities throughout the nation have adopted a stormwater fee to fund their stormwater programs. In Oregon, no fewer than 40 cities have implemented a stormwater utility funding mechanism including: Ashland, Corvallis, Eugene, Gresham, Keizer, Medford, Roseburg, Portland, Springfield, and the cities served by Clean Water Services (includes the cities of Beaverton, Tigard, Tualatin, Hillsboro, King City, Forest Grove, Sherwood, Cornelius, Banks, Gaston, Durham, and North Plains). Salem is the last major metropolitan city in Oregon to establish a stormwater utility.

17. When determining the amount of impervious surface for a property, are the sidewalk and street in front of it included?

Neither sidewalks nor the fronting street are included when determining the total impervious surface area of the property in order to calculate the fee. When determining a property's impervious surface, the following are included: rooftops, driveways, patios, walkways, parking lots, and non-paved surfaces subjected to vehicular traffic.

18. Why will gravel be considered an impervious instead a non-impervious surface?

Gravel and soil surfaces subjected to vehicular traffic, whether paved or not, are considered impervious for the purposes of establishing total area subject to the calculation. On gravel areas, automobiles and trucks moving and parking on the surface crush the rock and compact the soils to such a degree that infiltration is significantly impeded or entirely prevented. From a stormwater runoff perspective, a gravel surface that has been subjected to vehicular traffic acts much more like an impervious surface, similar to a street or



Figure 4. Gravel surfaces that have been subjected to vehicular traffic act like paved surfaces and are considered impervious.

parking lot, than a non-impervious surface such as a vegetated landscape (Figure 4). Asphalt and pavement that is specifically designed and maintained to be porous will not be included in the impervious area calculations.

Questions about Implementing the Stormwater Rate

19. When will the stormwater fee be itemized on utility bills?

The stormwater fee will be listed as a separate line item on utility bills beginning with the January 2013 billing period.

20. Why delay implementing the stormwater utility and why phase it in over time?

Delaying initial implementation of the stormwater utility and phasing the fee over time has the following advantages:

- It provides additional time for ratepayers who will be most affected by the new rate, most particularly commercial and institutional properties with large amounts of impervious surface, to anticipate the costs and plan for any necessary budgetary changes.
- 2. It provides additional time for preparation, notification, and stakeholder engagement by Public Works staff.

21. How will the stormwater fee be phased in over time?

Phasing is accomplished by continuing to fund a portion of Salem's stormwater programs through wastewater rates during the period. As shown in Table 1 below, a portion of the stormwater program funding will be shifted to stormwater rates during each annual rate adjustment, with the stormwater rate being initially implemented in January 2013.

Table 1. Phasing Stormwater Rate over Four Rate Cycles

	Funding for Stormwater Program	
Beginning Date	Stormwater Fee	Wastewater Fee
January 2013	25%	75%
January 2014	50%	50%
January 2015	75%	25%
January 2016	100%	0%

The complete decoupling of stormwater from wastewater will occur at the completion of the phasing period in January 2016. After that, the wastewater fee will only fund wastewater services and the stormwater fee will fully fund stormwater services.

22. Will the stormwater utility and fee be implemented outside of the city limits?

Because Salem's stormwater services are only provided inside the city limits, the stormwater utility and fee will only be implemented within this area. If an adjacent jurisdiction, such as Marion or Polk County, enters into an interagency agreement with

Salem for stormwater services to be provided within their jurisdictional limits, then property owners within the affected area would be subject to a stormwater fee.

23. Why does a home or business that is not connected to the City's drainage system have to pay for stormwater services?

Even if your property is not physically connected to the drainage system, you and your property are still provided stormwater services. For example, the City's stormwater programs improve and maintain stormwater facilities that reduce flooding risks to your property and protect the roads leading to it. Additionally, Salem's stormwater programs administer design criteria and regulate development in ways that help control stormwater runoff that otherwise could adversely impact your property, the roads on which you drive, and the establishments with which you do business. Our stormwater programs also provide benefits to all residents of Salem by taking actions that reduce stormwater pollutants that can degrade our urban streams and waters.

24. Why don't people outside Salem pay for stormwater services when their stormwater drains into our storm system?

The City of Salem does not have the authority to charge a stormwater fee to owners of properties located outside the city limits simply because their properties drain into our storm system.

25. Would Salem businesses be at a disadvantage with others that do not pay for stormwater?

The subject of City fees and taxes for services in the unincorporated areas of the city is an issue that goes beyond the approved stormwater utility. Currently, those who live or do business outside of the city limits are often able to use and enjoy—at no cost—Salem's streets, parks, libraries, and other amenities. It is true that businesses located in Salem will be subject to a stormwater fee while other businesses located in unincorporated areas of Marion and Polk Counties will not. What is also true is that this situation already exists for businesses in Keizer, which currently has a stormwater fee, while Salem, will not have a fully implemented stormwater rate until 2016. See Question 28 for a comparison of Salem's stormwater rate with other cities.

26. Will undeveloped lots in subdivisions be charged for stormwater services?

Because an undeveloped property is presumed to remain in its natural state, it will not be subject to the stormwater rate. If predevelopment activities result in compacted gravel or dirt and utility services are available to the property, the stormwater fee will be included on the customer's utility bill.

27. Will developed properties without water or wastewater services be charged for stormwater services?

A developed property will be charged a stormwater rate, even if it does not receive water or wastewater services.

28. How does the City of Salem stormwater rate compare to other Oregon cities?

Table 2 compares Salem's estimated stormwater rate with rates of other cities for a ratepayer with 100,000 square feet of impervious surface. Note that approximately 90 percent of all Salem commercial ratepayers have 100,000 square feet or less of impervious surface. The rates presented in Table 2 for the other cities use rates that were effective in July 2012. Salem's stormwater rates shown in the table are based on estimating the rate that will be in effect in January 2016 (the date of full implementation) and adjusting that value so that it can be compared to the 2010 rates of other jurisdictions.

Table 2. Salem Stormwater Rate Compared with other Cities. (Comparing stormwater bills for 100,000 square feet of impervious surface)

City	Monthly Stormwater Rate
Keizer	\$134
Salem	\$177
Corvallis	\$199
Clean Water Services	\$217
Hillsboro	\$218
Medford	\$228
Vancouver	\$284
Beaverton	\$294
Springfield	\$340
Gresham	\$394
Eugene	\$435
Portland	\$1,055

Questions about Billing

29. Will I get a separate stormwater bill?

Currently, all wastewater ratepayers in the City of Salem have a stormwater fee incorporated into their utility bill as part of the wastewater fee. Beginning with the January 2013 billing period, your stormwater fee will be added as a separate line item in your combined utility bill. Whenever possible, stormwater will be added to an existing water/wastewater account and tied to the tenant or occupant of the facility. In some cases, where multiple accounts serve one parcel, stormwater services will be charged to the property owner or divided between the accounts in consultation with the owner. In the case that a property owner is billed, it will be their responsibility to determine how to assess the other accounts. Generally, for multi-tenant facilities such as shopping centers

and apartment complexes, the stormwater bill will be sent to the person responsible for the property.

30. Will my bill go up?

As the stormwater utility fee is implemented, the portion of your wastewater fee that currently funds the stormwater services will be removed as the stormwater fee is incorporated into the bill. The *net* change of the new, revised bill (wastewater plus stormwater together) depends on the type of property, the amount of water consumed during the winter months (from which the wastewater fee is derived), and the new stormwater fee. Typically accounts with high water use and minimal impervious area, such as some agricultural processing industries, will likely see a decrease in their overall bill. On the other hand, properties with large amounts of impervious surface area and low water use will likely see an increase in the overall bill.

Generally, approval of the stormwater utility will have the following effects:

- Single family residential ratepayers can expect to see a small increase in the
 combined wastewater plus stormwater bills. This is primarily because of the
 influence of a new cost of service analysis, which will result in higher single family
 residential rates for wastewater, and the stormwater base fee paid by all stormwater
 customers regardless of the amount of impervious surface.
- Multifamily residential ratepayers can expect to see a small decrease in the combined wastewater plus stormwater bills.
- Commercial ratepayers¹ can expect to see an increase in the combined bill. For most small commercial properties, the increase should be between approximately 5 and 10 percent. For larger commercial properties, the combined bill can be expected to double or more.
- For industrial ratepayers, no general projections can be made because their combined wastewater plus stormwater bills are dominated by the amount they pay for wastewater.

31. What will the stormwater fee be for residential properties?

Once the new stormwater fee has been fully implemented in 2016, most single family residential (SFR) ratepayers will likely see a stormwater rate between \$15 and \$18 per month. This amount is composed of the stormwater base fee, which is expected to be between \$10

Once the stormwater rate is fully implemented in January 2016, single family residential ratepayers will pay approximately \$15 to \$18 per month for stormwater services.

¹ Note: "Commercial" ratepayers include businesses, agencies, nonprofit organizations, and all other non-residential ratepayers who pay for wastewater services based on the volume of water used during the winter months.

and \$12 per month, plus an equivalent dwelling unit (EDU) charge, which will be between approximately \$5 and \$6 per month.

32. Will all single family residential ratepayers have the same fee?

The amount of impervious surface area on most of Salem's 35,000 single family residential (SFR) properties fits within a relatively narrow range of between 1,000 and 5,000 square feet, with an average impervious surface area of 3,000 square feet. However, there are SFR properties that have significantly more or significantly less impervious surface area than the average. To have a more equitable SFR rate structure, a three-tiered system has been developed. Approximately 75 percent of all SFR properties—those with between about 2,200 and 3,700 square feet of impervious surface—will pay the same rate. The upper and lower 12.5 percent of SFR properties (by impervious surface area) will pay a rate slightly higher and slightly lower than the average rate.

33. Can billing estimates be provided for specific properties?

Individual estimates can be provided to the account holder upon request.

34. Who will be charged for stormwater when there is a rented or leased property?

Whenever possible, the stormwater service fee will be attached to an existing wastewater or water account. In some cases this may be a renter or lessee unless the account is held by the property owner.

35. How will duplexes, condominiums, and mobile home parks be charged for service?

Residential accounts that include single family homes, duplexes with one water service, group homes with one water service, condominiums with individual water services, and multifamily units with individual water services will all be charged based on the three-tiered single family residential rate system. The stormwater rate for multifamily complexes with shared meters, condominiums with shared meters, and mobile home parks with shared meters will be charged based on the amount of impervious surface area.

36. Is the City paying for stormwater on City property?

The City does not currently pay itself for water or wastewater utility services provided to City Departments. The addition of a new stormwater utility does not change this policy. Account holders who are renting or leasing City-owned property, such as those at the airport, will have stormwater service added to their current water and wastewater utility bills.

Questions about Stormwater Rate Credits

37. I have a stormwater management facility on my property. Am I eligible for a reduced stormwater rate?

Accounts that are *not* single family residential may be eligible to receive stormwater credits if there is a properly maintained and operated stormwater treatment or flow control facility on the property that has been designed and constructed according to approved City Standards (Figure 5).

38. Why are single family residential properties not eligible for a reduced stormwater rate?

Implementing a stormwater credit program for single family residential (SFR) properties would not be cost-effective. Because there are more than 35,000 separate SFR accounts and the stormwater rate credit for a SFR property is likely to be only a few dollars per month, costs to implement and



Figure 5. Credits are available to non-SFR customers who maintain a stormwater facility on their property. This rain garden provides both stormwater quantity and stormwater quality benefits.

administer such a credit program will exceed the benefits to both the City and our stormwater ratepayers.

39. How will the stormwater credit be determined?

In general, the amount of credit will depend on the type of facility, the amount of impervious surface routed to the facility, and the portion of the stormwater rate that supports the direct costs of the City's stormwater quantity and/or stormwater quality programs.

40. When will the stormwater credit system be implemented?

Implementation of the stormwater credit system depends on code and design standard updates that will be adopted by January 2014. After that date, ratepayers may apply for credits and provide the necessary access and operating and maintenance agreements for their stormwater facilities. Credits will be applied retroactively to 2013 for customers that have facilities that qualify for credits in 2014.

Further Information

41. Where can I get more information about Salem's stormwater program and fees?

Additional information is available on the City's website at:

http://www.cityofsalem.net/stormwaterutility

For additional information about the stormwater utility, contact Zach Diehl or Mike Gotterba at the Salem Public Works Department at 503-588-6211 or zdiehl@cityofsalem.net or mgotterba@cityofsalem.net.