

APPENDIX I

Funding Strategies Memorandum

MEMORANDUM

February 25, 2016

City of Sequim Storm and Surface Water Master Plan Funding Strategies Memorandum

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Executive Summary

This memorandum describes alternatives for funding the service level alternatives shown in the Storm and Surface Water Master Plan (“Master Plan”). It contains a review of existing stormwater program spending, projected future stormwater program spending associated with three level-of-service tiers described in the Master Plan, and alternatives for paying for stormwater services.

Current stormwater operating expenses are approximately \$110,000 per year. The funding is split 50/50 by the water and sewer utilities. A single-family residential water and sewer customer pays between approximately \$1.60 and \$2.10 per month (depending on water use) for stormwater services. Customers with higher water and sewer bills pay more.

Three level-of-service tiers are described in the Master Plan. The projected annual cost of these tiers through 2022 is compared with existing stormwater expenses as follows:

| | |
|--|------------------------|
| No Change: Existing Stormwater Operating Expenses | Annual cost: \$110,000 |
| Tier A: Needed to Meet Minimum Standards | Annual cost: \$565,000 |
| Tier B: Likely to be Mandated | Annual cost: \$675,000 |
| Tier C: Proactively Anticipating and Reducing Risk | Annual cost: \$825,000 |

The annual costs for each tier are what is required to pay projected operating costs, projected capital costs, and accumulate Stormwater Fund reserves consistent with city policies that exist for its water and sewer utilities.

The reader is directed to the Master Plan for a description of what each tier means, and more detail regarding the stormwater program elements of each tier

Five potential funding alternatives are:

1. Continuing to pay from water and sewer utility revenues
2. Ad valorem property tax assessment
3. Establishing a stormwater fee
4. Forming a special purpose district
5. Combination of the above funding sources

Each alternative is intended to collect the same amount of revenue – the difference among them is how the revenue gets collected. The potential monthly impact to a single-family residence is not possible to predict exactly; however, estimates are provided in this memorandum. The alternatives with the highest cost to single-family residences will have lower costs to other customers.

Table 1 shows the potential monthly financial impact for a single-family residence, for each tier and for each funding alternative.

The monthly funding impact is shown as a range. For all three alternatives, the range depends on water use, either because of continuing water and sewer utility funding (Alternative 1), or discontinued water and sewer utility funding (Alternatives 2 and 3). For Alternative 2, the

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range also depends on the assessed value of a house, and for Alternative 3, the range also depends on the amount of paved surface of non-residential parcels such as schools, and commercial properties such as parking lots, retail, and hospitals. The financial impact of a special purpose district is not yet known because services provided by a district and district boundaries have yet to be identified. The financial impact of Alternative 5 will be in between the lower and upper limits of Alternatives 1 through 3.

Table 1
Summary of Projected Financial Impacts for Single-Family Residences, \$/month

| Funding Alternative | Tier A | Tier B | Tier C | Notes |
|---|-------------------|-------------------|-------------------|-------|
| Alternative 1: Water and Sewer Utility Revenue | \$8.60 - \$11.00 | \$10.30 - \$13.20 | \$12.60 - \$16.10 | 1 |
| Alternative 2: Ad Valorem Property Tax Assessment | \$6.50 - \$12.70 | \$8.10 - \$15.50 | \$10.40 - \$19.30 | 2 |
| Alternative 3: Stormwater Fee | \$10.20 - \$16.20 | \$12.60 - \$19.70 | \$15.90 - \$24.40 | 3, 4 |

Notes:

- (1) Low = monthly water use of 400 cubic feet/month; high = monthly water use of 1,000 cubic feet/month
Average water use is ~700 cubic feet per month
- (2) Low = assessed value of \$150,000, monthly water use of 400 cf/month;
High = assessed value of \$250,000. Median assessed value ~\$185,000.
Low and high also based on water use ranges described in note 1 and discontinued water/sewer rate support.
- (3) Low = number of Equivalent Residential Units = 3,830. High = number of Equivalent Residential Units = 2,640. See main body of report for more detail.
Low and high also based on water use ranges described in note 1 and discontinued water/sewer rate support.
- (4) Impervious areas from the City's rights-of-way are not considered in this tables. If the City decides to "charge itself" for these areas, the rate impacts to a single-family residence will be smaller but a portion of the annual stormwater cost must be paid from the City's General Fund.

The financial impacts of Tiers A and B can be reduced by 20 and 10 percent respectively, by deferring some capital costs planned in 2018 and 2019 to alter in the six-year planning period.

In this memorandum, each of the funding alternatives is evaluated in terms of its financial impacts, equity considerations, and administrative and implementation considerations. When considering the equity of the funding alternatives, the City should consider the linkages between the service provided and the amount charged. For the three funding alternatives, this means how the stormwater program services relate to water use, assessed value, impervious area, or other parameters that define how to pay for stormwater services. Consideration should also be given to the extent of stormwater program elements that address runoff from rights-of-way, and how these costs are recovered.

Of the funding alternatives, a stormwater fee is the most common method of paying for stormwater program activities, particularly in Western Washington and including nearby cities such as Port Angeles, Port Townsend, Poulsbo, Aberdeen, Hoquiam, and Oak Harbor. The monthly stormwater fee for a single-family residence in these jurisdictions ranges from \$6.69 in Aberdeen to \$16.43 in Poulsbo.

Sequim's stormwater system differs from many utilities (particularly in western Washington) because runoff in much (but not all) of the City is infiltrated on-site. In most parts of the City, there is very little piped stormwater conveyance. An exception to this is the central business

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district, where piped stormwater conveyance systems exist that direct much of the runoff to City-owned and maintained infiltration sites. This infiltration-focused approach to stormwater management has led to fewer pipes for the City to maintain, but requires additional effort to maintain dry wells and other infiltration facilities. Relying on infiltration also makes it more obvious when the system is in need of rehabilitation because water ponds in the streets, as was observed in 2015. As a result of the widespread use of onsite infiltration, in Sequim there is a much less obvious link between impervious area on a parcel and runoff (when compared to other jurisdictions).

Unlike many utilities in Western Washington, Sequim's stormwater program activities have a water supply component, because the majority of runoff is infiltrated and some expenses are directly related to capturing wet-season irrigation ditch flow for recharge. An increasing focus of stormwater programs is water quality, and this is progressively reflected in the contents of Tiers A, B, and C. Because the majority of Sequim's runoff is infiltrated, efforts to improve the water quality may affect groundwater quality, which also may have a water supply link.

There is a weaker link between provision of stormwater management services and sewer rates. The strongest link may be found when considering that some of the City's stormwater program costs are the result of runoff generated from outside the City limits, particularly in Bell Hill. Sewer customers in Bell Hill pay a 50 percent surcharge on their sewer bills.

A significant percentage of the City's stormwater program costs are to address runoff from rights-of-way. These costs can be recovered from ad valorem property taxes, but there are many competing priorities for the City's property tax revenue. A stormwater fee, properly constructed, can also recognize the public's use of rights-of-way, either by a direct charge to parcels or via the City charging its General Fund a stormwater fee based on the same fee structure as applied to privately-owned parcels.

It is likely that the most equitable method to fund the stormwater program costs is a combination of alternatives. However, combining funding sources makes administration and implementation even more difficult.

Finally, the financial impacts associated with all of these alternatives are large. FG Solutions strongly encourages the City to have a detailed and transparent dialog with its residents and businesses to assess priorities and the affordability of these potential program changes.

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Introduction

This memorandum describes alternatives for paying for the service level alternatives shown in the Storm and Surface Water Master Plan (“Master Plan”). This memorandum provides a summary of the existing financial status: what the city currently spends and where the money comes from. Next is a summary of the future stormwater program costs: what the City might spend in the future, corresponding to each of the alternatives presented in Master Plan.

The third section describes alternatives for collecting the revenue requirement. Five alternatives are discussed:

1. Continuing to pay from water and sewer utility revenues
2. Ad valorem property tax assessment
3. Establishing a stormwater fee
4. Forming a special purpose district
5. A combination of the above alternatives

After a brief discussion of affordability, the Appendix provides some additional more detailed calculations and discussion.

This memorandum is based on data available as of November 2015. Any changes in staffing levels that have been made after November 2015 reflected in the final Master Plan will not substantively change the results of this funding analysis.

Existing Financial Status

From an accounting perspective, the City has formed two funds to track storm and surface water revenues and expenditures.

- Fund 107, the Stormwater Unrestricted fund, pays for operating expenses and is referred to in this memorandum as the “Operations Fund”.
- Fund 117, the Stormwater Restricted Fund, pays for capital expenses and is referred to in this memorandum as the “Capital Fund”.

Table 2 shows expenditures from the Operating Fund and Capital Fund. The City currently employs 1.75¹ full-time equivalents (“FTEs”) to complete its storm and surface water activities, including a full-time water resources manager and the following maintenance positions: 0.25 FTE Lead Sewer Maintenance Worker and 0.25 FTE Sewer Maintenance Worker that clean catch basins; 0.20 FTE Lead Streets Maintenance Worker who operates the street sweeper; and 0.05 FTE Streets Manager.

The annual budget for operations and maintenance (O&M) activities is approximately \$100,000, and in the past five years, capital expenditures have averaged approximately \$108,000 per year.

¹ Source: 2015 Adopted Budget, page 101

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Table 2
Historical Operating Fund and Capital Fund Expenditures

| | Stormwater Unrestricted Fund | Stormwater Restricted Fund |
|-------------------------|------------------------------------|----------------------------------|
| Fund Number | 107 | 117 |
| Type of Expenses Paid | Operating | Capital |
| Recent Expenditures (1) | | |
| 2011 Actual | \$93,882 | \$0 |
| 2012 Actual | \$54,215 | \$0 |
| 2013 Actual | \$101,014 | \$45,504 |
| 2014 Forecast (2) | \$98,948 | \$177,185 |
| 2015 Budget | \$100,248 | \$318,843 |
| Five-Year Average | \$89,661 | \$108,306 |
| Fund Balances (3) | | |
| Projected 1/1/15 | \$36,644 | \$5,765 |
| Projected 12/31/15 | \$46,871 | \$14,989 |

Notes:

- (1) Source: 2015 City Manager Adopted Budget, published November 2014
- (2) Projection for the calendar year 2014 made as 2015 budget was being developed
- (3) Source: 2015 Budget, page 29

Stormwater expenses include a charge for services provided by the City's Central Service Departments². These services include the City Council, city administration (e.g. city manager, city clerk, city attorney, communications, human resources), finance and information technology, public works administration, GIS/engineering, facilities maintenance, and other city-wide expenses. The City allocates costs among its departments for these services using a formula that considers the number of council agenda items, expenses, FTEs, amount of equipment, square footage of office space, and insurance claim data.

In the 2015 budget, the Operations Fund is charged \$25,273 for central services (approximately 25 percent of the budget), and the Capital Fund is charged \$56,751 (approximately 18 percent of the budget).

Table 2 also shows that at the end of 2015, the Operations Fund is projected to contain approximately \$47,000 in reserves and the Capital Fund is projected to contain approximately \$15,000.

² This is described further on page 119 of the City's 2015 Budget

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Operations Fund revenues are contributions from the water and sewer utilities. In 2015, the transfers will be \$55,000 from each utility, for a total of \$110,000. Capital Fund revenues vary; in 2015, the City received a grant to partially fund completion of the Storm and Surface Water Master Plan, and the water and sewer utilities contributed a combined \$133,000. A state grant has partially funded the City's stormwater program manager since 2014. This grant lasts through March 2016 and the City is pursuing an extension of this grant.

Future Stormwater Program Cost

Operations and Maintenance Costs

No Change

Without any change to the current stormwater program elements, future O&M costs will be approximately \$100,000 per year.

Tier A: Needed to Meet Minimum Standards

The "Plan Implementation" section of the Master Plan describes the elements of a stormwater program characterized as "Needed to Meet Minimum Standards" (Tier A). Table 3 shows the projected stormwater program staffing requirements and operating costs on a year-by-year basis from 2017 through 2022.

The upper portion of Table 3 shows the additional FTEs (in addition to existing FTEs) that would provide additional inspection, water quality compliance, and maintenance services. The lower portion of Table 3 shows estimated operating costs, including the existing \$101,000 stormwater operating costs, the additional labor costs for the new FTEs, capital expenses, and additional central services expenses related to the new O&M expenses.

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Table 3
Tier A: Projected Additional FTEs and Projected Program Costs (2015 Dollars)

| Tier A | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| 1 Additional FTEs, per Program Element | | | | | | | 1 |
| 2 Inspection Program | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | |
| 3 Water Quality Compliance | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | |
| 4 Species and Habitat Protection | | | | | | | |
| 5 Stormwater Design Guidance/Plan Review | | | | | | | |
| 6 Asset Management | | | | | | | |
| 7 Stormwater System O&M | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | |
| 8 Pollution Source Detection and Elimination | | | | | | | |
| 9 Public Education and Involvement | | | | | | | |
| 10 Total Additional FTEs | 1.76 | 1.76 | 1.76 | 1.76 | 1.76 | 1.76 | |
| 11 | | | | | | | |
| 12 Program Costs (2015 Dollars) | | | | | | | |
| 13 Existing Costs | \$101,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 | 2 |
| 14 Additional FTEs (@ \$75K/year/FTE) | \$132,000 | \$132,000 | \$132,000 | \$132,000 | \$132,000 | \$132,000 | 3 |
| 15 Additional Materials, Equipment, Contracted Services | | | | | | | 1 |
| 16 Inspection Program | | | | | | | |
| 17 Water Quality Compliance | \$50,000 | \$50,000 | | | | | |
| 18 Species and Habitat Protection | | | | | | | |
| 19 Stormwater Design Guidance/Plan Review | | | | | | | |
| 20 Stormwater System O&M | | | | | | | |
| 21 Pollution Source Detection and Elimination | | | | | | | |
| 22 Public Education and Involvement | | | | | | | |
| 23 Central Services on New Operating Expenses | \$45,500 | \$45,500 | \$33,000 | \$33,000 | \$33,000 | \$33,000 | 4 |
| 24 Capital Expenses | \$52,720 | \$134,780 | \$264,000 | \$19,000 | \$4,000 | \$0 | 5 |
| 25 Central Services on New Capital Expenses | \$9,490 | \$24,260 | \$47,520 | \$3,420 | \$720 | \$0 | 4 |
| 26 Total | \$390,710 | \$487,540 | \$577,520 | \$288,420 | \$270,720 | \$266,000 | |

Notes:

- (1) Refer to Draft Storm and Surface Water Master Plan Table 16
- (2) Source: City's 2015 Budget
- (3) \$75,000 per year per FTE, fully burdened including benefits (source: City staff, email communication September 17, 2015)
- (4) Additional central services on new expenses are calculated by a formula that considers factors like staffing and square feet of facilities. In this analysis, central services are calculated as 25% of operating expenditures which are the approximate percentage for the Operating Fund in the 2015 Budget.
Central services are included in the existing operating expense of approximately \$101,000 in FY 2015 budget.
- (5) Refer to Table 6 and the Master Plan for more detail on capital improvements

Tier B: Likely to be Mandated

Table 4 is similar to Table 3 except that it shows additional FTEs and operating costs for Tier B "Likely to be Mandated". In addition to the new FTEs and operating costs included in Tier A, Tier B includes new stormwater program activities that would begin in 2019. These new activities include additional water quality compliance, additional maintenance services, development of an asset management program, pollutant source detection and elimination, and public education and involvement.

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**Table 4
Tier B: Projected Additional FTEs and Projected Program Costs (2015 Dollars)**

| Tier B | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| 1 Additional FTEs, per Program Element | | | | | | | 1 |
| 2 Inspection Program | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | |
| 3 Water Quality Compliance | 0.20 | 0.20 | 0.27 | 0.27 | 0.27 | 0.27 | |
| 4 Species and Habitat Protection | | | | | | | |
| 5 Stormwater Design Guidance/Plan Review | | | 0.14 | 0.14 | 0.14 | 0.14 | |
| 6 Asset Management | | | 1.02 | 1.02 | 1.02 | 1.02 | |
| 7 Stormwater System O&M | 1.39 | 1.39 | 1.54 | 1.54 | 1.54 | 1.54 | |
| 8 Pollution Source Detection and Elimination | | | 0.11 | 0.11 | 0.11 | 0.11 | |
| 9 Public Education and Involvement | | | 0.24 | 0.24 | 0.24 | 0.24 | |
| 10 Total Additional FTEs | 1.76 | 1.76 | 3.49 | 3.49 | 3.49 | 3.49 | |
| 11 | | | | | | | |
| 12 Program Costs (2015 Dollars) | | | | | | | |
| 13 Existing Costs | \$101,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 | 2 |
| 14 Additional FTEs (@ \$75K/year/FTE) | \$132,000 | \$132,000 | \$261,750 | \$261,750 | \$261,750 | \$261,750 | 3 |
| 15 Additional Materials, Equipment, Contracted Services | | | | | | | 1 |
| 16 Inspection Program | | | | | | | |
| 17 Water Quality Compliance | \$50,000 | \$50,000 | \$24,000 | \$24,000 | | | |
| 18 Species and Habitat Protection | | | | | | | |
| 19 Stormwater Design Guidance/Plan Review | | | | | | | |
| 20 Stormwater System O&M | | | \$7,500 | \$7,500 | | | |
| 21 Pollution Source Detection and Elimination | | | \$7,000 | \$7,000 | | | |
| 22 Public Education and Involvement | | | \$12,000 | \$12,000 | | | |
| 23 Central Services on New Operating Expenses | \$45,500 | \$45,500 | \$78,060 | \$78,060 | \$65,440 | \$65,440 | 4 |
| 24 Capital Expenses | \$52,720 | \$134,780 | \$264,000 | \$19,000 | \$4,000 | \$0 | 5 |
| 25 Central Services on New Capital Expenses | \$9,490 | \$24,260 | \$47,520 | \$3,420 | \$720 | \$0 | 4 |
| 26 Total | \$390,710 | \$487,540 | \$802,830 | \$513,730 | \$432,910 | \$428,190 | |

Notes:

- (1) Refer to Draft Storm and Surface Water Master Plan Table 16
- (2) Source: City's 2015 Budget
- (3) \$75,000 per year per FTE, fully burdened including benefits (source: City staff, email communication September 17, 2015)
- (4) Additional central services on new expenses are calculated by a formula that considers factors like staffing and square feet of facilities. In this analysis, central services are calculated as 25% of operating expenditures which are the approximate percentage for the Operating Fund in the 2015 Budget.
Central services are included in the existing operating expense of approximately \$101,000 in FY 2015 budget.
- (5) Refer to Table 6 and the Master Plan for more detail on capital improvements

Tier C: Proactively Anticipating and Reducing Risk

Table 5 shows FTEs and Operating Costs for Tier C, "Proactively Anticipating and Reducing Risk". Compared with Tier B, there is additional staff time for most program elements. Total operating costs include significant new non-labor expenditures for stormwater system operation and maintenance. Additional funding is also included to support water quality compliance, stormwater design guidance/plan review, pollutant source detection and elimination, and public education and involvement activities.

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Table 5
Tier C: Projected Additional FTEs and Projected Program Costs (2015 Dollars)

| Tier C | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
|---|-----------|-----------|-----------|-----------|-------------|-----------|-------|
| 1 Additional FTEs, per Program Element | | | | | | | 1 |
| 2 Inspection Program | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | |
| 3 Water Quality Compliance | 0.20 | 0.20 | 0.27 | 0.27 | 0.29 | 0.29 | |
| 4 Species and Habitat Protection | | | | | 0.04 | 0.04 | |
| 5 Stormwater Design Guidance/Plan Review | | | 0.14 | 0.14 | 0.27 | 0.27 | |
| 6 Asset Management | | | 1.02 | 1.02 | 1.02 | 1.02 | |
| 7 Stormwater System O&M | 1.39 | 1.39 | 1.54 | 1.54 | 1.54 | 1.54 | |
| 8 Pollution Source Detection and Elimination | | | 0.11 | 0.11 | 0.19 | 0.19 | |
| 9 Public Education and Involvement | | | 0.24 | 0.24 | 0.29 | 0.29 | |
| 10 Total Additional FTEs | 1.76 | 1.76 | 3.49 | 3.49 | 3.81 | 3.81 | |
| 11 | | | | | | | |
| 12 Program Costs (2015 Dollars) | | | | | | | |
| 13 Existing Costs | \$101,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 | \$101,000 | 2 |
| 14 Additional FTEs (@ \$75K/year/FTE) | \$132,000 | \$132,000 | \$261,750 | \$261,750 | \$285,750 | \$285,750 | 3 |
| 15 Additional Materials, Equipment, Contracted Services | | | | | | | 1 |
| 16 Inspection Program | | | | | | | |
| 17 Water Quality Compliance | \$50,000 | \$50,000 | \$24,000 | \$24,000 | \$5,000 | \$5,000 | |
| 18 Species and Habitat Protection | | | | | | | |
| 19 Stormwater Design Guidance/Plan Review | | | \$10,000 | \$10,000 | \$10,000 | \$10,000 | |
| 20 Stormwater System O&M | | | \$7,500 | \$7,500 | \$133,000 | \$133,000 | |
| 21 Pollution Source Detection and Elimination | | | \$2,000 | \$2,000 | \$10,000 | \$10,000 | |
| 22 Public Education and Involvement | | | \$4,000 | \$4,000 | \$15,500 | \$15,500 | |
| 23 Central Services on New Operating Expenses | \$45,500 | \$45,500 | \$77,310 | \$77,310 | \$114,810 | \$114,810 | 4 |
| 24 Capital Expenses | \$52,720 | \$134,780 | \$264,000 | \$39,760 | \$288,240 | \$0 | 5 |
| 25 Central Services on New Capital Expenses | \$9,490 | \$24,260 | \$47,520 | \$7,160 | \$51,880 | \$0 | 4 |
| 26 Total | \$390,710 | \$487,540 | \$799,080 | \$534,480 | \$1,015,180 | \$675,060 | |

Notes:

- (1) Refer to Draft Storm and Surface Water Master Plan Table 16
- (2) Source: City's 2015 Budget
- (3) \$75,000 per year per FTE, fully burdened including benefits (source: City staff, email communication September 17, 2015)
- (4) Additional central services on new expenses are calculated by a formula that considers factors like staffing and square feet of facilities. In this analysis, central services are calculated as 25% of operating expenditures which are the approximate percentage for the Operating Fund in the 2015 Budget.
Central services are included in the existing operating expense of approximately \$101,000 in FY 2015 budget.
- (5) Refer to Table 6 and the Master Plan for more detail on capital improvements

Capital Spending

Table 6 shows projected capital improvements, including the projects included in each tier and the City's estimated contribution to the project cost. A more complete description of the projects is included in Appendix F of the Master Plan. Table 6 does not include two additional projects (1.09 – Middle Reach Bell Creek Basin Plan and 2.26 – River Road Storage Project) which require substantial amounts of grant and/or partner funding in order to be completed.

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Table 6
Projected Capital Costs (2015 Dollars)

| Project ID and Name | Tier A | Tier B | Tier C | City Portion of Total Project Cost (2015 Dollars) (1) | | | | | |
|---|--------|--------|--------|---|----------|-----------|-----------|----------|-----------|
| | | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| 1 1.09 Middle Reach Bell Creek Floodplain Planning | 0 | 0 | 0 | | \$12,500 | \$75,000 | \$80,000 | \$15,000 | |
| 2 2.63 West Prairie St Green Street Upgrade (Sequim Ave to 2nd Ave) | | | 0 | | | | | \$20,760 | \$109,240 |
| 3 2.04 S 3rd Ave (west ROW south of Bypass) Drainage Improvements | 0 | 0 | 0 | | \$14,220 | \$55,780 | | | |
| 4 2.25 Etta Street Infiltration and Inflow | | | | | | | | | |
| 5 2.12 7th Avenue and Washington Upgrade | 0 | 0 | 0 | | | | \$180,000 | | |
| 6 2.23 Centennial Place Inflow and Infiltration Repair | 0 | 0 | 0 | | \$22,000 | | | | |
| 7 2.26 River Road Storage Reservoir | 0 | 0 | 0 | \$4,000 | \$4,000 | \$4,000 | \$4,000 | \$4,000 | \$4,000 |
| 8 2.68 Emerald Highlands Detention Pond Repair (remaining tasks) | 0 | 0 | 0 | \$40,000 | | | | | |
| 9 2.34 Clara Crest Way/Highland Hills Runoff Control | | | 0 | | | | | | \$55,000 |
| 10 2.05 North 5th Avenue Structure Upgrade | | | 0 | | | | | | \$120,000 |
| 11 | | | | | | | | | |
| 12 Tier A Summary | | | | | | | | | |
| 13 Capital Project Cost | | | | | \$52,720 | \$134,780 | \$264,000 | \$19,000 | \$4,000 |
| 14 Central Services on Capital Cost | | | | | \$9,490 | \$24,260 | \$47,520 | \$3,420 | \$720 |
| 15 Total Tier A Capital Cost (2015 Dollars) | | | | | \$62,210 | \$159,040 | \$311,520 | \$22,420 | \$4,720 |
| 16 | | | | | | | | | |
| 17 Tier B Summary | | | | | | | | | |
| 18 Capital Project Cost | | | | | \$52,720 | \$134,780 | \$264,000 | \$19,000 | \$4,000 |
| 19 Central Services on Capital Cost | | | | | \$9,490 | \$24,260 | \$47,520 | \$3,420 | \$720 |
| 20 Total Tier B Capital Cost (2015 Dollars) | | | | | \$62,210 | \$159,040 | \$311,520 | \$22,420 | \$4,720 |
| 21 | | | | | | | | | |
| 22 Tier C Summary | | | | | | | | | |
| 23 Capital Project Cost | | | | | \$52,720 | \$134,780 | \$264,000 | \$39,760 | \$288,240 |
| 24 Central Services on Capital Cost | | | | | \$9,490 | \$24,260 | \$47,520 | \$7,157 | \$51,883 |
| 25 Total Tier B Capital Cost (2015 Dollars) | | | | | \$62,210 | \$159,040 | \$311,520 | \$46,917 | \$340,123 |

The lower portion of Table 6 shows the capital improvement costs by year for each Tier in 2015 dollars. Additional central services will be applicable for these levels of capital spending. For the purposes of this analysis, the additional central services cost is 18 percent of the capital cost which is the approximate percentage in the City's 2015 Budget.

Revenue Requirement Analysis

Introduction

The Revenue Requirement Analysis calculates the amount of revenues needed to fund operating and capital expenses, without considering where these revenues come from. Separate analyses are completed for each Tier.

Fund reserves are also considered. There is no formalized polity associated with the reserve balances in the City's existing 107 Operating and 117 Capital funds. Table 7 describes the reserve balance assumptions included in this analysis.

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**Table 7
Reserve Balance Assumptions**

| | Minimum Fund Balance Reserves, Operating Fund | Minimum Fund Balance Reserves, Capital Fund | Economic Uncertainty Reserves (Applies to Operating Fund Only) | Future Liabilities Reserves (Applies to Operating Fund Only) | Facilities, Equipment Reserves (Capital Fund Only) |
|---------------------------------------|--|--|--|--|---|
| Purpose | Cushion for revenue fluctuations and cyclical activity | Cushion for revenue fluctuations and cyclical activity | Cushion against unanticipated adverse financial or economic services, emergencies, or litigation | Related to an accrued obligation or to self-insure for a future obligation (3) | Purchase, replace, or refurbish facilities and operating equipment (4) |
| Potential Policy | 4 months of operating expenses | 4 months of average annual capital expenditure | 2 percent of Operating Fund revenues | 2 percent of Operating Fund revenues | Between 2.5 and 6 years scheduled replacement (\$0 because there is no scheduled replacement) |
| Reason | Consistency with Water Unrestricted Fund and Sewer Unrestricted Fund (policy = between 3 and 5 months) | Analogous to Water Unrestricted Fund and Sewer Unrestricted Fund | Consistency with Water, Sewer, and General Fund (policy = between 1 and 3 percent of ongoing revenues) | Consistency with Water, Sewer, and General Fund (policy = between 1 and 3 percent of ongoing revenues) | Consistency with Water, Sewer, and General Fund |
| Approximate Minimum Fund Balances (5) | | | | | |
| Tier A | ~\$95,000 - \$115,000 | ~\$34,000 | ~\$12,000 | ~\$12,000 | \$0 |
| Tier B | ~\$115,000 - \$185,000 | ~\$34,000 | ~\$13,500 | ~\$13,500 | \$0 |
| Tier C | ~\$125,000 - \$280,000 | ~\$57,000 | ~\$16,500 | ~\$16,500 | \$0 |

Notes:

- (1) Source: page 24, 2015 Budget
- (2) If an ad valorem funding source is chosen, the City may prefer the policy of its General Fund, which is between 15% and 20% of ongoing revenues.
- (3) The City's budget notes this should include reserves for unemployment self-insurance or a portion of accrued compensation (paid time off, sick leave) paid to an employee upon separation from employment
- (4) The City's budget notes that this would include computers, copiers, operating equipment, and vehicles
- (5) Some values are shown as a range because they are based on annual level of spending that varies from year to year.

Required Stormwater Program Revenues: Tiers A, B, and C

Table 8 is a six-year financial plan, showing projected revenues, expenditures, and reserve fund balances for Tier A. The first year of the projection is 2017, allowing some time for the City to implement measures needed to provide funding. It includes the Operating Expenses shown in Table 3 and the Capital Expenses shown in Table 6. Table 8 shows the Operating Fund and the Capital Fund separately. All stormwater program revenues would go into the Operating Fund. Operating expenses are paid from the Operating Fund, and a transfer from the Operating Fund to the Capital Fund pays for capital expenses. Tables 9 and 10 are the six-year financial plans for Tiers B and C, respectively. Tables 8, 9, and 10 are adjusted for inflation at an annual rate of 2.5 percent. The beginning fund balance in all three tables is adjusted for \$44,000 in capital expenses planned for 2016.

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Table 8
Required Stormwater Program Revenues: Tier A

| Tier A - Operating Fund 107 | | | | | | | |
|---|-----------|-----------|-----------|-----------|-----------|-------------|-------|
| Sources of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| Beginning Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$2,900 | \$138,420 | \$178,390 | \$105,910 | \$320,580 | \$571,620 | 1, 2 |
| Economic Uncertainty Reserves | \$0 | \$0 | \$0 | \$0 | \$12,000 | \$12,000 | 1 |
| Future Liability Reserves | \$0 | \$0 | \$0 | \$0 | \$12,000 | \$12,000 | 1 |
| Revenues | \$565,000 | \$565,000 | \$565,000 | \$565,000 | \$565,000 | \$565,000 | 3 |
| Total Sources of Funds | \$567,900 | \$703,420 | \$743,390 | \$670,910 | \$909,580 | \$1,160,620 | |
| Tier A - Operating Fund 107 | | | | | | | |
| Uses of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| O&M Expenses | | | | | | | |
| Existing (2015 Level of Service) | \$106,110 | \$108,770 | \$111,490 | \$114,270 | \$117,130 | \$120,060 | |
| New Staff | \$138,680 | \$142,150 | \$145,700 | \$149,350 | \$153,080 | \$156,910 | |
| New Materials/Supplies/Equipment | \$52,530 | \$53,840 | \$0 | \$0 | \$0 | \$0 | |
| Central Services on New Operating Expenses | \$47,800 | \$49,000 | \$36,430 | \$37,340 | \$38,270 | \$39,230 | |
| Transfer to Capital Fund | \$84,360 | \$171,270 | \$343,860 | \$25,370 | \$5,480 | \$0 | 4 |
| Ending Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$138,420 | \$178,390 | \$105,910 | \$320,580 | \$571,620 | \$820,420 | |
| Economic Uncertainty Reserves | \$0 | \$0 | \$0 | \$12,000 | \$12,000 | \$12,000 | |
| Future Liability Reserves | \$0 | \$0 | \$0 | \$12,000 | \$12,000 | \$12,000 | |
| Tier A - Capital Fund 117 | | | | | | | |
| Sources of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| Beginning Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$15,000 | \$34,000 | \$34,000 | \$34,000 | \$34,000 | \$34,000 | 1, 2 |
| Facilities/Equipment Reserves | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | 1 |
| Transfer from Operating Fund 107 | \$84,360 | \$171,270 | \$343,860 | \$25,370 | \$5,480 | \$0 | 4 |
| Total Sources of Funds | \$99,360 | \$205,270 | \$377,860 | \$59,370 | \$39,480 | \$34,000 | |
| Tier A - Capital Fund 117 | | | | | | | |
| Uses of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| Capital Expenses | \$55,390 | \$145,140 | \$291,410 | \$21,500 | \$4,640 | \$0 | |
| Additional Central Services on New Expenses | \$9,970 | \$26,130 | \$52,450 | \$3,870 | \$840 | \$0 | |
| Ending Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$34,000 | \$34,000 | \$34,000 | \$34,000 | \$34,000 | \$34,000 | 1 |
| Facilities/Equipment Reserves | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | 1 |

Notes:

- (1) Assumes minimum reserve balances are accumulated by the end of the six-year planning period: minimum fund balance reserves of 3-5 months operating expenses (this table assumes 4 months revenue for Operating Fund and 4 months 6-year average Capital Fund expenditure); economic uncertainty reserves and future liability reserves each 1-3% of revenues (this table uses 2%); facilities/equipment reserves of 2.5 to six years of replacements (this table uses \$0); there are no replacements in CIP. In the Operating Fund, the economic uncertainty and future liability reserves are only funded when the minimum fund balance reserve is fully funded.
- (2) Year end 2015 per the City's 2015 Budget projection; assumed unchanged in 2016 except less \$44,000 for planned 2016 capital.
- (3) Revenues are shown here without (in this table) consideration of where the revenues come from. Stormwater program funding is discussed later in this memorandum.
- (4) Transfer to Capital Fund includes funds to pay capital expenses, central services on capital expenses, and accumulate appropriate Capital Fund reserves.

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**Table 9
Required Stormwater Program Revenues: Tier B**

| Tier B - Operating Fund 107 | | | | | | | |
|---|-----------|-----------|-------------|-----------|-----------|-------------|-------|
| Sources of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| Beginning Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$2,900 | \$248,420 | \$398,390 | \$187,220 | \$253,970 | \$426,920 | 1, 2 |
| Economic Uncertainty Reserves | \$0 | \$0 | \$0 | \$0 | \$13,500 | \$13,500 | 1 |
| Future Liability Reserves | \$0 | \$0 | \$0 | \$0 | \$13,500 | \$13,500 | 1 |
| Revenues | \$675,000 | \$675,000 | \$675,000 | \$675,000 | \$675,000 | \$675,000 | 3 |
| Total Sources of Funds | \$677,900 | \$923,420 | \$1,073,390 | \$862,220 | \$955,970 | \$1,128,920 | |
| Tier B - Operating Fund 107 | | | | | | | |
| Uses of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| O&M Expenses | | | | | | | |
| Existing (2015 Level of Service) | \$106,110 | \$108,770 | \$111,490 | \$114,270 | \$117,130 | \$120,060 | |
| New Staff | \$138,680 | \$142,150 | \$288,920 | \$296,150 | \$303,550 | \$311,140 | |
| New Materials/Supplies/Equipment | \$52,530 | \$53,840 | \$55,740 | \$57,140 | \$0 | \$0 | |
| Central Services on New Operating Expenses | \$47,800 | \$49,000 | \$86,160 | \$88,320 | \$75,890 | \$77,790 | |
| Transfer to Capital Fund | \$84,360 | \$171,270 | \$343,860 | \$25,370 | \$5,480 | \$0 | 4 |
| Ending Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$248,420 | \$398,390 | \$187,220 | \$253,970 | \$426,920 | \$592,930 | |
| Economic Uncertainty Reserves | \$0 | \$0 | \$0 | \$13,500 | \$13,500 | \$13,500 | |
| Future Liability Reserves | \$0 | \$0 | \$0 | \$13,500 | \$13,500 | \$13,500 | |
| Tier B - Capital Fund 117 | | | | | | | |
| Sources of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| Beginning Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$15,000 | \$34,000 | \$34,000 | \$34,000 | \$34,000 | \$34,000 | 1, 2 |
| Facilities/Equipment Reserves | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | 1 |
| Transfer from Operating Fund 107 | \$84,360 | \$171,270 | \$343,860 | \$25,370 | \$5,480 | \$0 | 4 |
| Total Sources of Funds | \$99,360 | \$205,270 | \$377,860 | \$59,370 | \$39,480 | \$34,000 | |
| Tier B - Capital Fund 117 | | | | | | | |
| Uses of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| Capital Expenses | \$55,390 | \$145,140 | \$291,410 | \$21,500 | \$4,640 | \$0 | |
| Additional Central Services on New Expenses | \$9,970 | \$26,130 | \$52,450 | \$3,870 | \$840 | \$0 | |
| Ending Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$34,000 | \$34,000 | \$34,000 | \$34,000 | \$34,000 | \$34,000 | 1 |
| Facilities/Equipment Reserves | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | 1 |

Notes:

- (1) Assumes minimum reserve balances are accumulated by the end of the six-year planning period: minimum fund balance reserves of 3-5 months operating expenses (this table assumes 4 months revenue for Operating Fund and 4 months 6-year average Capital Fund expenditure); economic uncertainty reserves and future liability reserves each 1-3% of revenues (this table uses 2%); facilities/equipment reserves of 2.5 to six years of replacements (this table uses \$0); there are no replacements in CIP. In the Operating Fund, the economic uncertainty and future liability reserves are only funded when the minimum fund balance reserve is fully funded.
- (2) Year end 2015 per the City's 2015 Budget projection; assumed unchanged in 2016 except less \$44,000 for planned 2016 capital.
- (3) Revenues are shown here without (in this table) consideration of where the revenues come from. Stormwater program funding is discussed later in this memorandum.
- (4) Transfer to Capital Fund includes funds to pay capital expenses, central services on capital expenses, and accumulate appropriate Capital Fund reserves.

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**Table 10
Required Stormwater Program Revenues: Tier C**

| Tier C - Operating Fund 107 | | | | | | | |
|---|-----------|-------------|-------------|-------------|-------------|-------------|-------|
| Sources of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| Beginning Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$2,900 | \$347,890 | \$587,670 | \$502,760 | \$694,480 | \$312,890 | 1, 2 |
| Economic Uncertainty Reserves | \$0 | \$0 | \$16,500 | \$16,500 | \$16,500 | \$16,500 | 1 |
| Future Liability Reserves | \$0 | \$0 | \$16,500 | \$16,500 | \$16,500 | \$16,500 | 1 |
| Revenues | \$825,000 | \$825,000 | \$825,000 | \$825,000 | \$825,000 | \$825,000 | 3 |
| Total Sources of Funds | \$827,900 | \$1,172,890 | \$1,445,670 | \$1,360,760 | \$1,552,480 | \$1,170,890 | |
| Tier C - Operating Fund 107 | | | | | | | |
| Uses of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| O&M Expenses | | | | | | | |
| Existing (2015 Level of Service) | \$106,110 | \$108,770 | \$111,490 | \$114,270 | \$117,130 | \$120,060 | |
| New Staff | \$138,680 | \$142,150 | \$288,920 | \$296,150 | \$331,380 | \$339,670 | |
| New Materials/Supplies/Equipment | \$52,530 | \$53,840 | \$52,430 | \$53,740 | \$201,210 | \$206,240 | |
| Central Services on New Operating Expenses | \$74,330 | \$76,190 | \$113,210 | \$116,040 | \$162,430 | \$166,490 | |
| Transfer to Capital Fund | \$108,360 | \$171,270 | \$343,860 | \$53,080 | \$394,440 | \$0 | 4 |
| Ending Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$347,890 | \$587,670 | \$502,760 | \$694,480 | \$312,890 | \$305,430 | |
| Economic Uncertainty Reserves | \$0 | \$16,500 | \$16,500 | \$16,500 | \$16,500 | \$16,500 | |
| Future Liability Reserves | \$0 | \$16,500 | \$16,500 | \$16,500 | \$16,500 | \$16,500 | |
| Tier C - Capital Fund 117 | | | | | | | |
| Sources of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| Beginning Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$15,000 | \$58,000 | \$58,000 | \$58,000 | \$58,000 | \$58,000 | 1, 2 |
| Facilities/Equipment Reserves | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | 1 |
| Transfer from Operating Fund 107 | \$108,360 | \$171,270 | \$343,860 | \$53,080 | \$394,440 | \$0 | 4 |
| Total Sources of Funds | \$123,360 | \$229,270 | \$401,860 | \$111,080 | \$452,440 | \$58,000 | |
| Tier C - Capital Fund 117 | | | | | | | |
| Uses of Funds | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Notes |
| Capital Expenses | \$55,390 | \$145,140 | \$291,410 | \$44,980 | \$334,270 | \$0 | |
| Additional Central Services on New Expenses | \$9,970 | \$26,130 | \$52,450 | \$8,100 | \$60,170 | \$0 | |
| Ending Year Reserve Balance | | | | | | | |
| Minimum Fund Balance Reserves | \$58,000 | \$58,000 | \$58,000 | \$58,000 | \$58,000 | \$58,000 | 1 |
| Facilities/Equipment Reserves | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | 1 |

Notes:

- (1) Assumes minimum reserve balances are accumulated by the end of the six-year planning period: minimum fund balance reserves of 3-5 months operating expenses (this table assumes 4 months revenue for Operating Fund and 4 months 6-year average Capital Fund expenditure); economic uncertainty reserves and future liability reserves each 1-3% of revenues (this table uses 2%); facilities/equipment reserves of 2.5 to six years of replacements (this table uses \$0). there are no replacements in CIP. In the Operating Fund, the economic uncertainty and future liability reserves are only funded when the minimum fund balance reserve is fully funded
- (2) Year end 2015 per the City's 2015 Budget projection; assumed unchanged in 2016 except less \$44,000 for planned 2016 capital.
- (3) Revenues are shown here without (in this table) consideration of where the revenues come from. Stormwater program funding is discussed later in this memorandum.
- (4) Transfer to Capital Fund includes funds to pay capital expenses, central services on capital expenses, and accumulate appropriate Capital Fund reserves.

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Tables 8, 9, and 10 show that the program revenues for Tiers A, B, and C respectively are:

- Tier A: \$565,000 per year
- Tier B: \$675,000 per year
- Tier C: \$825,000 per year

Note that in Tier A, there is an accumulation of reserves in the Operating Fund because capital expenditures are higher in the first few years of the six-year planning period. If some expenses were deferred to later in the six-year planning period so that reserves do not accumulate above the minimum values, the overall program revenues for Tier A could be reduced from \$565,000 per year to \$450,000 per year.

Similarly, for Tier B, if some expenses were deferred so that reserves do not accumulate above the minimum values, the overall program revenues for Tier B could be reduced from \$675,000 per year to \$605,000 per year.

For Tier C, there is no reserve accumulation beyond the minimum balances.

Funding Alternatives

Introduction

This section describes how the City could pay for stormwater program activities, including the following:

1. Continuing to pay from water and sewer utility revenues
2. Ad valorem property tax assessment
3. Establishing a stormwater fee
4. Formation of a special purpose district
5. A combination of all of the above

The difference among these alternatives is how much different types of customers pay for services. There is no difference in the total amount of money collected – each alternative is developed to collect the same amount of money in total. The alternative with the lowest cost for a single-family residence will result in the highest cost from other customers.

When deciding among these alternatives, the City should consider equity and ease of administration. Equity may be viewed as a policy or philosophy the City could choose to adhere to, and there may also be legal ramifications.³ A common test is whether there is a reasonable relationship between the amount charged and the service provided. Utility rates do not have to be perfect to be considered equitable, but they need to be reasonable.

³ This document *is not* a legal opinion, as neither FG Solutions, LLC nor Herrera Environmental Consultants are attorneys who provide legal services.

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In many jurisdictions, a stormwater fee is established to pay for stormwater program costs. Stormwater fees are based on parcel characteristics, most commonly relying on the amount of impervious surface associated with each parcel. This fee basis works because the publicly-owned stormwater system collects runoff from parcels, and the amount of runoff is presumed to be reasonably proportional to the amount of impervious surface.

Sequim is different from many jurisdictions, particularly those in western Washington, because runoff in much (but not all) of the City is infiltrated on-site. In most parts of the City, there is very little piped stormwater conveyance. Also unlike many jurisdictions, Sequim requires new development to direct runoff from roof areas to dry wells and a lot of new commercial development manages all stormwater on site. As a result, in Sequim there is a much weaker link between impervious area on a parcel and runoff.

Table 11 describes additional characteristics of the City’s stormwater program that will be considered as the financial impacts of the above alternatives are evaluated.

Table 11
Sequim Stormwater System Characteristics

| Stormwater System Characteristic | Implication |
|---|---|
| Runoff from most of the parcels in the City is handled via on-site infiltration | A cost recovery structure based <u>solely</u> on parcel impervious area is not appropriate. |
| Much of the piped stormwater conveyance in the City is in the central business district. | Parcels with on-site management of stormwater may not want to pay to address runoff in the central business district via a fee based on parcel impervious area. |
| A large percentage of runoff into piped conveyance system is from rights-of-way. Existing maintenance costs are mostly related to maintenance of piped conveyance systems in rights-of-way. | A cost recovery structure based on parcel impervious area is not appropriate, unless it is understood that parcel impervious area is a proxy measurement for the use of rights-of-way. As an alternative, paying for runoff generated from rights-of-way from the General Fund may also be appropriate. |
| Future public education efforts benefit water quality – not necessarily stormwater quality but groundwater quality because of stormwater infiltration. | Per parcel charges and/or parcel impervious area charges are appropriate and are an industry standard, though runoff from rights-of-way should be considered. |
| Some stormwater program activities are directly related to capturing runoff for aquifer recharge. | Considering these activities as a water supply activity and recovery through water rates may be appropriate. |
| Part of the City's costs are related to managing stormwater originating outside the City limits in Bell Hill | The City should seek a legal opinion regarding whether a portion of the outside City limit surcharge on wastewater bills charged to Bell Hill customers can be used to pay relevant City costs. This is discussed in further detail below. |
| Stormwater program activities benefit residents and businesses outside the City limits. | The City could investigate the feasibility of forming a special purpose district that could extend beyond the City limits. The City should clearly show the link between the fees charged and services provided. |
| Some new program elements public education efforts benefit water quality – not necessarily in stormwater runoff but in groundwater because of stormwater infiltration. | Per parcel charges and/or parcel impervious area charges are appropriate. |

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Alternative 1. Continuing to Pay from Water and Sewer Rates

Current Financial Impacts

In the 2015 budget, the Water Utility pays \$55,000 for stormwater services and the Sewer Utility pays an additional \$55,000. This is approximately from \$1.60 to \$2.10 per month per household. This financial impact depends on the amount of water use, and the above range is for water use between 400 and 1000 cubic feet per month. Additional detail of this calculation is included in the Appendix.

Potential Financial Impacts

The financial impact to any given customer will vary depending on total water use and winter water use. For most single-family residential customers, they are projected to be:

- No Change: approximately \$1.60 to \$2.10 per month
- Tier A: approximately \$8.60 to \$11 per month (incl. current \$1.60 – \$2.10/month)
- Tier B: approximately \$10.30 to \$13.20 per month (incl. current \$1.60 – \$2.10/month)
- Tier C: approximately \$12.60 to \$16.10 per month (incl. current \$1.60 – \$2.10/month)

These ranges are based on a range of water use of 400 to 1,000 cubic feet per month, and include the costs currently recovered through water and sewer rates (~\$1.60 - \$2.20 per month) and the costs of proposed program elements. Additional detail is included in the Appendix.

Equity Considerations

Even though the stormwater costs would be split 50/50 between water and sewer, this Alternative links payment for stormwater costs to water use because residential sewer bills are based on winter water use, and commercial sewer bills are based on water use.

In many cities, water use has some relationship to impacts to the benefits provided by a stormwater program. It is possible that the customers with the highest water and sewer bills also have more impervious surfaces that generate runoff and practices that influence water quality. But the link is far from perfect, particularly when considering the amount of stormwater that is managed on-site. A restaurant, as another example, may have high water use on a small site. A business with a parking lot might have low water use, but with a large impervious surface area.

Water use also does not account for runoff generated from rights-of-way.

That being said, some water utility support is reasonable recognizing that infiltrated stormwater has a water supply function, and recognizing the direct costs associated with capturing wet-season irrigation ditch flow for recharge.

In addition, some of the City's costs for managing stormwater are the result of stormwater runoff generated outside the City limits, particularly from the Bell Hill area. The City currently provides sewer service to Bell Hill and applies a 50 percent sewer rate surcharge for customers outside the city limits. It may be desirable to dedicate a portion of this surcharge to cover the

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City's stormwater expenses applicable runoff generated in the Bell Hill area. If the City is interested in pursuing this option, the City should obtain a legal opinion of this strategy.

Administrative and Implementation Considerations

From a billing perspective, this alternative is easy to administer, as water and sewer billing mechanisms are already in place.

Of the alternatives, this is the easiest to administer. It could be implemented by the Sequim City Council by adopting water and sewer rate increases. Adopting water and sewer rate increases is not necessarily easy, but could be a more straightforward approach than the other two alternatives.

Alternative 2. Ad Valorem Property Tax Assessment

Potential Financial Impacts

Financial impacts will depend on the assessed valuation of each specific property. The City's assessed valuation estimate in its 2015 budget is just over \$823 million, and to recover the entirety of stormwater program costs through ad valorem taxes, the assessment per \$1,000 of assessed valuation would be:

- No Change: none; recovery of costs through water and sewer rates would continue
- Tier A: \$0.686 per \$1,000 assessed valuation
- Tier B: \$0.820 per \$1,000 assessed valuation
- Tier C: \$1.002 per \$1,000 assessed valuation

For a property with an assessed valuation of \$185,000⁴, the estimated financial impact is shown below. For Tiers A, B, and C, the property tax impact is partially offset by the reduction in revenues collected through water and sewer rates.

- No Change: none; recovery of costs through water and sewer rates would continue
- Tier A: \$10.58 per month of new property taxes, less \$1.60-\$2.10 per month through discontinued water/sewer rate support
- Tier B: \$12.63 per month of new property taxes, less \$1.60-\$2.10 per month through discontinued water/sewer rate support
- Tier C: \$15.44 per month of new property taxes, less \$1.60-\$2.10 per month through discontinued water/sewer rate support

Additional detail, including the estimated financial impact at other assessed valuations, is included in the Appendix.

⁴ City staff report that the median assessed valuation of a single-family residence to be approximately \$185,000.
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Equity Considerations

With this alternative, the sole link between revenues and services is assessed value. There is likely some relationship, as, for example, single-family residential parcels with a higher assessed value tend to be larger and contain more surfaces that generate runoff and/or infiltration. The relationship is far from perfect, and does not capture neighborhood differences in assessed value. Further, ad valorem taxes could only be collected from parcels within the city, so the costs incurred by the City to address runoff generated outside the City are not addressed. Additionally, an analysis has not been performed to consider the relationship between non-residential assessed value and impacts to the City's stormwater program.

Further, use of assessed value does not account for property that is not on the tax roll, such as schools, churches, and municipally-owned properties such as parks or maintenance yards. An ad valorem tax is one way to recognize the financial impacts of runoff generated from public rights-of-way.

Administrative and Implementation Considerations

This alternative should be simple to administer, since the tax roll already exists. It may be difficult to implement, however. Table 12 shows that the annual stormwater revenue requirement is a large percentage of the City's existing property tax revenue, so dedicating existing property tax revenue to fund stormwater activities is probably not feasible.

Table 12
Alternative 2: Comparison of Stormwater Costs with Property Tax Revenues

| Comparison with City's Property Tax Revenues | Tier A | Tier B | Tier C |
|---|---------------|---------------|---------------|
| City's Certified Property Tax Levy (1) | \$1,412,860 | \$1,412,860 | \$1,412,860 |
| Annual Stormwater Funding | \$565,000 | \$675,000 | \$825,000 |
| Annual Stormwater Funding, as % of City's Tax Levy | 40% | 48% | 58% |

Notes:

(1) Source: 2015 Budget Page 44, includes prior year + 1% increase
+ 2015 new construction + rollover refunded amounts

Instead, the City would likely have to raise property taxes to pay for the costs of Tiers A, B, or C, likely requiring a public vote in order to do so.

Alternative 3. Establishing a Stormwater Fee

Potential Financial Impacts

The potential financial impacts of a stormwater fee are difficult to predict because the customer base is not known. As described in the Appendix in more detail, stormwater fees are typically based in part on the amount of impervious surface on a parcel. Impervious surface data for residential and non-residential parcels in Sequim is not currently readily available.

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An estimate of the stormwater customer base was made based on system data from nearby cities with stormwater utilities, as described in the Appendix. This estimated customer base was used to develop the following estimated stormwater fees for single-family residences:

- No Change: none; recovery of costs through water and sewer rates would continue
- Tier A: \$12 - \$18 per month, less \$1.60-\$2.10 per month through discontinued water/sewer rate support
- Tier B: \$15 - \$21 per month, less \$1.60-\$2.10 per month through discontinued water/sewer rate support
- Tier C: \$18 - \$26 per month, less \$1.60-\$2.10 per month through discontinued water/sewer rate support

Additional detail is included in the Appendix.

These fee impacts are higher than for the other alternatives, meaning that the amount of stormwater program revenue collected from non-residential customers would be lower under this alternative.

In practice, there is a wide variety of stormwater rate structures. Nearly all of them have one feature in common: they are based in part on the amount of impervious surface on a parcel. There are many variations that are discussed in more detail in the Appendix.

Equity Considerations

A stormwater fee is the industry standard in Western Washington, particularly for cities the size of Sequim or larger. It is considered to be equitable – with modifications that are community-specific to fit the circumstances of the community.

As described above, however, managing runoff in Sequim is different from most other communities, because runoff in much (but not all) of the City is infiltrated on-site. In most parts of the City, there is very little piped stormwater conveyance. An exception to this is the central business district, where piped stormwater conveyance systems exist that direct much of the runoff to City-owned and maintained infiltration sites. As a result of the widespread use of onsite infiltration, in Sequim there is a much less obvious link between impervious area on a parcel and runoff (when compared to other jurisdictions).

While an impervious-area based fee might be applicable for a portion of stormwater program funding, particularly if all single-family residences are charged the same amount, it may not be applicable to fund the stormwater program in its entirety.

If the City pursues implementing a stormwater fee for all or part of the stormwater program cost, the City should refer to additional discussion in the Appendix, describing additional considerations of a stormwater fee.

Implementation and Administration

Implementation of a stormwater fee is more difficult than the continued use of water/sewer rates and ad valorem taxes. A detailed description of implementation steps is beyond the scope of this memorandum, but includes development of billing information for all parcels, defining a

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rate structure, and modifying the billing system to accommodate addition of a stormwater bill. Some cities have chosen to add stormwater billing to property tax statements – if done this way, the bill would be sent to the owner of the property and not the resident of the property. A public involvement and education effort is also necessary, as a stormwater fee will have financial impacts to residents, businesses, schools, and churches, particularly those with large paved areas.

Because of the additional complexities of billing, a stormwater fee would also be harder to administer. Billing data from newly developed parcels must be compiled and billing data from all other customers must be periodically verified to reflect changes in surface coverage.

Alternative 4. Special Purpose District

The City could choose to pursue forming a special purpose district to recover all or a part of stormwater program costs. A special purpose district has one advantage in that the boundaries could extend beyond the City limits and recover costs the City incurs due to runoff generated and/or services provided outside the City limits. However, there would need to be a clear link between the service provided and the monetary assessment to each parcel in the district. A district would have its own governance and therefore would not be a department of the City.

Across Washington, there are several examples of special purpose districts that provide services related to water quality. Three examples are:

- The Sequim-Dungeness Clean Water District, formed in 2001 by the Clallam County Commissioners pursuant to Revised Code of Washington Chapter 90.72.
- In 1993, the Snohomish County Council created the Stillaguamish River Clean Water District (CWD) to “provide a comprehensive approach to managing and regulating surface water in order to respect and preserve the county’s rivers, streams, lakes, and other waterbodies”
- The Kitsap Conservation District offers technical assistance to landowners to help preserve our natural resources. The District is a non-regulatory organization working cooperatively with private landowners to reduce soil erosion and improve water quality. The District works with farmers and others with soil and water quality concerns.

Financial implications are not assessed as further evaluation is needed to define the purpose of a proposed district, the applicable services, the cost of these services, and a proposed boundary. This financial evaluation does not provide the implementation path or define the legislative authority for district formation inside or in the vicinity of the City.

Alternative 5. Multiple Funding Alternatives

Description

From the above discussion, it may be most equitable to use a combination of the above alternatives to pay for stormwater program costs.

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- Water utility support: recognizing that infiltrated stormwater has a water supply function, and recognizing the direct costs associated with capturing wet-season irrigation ditch flow for recharge.
- Sewer utility support: if allowable, using part of the outside City limits surcharge collected from Bell Hill sewer customers to recognize the City's costs in managing runoff generated in Bell Hill. This strategy should be reviewed by the City's legal counsel.
- Stormwater fee: recognizing some program elements might best be charged to all customers based on a factor other than water use. A per-parcel stormwater fee might be best for residential customers, with an appropriate modification for non-residential parcels.
- Rights-of-way cost recovery: the City's rights-of-way are a significant contributor to generation of runoff and the City's stormwater program costs.
 - Ad valorem property taxes can be appropriate method.
 - Folding right-of-way cost recovery into a stormwater fee is also appropriate, if done in a reasonable way. A flat per-parcel component of a fee might be appropriate for residential customers, with a corresponding modification for non-residential customers.
- Special purpose district: if the appropriate link between services and assessments can be developed, a special purpose district might be appropriate for a portion of the stormwater program costs.

Financial Impacts

Financial impacts are not developed for this alternative at this time. The most appropriate time to develop an estimate of the financial impacts is after specific funding sources have been identified (and/or ruled out). In general, however, the financial impacts will be in the range of those shown for Alternatives 1, 2, and 3.

Equity Considerations

This alternative is potentially the most equitable. It could be developed to maximize the link between the funding source and the service paid for.

Implementation and Administration

This alternative would be the most difficult to implement and administer, because of its complexity. It would combine the implementation and administrative considerations of all of the above alternatives.

Affordability

The financial impacts associated with all of these alternatives are large. FG Solutions strongly encourages the City to have a detailed and transparent dialog with its residents and businesses to assess priorities and the affordability of these potential program changes.

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Appendix

Additional Detail: Stormwater Services Included in Existing Water and Sewer Rates

Table A-1 below is an estimate of the financial impact of this existing funding to the Water Utility and the Sewer Utility. As a percent of utility revenues, the Water Utility's contribution is approximately 2.9 percent of the utility's operating revenues, and the Sewer Utility's contribution is approximately 1.5 percent.

The amount per household varies depending on total water use and winter water use. As shown in the table below, it typically ranges from \$1.60 to \$2.10 per month, assuming water use ranges between 400 and 1000 cubic feet per month. A standby connection would pay \$1.36 per month for these services.

**Table A-1
Existing Water and Sewer Utility Support**

| Parameter | Unrestricted Water Fund | Unrestricted Sewer Fund |
|---|----------------------------|-------------------------------|
| Revenues, 2015 Budget (1) | \$1,846,498 | \$3,647,931 |
| Contribution to Stormwater Utility | | |
| \$ per year | \$55,000 | \$55,000 |
| % of Revenues | 3.0% | 1.5% |
| \$/month Impact to Example Single-Family Residential Customers | | |
| Water Customer | <u>\$/month</u> | <u>Total Monthly Bill</u> |
| Single-Family Residence, 400 cf/month | \$0.78 | \$26.32 |
| Single-Family Residence, 700 cf/month | \$0.90 | \$30.31 |
| Single-Family Residence, 1000 cf/month | \$1.12 | \$37.44 |
| Single-Family Residence, Standby Rate | \$0.69 | \$23.11 |
| Sewer Rate Customer | | |
| SFR, Winter Average < 600 cf/month | \$0.89 | \$59.11 |
| SFR, Winter Average > 600 cf/month | \$1.03 | \$68.59 |
| SFR, Standby | \$0.70 | \$46.22 |
| Total | | |
| SFR, 400 cf/month | \$1.68 | \$85.43 |
| SFR, 700 cf/month, winter avg < 600 | \$1.79 | \$89.42 |
| SFR, 1000 cf/month, winter avg > 600 | \$2.15 | \$106.03 |
| SFR, Standby | \$1.39 | \$69.33 |

Notes:

(1) 2015 Budget. Excludes late fees, investment interest, and revenues from acceptance of biosolids.

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Additional Detail: Financial Impacts, Alternative 1

Table A-2 provides additional detail on the financial impacts associated with funding the entirety of the stormwater program costs from water and sewer rates. The calculation shown assumes that the stormwater costs are split 50/50 between the water and sewer utilities.

Table A-2
Alternative 1: Continued Funding from Water and Sewer Rates

| Additional Annual Contribution From Water and Sewer Utilities | Tier A | Tier B | Tier C |
|---|------------------|------------------|------------------|
| Water Utility Impact | | | |
| Existing Contribution | \$55,000 | \$55,000 | \$55,000 |
| Additional Contribution (1) | \$227,500 | \$282,500 | \$357,500 |
| Total Contribution | \$282,500 | \$337,500 | \$412,500 |
| Additional Contribution, as % of Water Rate Revenues | 12.3% | 15.3% | 19.4% |
| Total Contribution, as % of Water Rate Revenues | 15.3% | 18.3% | 22.3% |
| Sewer Utility Impact | | | |
| Existing Contribution | \$55,000 | \$55,000 | \$55,000 |
| Additional Contribution (1) | \$227,500 | \$282,500 | \$357,500 |
| Total Contribution | \$282,500 | \$337,500 | \$412,500 |
| Additional Contribution, as % of Sewer Rate Revenues | 6.2% | 7.7% | 9.8% |
| Additional Contribution, as % of Sewer Rate Revenues | 7.7% | 9.3% | 11.3% |
| \$/month Impact to Example Single-Family Residential Customers | Tier A | Tier B | Tier C |
| Water Customer | | | |
| Single-Family Residence, 400 cf/month | \$4.03 | \$4.81 | \$5.88 |
| Single-Family Residence, 700 cf/month | \$4.64 | \$5.54 | \$6.77 |
| Single-Family Residence, 1000 cf/month | \$5.73 | \$6.84 | \$8.36 |
| Single-Family Residence, Standby Rate | \$3.54 | \$4.22 | \$5.16 |
| Sewer Rate Customer | | | |
| SFR, Winter Average < 600 cf/month | \$4.58 | \$5.47 | \$6.68 |
| SFR, Winter Average > 600 cf/month | \$5.31 | \$6.35 | \$7.76 |
| SFR, Standby | \$3.58 | \$4.28 | \$5.23 |
| Total | | | |
| SFR, 400 cf/month | \$8.60 | \$10.28 | \$12.56 |
| SFR, 700 cf/month, winter avg < 600 | \$9.21 | \$11.01 | \$13.45 |
| SFR, 1000 cf/month, winter avg > 600 | \$11.04 | \$13.19 | \$16.12 |
| SFR, Standby | \$7.11 | \$8.50 | \$10.39 |

Notes:

(1) Assumes stormwater program costs are split 50/50 between water and sewer.

Financial impacts in this table include the existing services funded through water and sewer rates.

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Additional Detail: Ad Valorem Property Tax Assessment

Table A-3 shows the potential financial impact of recovering the stormwater revenue requirement through an ad valorem property tax assessment.

Table A-3
Alternative 2: Ad Valorem Property Tax Assessment

| Financial Impact per \$1,000 Assessed Valuation | Tier A | Tier B | Tier C |
|---|---------------|---------------|---------------|
| City's Total Assessed Value, 2015 (1) | \$823,614,967 | \$823,614,967 | \$823,614,967 |
| Total Annual Stormwater Funding | | | |
| Dollars Per Year | \$565,000 | \$675,000 | \$825,000 |
| As \$/1,000 Assessed Value | \$0.686 | \$0.820 | \$1.002 |
| Impact to Single-Family Residence, \$/month | Tier A | Tier B | Tier C |
| Assessed Valuation: \$100,000 | \$5.72 | \$6.83 | \$8.35 |
| Assessed Valuation: \$150,000 | \$8.58 | \$10.24 | \$12.52 |
| Assessed Valuation: \$185,000 (2) | \$10.58 | \$12.63 | \$15.44 |
| Assessed Valuation: \$200,000 | \$11.43 | \$13.66 | \$16.69 |
| Assessed Valuation: \$250,000 | \$14.29 | \$17.07 | \$20.87 |
| Assessed Valuation: \$300,000 | \$17.15 | \$20.49 | \$25.04 |
| Assessed Valuation: \$400,000 | \$22.87 | \$27.32 | \$33.39 |
| Assessed Valuation: \$500,000 | \$28.58 | \$34.15 | \$41.74 |

Notes:

(1) End of Year Estimate. Source: City's 2015 Budget Page 44

(2) Estimate of median single-family residential assessed value (source: city staff)

Table A-3 shows the financial impact to a single-family residence. Compared with the other two alternatives, there is a wider range of impacts for single-family residences. At a median assessed value of \$185,000, the monthly impact for the three tiers is \$10.58, \$12.63, and \$15.44 per month, respectively.

These impacts are partially offset by discontinuing the financial support from the water and sewer utilities. As described above, support from existing water and sewer rates would be approximately \$1.60 to \$2.10 per month, so the net impact to the single-family residence at the median valuation is comparable with continued water and sewer rate support.

Additional Detail: Stormwater Fee

Table A-4 shows an estimate of the stormwater fee customer base, using data from six nearby cities. The goal is to estimate the number of equivalent residential units ("ERUs") in Sequim, using the number of single-family residences and an estimate of total ERUs based on revenues.

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**Table A-4
Alternative 3: Estimated Stormwater Fee Customer Base**

| City | Single-Family Residential | Stormwater Fund Rate | Equivalent Residential | No. of Single-Family Residences | |
|----------------|---------------------------|----------------------|------------------------|---------------------------------|------------|
| | Monthly Rate | Revenue (1) | Units (2) | Total (3) | % of ERUs |
| Aberdeen | \$6.69 | \$485,000 | 6,041 | 4,900 | 81% |
| Hoquiam | \$8.83 | \$375,000 | 3,539 | 2,856 | 81% |
| Oak Harbor | \$14.22 | \$1,736,339 | 10,175 | 5,793 | 57% |
| Port Angeles | \$12.00 | \$1,455,000 | 10,104 | 6,828 | 68% |
| Port Townsend | \$7.25 | \$517,444 | 5,948 | 4,002 | 67% |
| Poulsbo | \$16.43 | \$1,020,000 | 5,173 | 2,910 | 56% |
| Average | \$10.90 | | | | 68% |

| City of Sequim Estimate | Low | Middle | High |
|--|--------------|--------------|--------------|
| Number of Single Family Residences (3) | 2,109 | 2,109 | 2,109 |
| Single-Family Residences, as % of Total ERUs (4) | 80% | 68% | 55% |
| Estimated Number of ERUs (5) | 2,640 | 3,090 | 3,830 |

Notes:

(1) Sources: 2015 Budgets for the six cities

Aberdeen: 2015 Budget, pdf page 105 of 116, <http://aberdeenwa.gov/wp-content/uploads/2015-Budget.pdf>
 Hoquiam: \$750,000 for the biennium, page 79 of budget. No separate number included. Water, sewer, storm rate revenue are bundled together for accounting purposes. Only reference to storm revenues is a graph, increasing to \$10.83 by 2017

Oak Harbor: 2015/16 Biennial Budget, page Budget, page 131.
http://www.oakharbor.org/uploads/documents/9472015_2016__budget_document.pdf

Port Angeles: 2015 budget, page 211. <https://wa-portangeles.civicplus.com/DocumentCenter/Home/View/2114>

Poulsbo: 2015 budget, page 138 of General Ledger Budget Analysis,
<https://weblink.cityofpt.us/weblink/0/ecdoc/115406/2015%20Final%20Budget.pdf>

Port Townsend: City's budget page 7-24.
https://www.cityofpoulsbo.com/finance/documents/2015_Final_Budget.pdf

(2) Calculated by dividing stormwater rate revenue by the single-family monthly rate, and dividing by 12.

(3) Source: Washington Office of Financial Management, April 1 housing and population estimates (2014)

(4) Low: SFR = 80% of ERUs, ~ one end of the range of other cities; medium uses the average of the six cities. High uses the other end of the range of the other cities.

(5) Number of SFR divided by SFR as % of total; rounded to nearest 10

The estimated number of stormwater ERUs is a range from 2,640 to 3,830, and using average data from other cities produces an estimated 3,090 ERUs.

Table A-5 shows the calculation of the financial impact per month per ERU, for each tier and for the range of ERUs shown in Table A-4.

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Table A-5
Alternative 3: Estimated Stormwater Fee Calculation

| Number of ERUs | Monthly Stormwater Fee per ERU (1) | | |
|-------------------|------------------------------------|---------|---------|
| | Tier A | Tier B | Tier C |
| Low End of Range | \$17.80 | \$21.30 | \$26.00 |
| Middle of Range | \$15.20 | \$18.20 | \$22.20 |
| High End of Range | \$12.30 | \$14.70 | \$18.00 |

Note:

(1) Draft. There is considerable uncertainty in the number of stormwater ERUs. A single-family residence by definition = 1.0 ERUs. The existing funding of \$1.60 to \$2.10 per month through water and sewer rates would be discontinued.

Rate Structure Options

In practice, there is a wide variety of stormwater rate structures. Nearly all of them have one feature in common: they are based in part on the amount of impervious surface on a parcel. There are many variations. Some of the more common are as follows, separated by considerations of single-family residences and other parcels.

Single Family

To minimize administrative costs, single-family residences are typically grouped into customer classes, so that individual parcel measurements do not need to be calculated for each residence. Rate structures can include:

- Flat monthly rate for each single-family residence. This rate structure is often chosen for administrative reasons, as the majority of parcels in a city are single-family residences and a flat rate removes the need to collect and monitor parcel specific data. Other nearby cities (Port Angeles, Port Townsend, Oak Harbor, Aberdeen, Hoquiam, and Burlington) have this rate structure.
- Tiered rates based on ranges of total parcel area. The idea behind this rate structure is that larger parcel areas typically contain more impervious surface and generate more runoff. For example, the City of Seattle has four parcel size tiers. The City of Bellevue uses a unit charge structure approach where the monthly charge is flat for every 2,000 square feet of parcel area.
- Tiered rates based on building footprint. This rate structure is based on the building footprint, and is based on the premise that larger footprints generate more runoff. For example, the City of Bellingham has three rate tiers that are based on building footprint square footage (square footage of house plus garage; paved driveways are not included).

Multi-Family Residential and Non-Residential

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Because of the variability in area and surface types, non-residential parcels are typically characterized on a parcel-by-parcel basis. The two most common rate structures in Western Washington include:

- **Per-ERU Rate.** In this rate structure, ERU means equivalent residential unit, and is defined as the average impervious area on a single-family residential parcel. A sample of single-family residences is measured for impervious area to generate the impervious square footage equal to one ERU. The amount of impervious surface associated with every other parcel is measured or estimated using aerial photographs. The number of ERUs is calculated by dividing the total parcel impervious area by the ERU impervious area. The stormwater bill is the per-ERU rate times the number of ERUs. The per-ERU rate is typically also applied to each single-family residence.
- **Density of Development Rate.** This rate structure groups customers into rate categories, often five or six, by ranges of impervious area (for example, 35% to 55%, 55% to 75%, or over 85%). Per-acre unit costs are established, and the customer is billed according to the total parcel area and appropriate rate category. Some utilities, like Seattle Public Utilities, use units of 1,000 square feet instead of acres.

Variations to Accommodate Semi-Pervious Surfaces

Some stormwater rate structures, particularly non-residential rate structures, recognize the impact from semi-pervious surfaces. One method for doing this uses the concept of “effective impervious area” by acknowledging that during periods of heavy rainfall, there can be runoff from pervious surfaces and that some surfaces (e.g., gravel) can result in incidental infiltration. Seattle Public Utilities uses a different approach, where “low impact” non-residential accounts are charged a reduced rate, and eligibility for the low impact rate is based on the types of parcel surface.

Stormwater Rate Credits

There is a wide variety of stormwater rate credits. Some of the more common include:

- Reduced rates if runoff is managed on-site. The amount of the credit can vary, and the amount of the credit sometimes depends on whether the municipality or the property owner is responsible for maintenance of the facility.
- Reduced rates for on-site management of stormwater using a dry well. This is usually a credit, and not an exemption, in part because the property owner still benefits from the stormwater system’s conveyance of runoff from rights-of-way.
- Reduced rates for parcels that discharge directly to water bodies without use of the City’s stormwater system. Because of right-of-way considerations, this is often a rate credit and not an exemption.
- Reduced rates for on-site water quality treatment. This often applies to commercial facilities, to recognize the potential water quality benefits.

Considerations in setting up a stormwater fee that affect equity include:

- How to structure the single-family residential rate.

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- How to account for the costs of managing runoff from rights-of-way. Property characteristics such as impervious area do affect the amount of runoff from the parcel, but do not affect the amount of runoff from rights-of-way. The City may choose to not charge private property owners directly for the costs of runoff from rights-of-way; instead, the right-of-way is charged the same way any other commercial parcel would be charged. In effect, the City charges itself. In Washington, an additional advantage of this policy is that provides the ability to charge the Washington State Department of Transportation for right-of-way associated with state highways. *The fee estimates shown in Table 15 of this memorandum do not assume that the City charges itself a stormwater fee associated with rights-of-way.*
- How to structure rate credits, given the amount of stormwater infiltration and how it varies geographically: downtown areas have less infiltration and more piped stormwater conveyance systems.