

**APPENDIX F – ROGUE VALLEY SEWER SERVICES STORMWATER CREDITS**

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## INTRODUCTION

Rogue Valley Sewer Services (RVSS) collects a monthly stormwater quality management fee of \$1 for a single family residence. Multi-family residences, commercial, and industrial uses are charged \$1 per 3,000 square feet of impervious area. RVS code specifies that properties that take measures above and beyond the minimum requirements to protect water quality are entitled to a reduction in the monthly stormwater quality management fee. The onus of demonstrating that a property is entitled to stormwater credit is on the property owner and is subject to review and approval by RVS. Stormwater credits cannot reduce the monthly rate below the base rate for a single family home.

RVSS does not collect a Systems Development Charge for stormwater quality. Partner cities may have stormwater SDC's designed to pay for capacity in the stormwater collection systems. Water quality controls that receive credit against the stormwater quality fee may not necessarily receive credit against stormwater Systems Development Charges.

## VOLUME CONTROL

The requirements in Chapter 2 require flow control measures to mitigate the *peak runoff* from a property. This manual does not require limitations on the *total volume* of stormwater runoff from a property. However, credit for volume control can be earned by reducing the total volume of stormwater that flows off of the subject property. This can be done through infiltration, retention, extended detention, or beneficial reuse. To qualify for this credit, the applicant must show the calculated runoff both with and without volume control measures. The total credit is equal to the percentage reduction in runoff volume over 24-hours using a 10-year design storm (see worksheet below).

**Example 1:** A 10-acre commercial facility has 5-acres of impervious surface area. The monthly charge would be \$72.60 with no volume control. The calculated runoff during a water quality design storm is 38,738 cubic feet in 24-hours. The property owner designs the stormwater system to retain and infiltrate 10,000 cubic feet per day which reduces the runoff volume by 25.8%. The reduced monthly fee is  $\$72.60 \times (1 - 0.258)$ , or \$53.87.

**Example 2:** The same 10-acre commercial facility instead decides to install an extended detention basin with a maximum outflow of 0.30-cfs. The average daily runoff for the property is 0.45-cfs. The extended detention basin is therefore a 66.6% reduction in runoff over 24-hours which qualifies the project for a credit equal to 33.3% of the monthly charge. The total monthly charge would therefore be  $\$72.60 \times (1 - 0.333)$ , or \$48.42.

All water running off the site must still meet applicable pollution reduction standards.

## TREES

The amount of impervious surface area used to calculate the monthly fee can be reduced through protection of some existing tree cover and by planting new trees. Tree credits can amount to a maximum of 25% of the total impervious surface area. The impervious area reduction associated with trees is described in Section 4.4.2 (calculations are shown in the worksheet below).

**Example 3:** A 2-acre commercial facility will have 60,000 square feet of impervious surface area, which would result in a \$20 per month service charge. As part of their development plan they are able to preserve 10,000 square feet of existing tree canopy, all within 30-feet of the impervious surface. They are also planting 30 evergreen trees and 30 deciduous trees as part of their landscaping plans. The reduction in impervious area calculated for the fee is as follows:

Area of Protected Existing Tree Canopy	10,000 SF ÷ 2 =	5,000 SF	Number of new Deciduous Trees	30 x 100 SF =	3,000 SF	Number of new Evergreen Trees	30 x 200 SF =	6,000 SF	Total Area Reduction for Tree Credit	= 14,000 SF
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Since the calculated tree credit area (14,000 SF) is less than 25% of the total impervious surface area (60,000 SF \* 0.25 = 15,000 SF), the full credit applies. The impervious surface used to calculate the monthly fee is 60,000 SF – 14,000 SF = 46,000 SF. The total monthly fee would be \$1 \* (46,000 SF/3,000 SF), or \$15.33.

## COMBINED CREDIT

Both volume control credit and tree credit can apply to the same property. When this happens, each credit is calculated independently and is added together for the total credit.

**Example 4:** A 5-acre development has 3-acres (130,680 SF) of impervious surface, which creates 22,000 cubic feet per day of runoff during a 10-year storm. The standard monthly stormwater quality fee would be \$1\*(130,680 SF/3,000 SF), or \$43.56. The project uses an extended detention basin with a maximum outflow of 0.17 cfs, which is 66.6% of the average daily runoff. The assessed impervious area would be reduced by 33.3%, or 43,516 SF. The project also preserves existing trees and plants new trees as in Example 3 for a tree credit area reduction of 14,000 SF. The total assessed area is calculated below:

Impervious Surface Area	130,680 SF	Volume control credit	- 43,560 SF	Tree credit	- 14,000 SF	Assessed Impervious Surface Area	<b>73,120 SF</b>
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By taking these measures, the monthly stormwater quality fee would be reduced from \$43.56 to \$24.37 (\$1\*(73,120 SF/3,000 SF), a monthly savings of \$19.19.

## RVSS STORMWATER QUALITY MANAGEMENT FEE CREDIT WORKSHEET

The standard stormwater quality management fee is \$1 per 3,000 square feet of impervious surface on the site (as described in Chapter 6). This fee may be reduced by limiting the volume of stormwater that leaves the site in 24-hours or by planting new trees and protecting existing tree canopy. NOTE: Units are in square feet (SF) and cubic feet per day (CF/DAY).

- A. Total Area \_\_\_\_\_ SF
- B. Total Impervious Area \_\_\_\_\_ SF
- C. Monthly Stormwater Base Rate  $B \times \$1 \div 3,000 \text{ SF} =$  \$ \_\_\_\_\_

### VOLUME CONTROL CREDIT

- D. Calculated Runoff with no Volume Control \_\_\_\_\_ CF/DAY
- E. Calculated Runoff with Volume Control \_\_\_\_\_ CF/DAY
- F. Percent Reduction from Volume Control  $E \div D =$  \_\_\_\_\_ %
- G. Assessed Impervious Surface Reduction  $B \times (1 - F) =$  \_\_\_\_\_ SF

### TREE CREDIT

- H. Area of Protected Existing Tree Canopy \_\_\_\_\_ SF  $\div 2 =$  \_\_\_\_\_ SF
- I. Number of new Deciduous Trees \_\_\_\_\_  $\times 100 \text{ SF} =$  \_\_\_\_\_ SF
- J. Number of new Evergreen Trees \_\_\_\_\_  $\times 200 \text{ SF} =$  \_\_\_\_\_ SF
- K. Total Area for Tree Credit  $H + I + J =$  \_\_\_\_\_ SF
- J. Maximum Credit Allowable  $B \times 0.25 =$  \_\_\_\_\_ SF
- L. Smaller of K or J \_\_\_\_\_ SF

### TOTAL STORMWATER CREDIT

- M. Total Impervious Area (B) \_\_\_\_\_ SF
- N. Volume Control Credit (G) \_\_\_\_\_ SF
- O. Tree Credit (L) \_\_\_\_\_ SF
- P. Assessed Impervious Area  $M - N - O =$  \_\_\_\_\_ SF
- Q. Adjusted Stormwater Fee  $P \times \$1 \div 3,000 \text{ SF} =$  \$ \_\_\_\_\_