ANNUAL NPDES PHASE II REPORT FOR FISCAL YEAR 2019

FOR THE COMMUNITIES OF:

CENTRAL POINT

CITY OF PHOENIX OREGON

TALENT · OREGON 1911

JACKSON COUNTY oregon

ROGUE VALLEY SEWER SERVICES

Location: 138 West Vilas Road, Central Point, OR - Mailing Address: P.O. Box 3130, Central Point, OR 7502-0005
Tel. (541) 664-6300, Fax (541) 664-7171 www.RVSS.us

DEQ
State of Oregon
Department of
Environmental
Quality

www.oregon.gov/DEQ; Search "MS4"

Annual Report

MS4 Phase II General Permit

National Pollutant Discharge Elimination System
MS4 Stormwater Discharge Permit

Fiscal Year 2019
Monitoring Year

Rogue Valley Sewer Services
October 18th, 2019

DEQ File Number: 116270

1.0 Certification and Signature
1. Permit Registrant(s): Rogue Valley Sewer Services
2. Legally Authorized Representative: Carl Tappert
3. Title: General Manager
4. Email: ctappert@rvss.us
5. Phone: 541-779-4144
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations (40 CFR 122.22(d)).

Signature: _____ Date: 10/17/2019

Created by M. Riedel-Bash
Date: 12/27/2018

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Instructions

At least once per year, the permit registrant must evaluate compliance with the requirements of the MS4 Phase II general permit using this Annual Report template. This self-evaluation includes assessment of progress made towards implementing the SWMP control measures in Schedule A, and implementation of actions to comply with any additional requirements identified pursuant to Schedule D.1 (Requirements for Discharges to Impaired Waterbodies).

For each SWMP control measure or activity listed below, please answer all the questions and in the comments field cite any relevant information and/or statistics that helps to illustrate implementation or compliance. If your answer is "No," in the comments field explain the reasons and outline the anticipated implementation timeline. If the requirement does not apply, explain why it is not applicable in the comments field.

No later than November 1 each year, beginning in 2020, the permit registrant must submit an Annual Report to DEQ. One signed copy and one electronic copy must be submitted to DEQ using the address provided in permit. DEQ can provide an FTP site for submittal of the electronic copy, upon request.

2.0 General Information

2.1 Registrant Information

6. Permit Registrant(s): Rogue Valley Sewer Services		
7. Type(s): ☐ City / ☐ County / ☒ Special District / ☐ Other:		
8. Registrant Type: Existing Registrant: ☒ New Registrant: ☐		
9. Community Type: Large Community: ☒ Small Community: ☐		
10. DEQ Permit No: 116270		
11. EPA File No: ORS116270		
12. Physical Address: 138 West Vilas Road		
City: Central Point	State: OR	Zip: 97502
13. Point of Contact: Jennie Morgan		
Title: Stormwater Program Manager	Email: jmorgan@rvss.us	Phone: 541-727-6876
14. Mailing Address (*if different*): PO Box 3130		
City: Central Point	State: OR	Zip: 97502

2.2 Municipal Separate Storm Sewer System (MS4) Information

15. Estimate the area in square mileage served by the MS4: 30.4 square miles

16. Estimate the population served by the MS4: 40,829

2.3 MS4 Stormwater Discharge Information

Identify the names of all know waters that receive a discharge from your MS4.

Receiving Waterbody	# of Outfalls	Impaired waterbody		Impairment(s)
		303d listed	TMDL issued	
a. Data is provided in Table 1.		Yes ☒ No ☐	Yes ☒ No ☐	E. coli, Temperature, Phosphorus
b.		Yes ☐ No ☐	Yes ☐ No ☐	
c.		Yes ☐ No ☐	Yes ☐ No ☐	
d.		Yes ☐ No ☐	Yes ☐ No ☐	
e.		Yes ☐ No ☐	Yes ☐ No ☐	
f.		Yes ☐ No ☐	Yes ☐ No ☐	
g.		Yes ☐ No ☐	Yes ☐ No ☐	
h.		Yes ☐ No ☐	Yes ☐ No ☐	
i.		Yes ☐ No ☐	Yes ☐ No ☐	
j.		Yes ☐ No ☐	Yes ☐ No ☐	

2.4 Coordination Among Registrants and Joint Agreements

Required for permit registrants relying on another entity to satisfy one or more of the requirements of the permit.

17. Is there a joint agreement in place for the implementation of one or more stormwater management program control measure? *Schedule A.2* Yes ☒ No ☐

18. If yes, has there been any change to the joint agreement(s) submitted previously? Yes ☒ No ☐

If yes, include, as an attachment, a summary of the changes.
RVSS holds Intergovernmental Agreements with each of its co-implementers that govern implementation of the MS4 program within their jurisdictions.With issuance of the new permit, RVSS revised the IGA's with the cities of Talent and Phoenix to ensure a clear understanding between RVSS and its co-implementers on the responsibilities of each entity. Jackson County has not yet signed a revised IGA thus we are continuing under the 2005 IGA. In March 2019, the IGA with the City of Central Point was terminated when Central Point applied for their own MS4 permit.This annual report includes events and activities that occurred within Central Point through February 2019 only. The revised IGAs with Phoenix and Talent are attached to the report.

2.5 Stormwater Management Program Information

19. Discuss the status and overall progress of establishing legal authority to control pollutant discharges into and discharges from the MS4 and to implement and enforce the conditions of this permit. *Schedule A.2.c*

RVSS established legal authority to control pollutant discharges into and discharges from the MS4 in its code with the initial permit issuance in 2007.

2.6 Stormwater Management Program Information

20. Is an updated SWMP Document attached? *Schedule A.2.c*
Yes ☐ No ☒ *(must be submitted with the second Annual Report)*
If necessary, provide an explanation:

21. Identify the publicly accessible website where the SWMP Document is posted. *Schedule 2.c & A.3.b.ii*
https:// www.rvss.us/pilot.asp?pg=stormwaterdocs
If necessary, provide an explanation:

22. Does the SWMP Document include an implementation schedule for control measures that have yet to be or are partially implemented? *Schedule A.2.c*
Yes ☐ No ☒
If necessary, provide an explanation:

23. Describe the method used to gather, track, and use SWMP information to set priorities or assess compliance: *Schedule A.2.d*

24. Have adequate finances, staff, equipment and other support capabilities been provided to implement the permit? *Schedule A.2.e*
Yes ☒ No ☐
If necessary, provide an explanation:

25. During this monitoring year was compliance with the requirements of this permit evaluated? *Schedule B.1*
Yes ☒ No ☐
If necessary, provide an explanation:
Compliance with the expired permit issued in 2007 was evaluated during FY19.

26. During this monitoring year was it determined or reported that discharge from the MS4 caused or contributed to an excursion of an applicable water quality standard? *Schedule A.1.a*
Yes ☐ No ☒
If "Yes", complete section 3.7, Water Quality Standards of this template.

3.0 Stormwater Management Program Control Measures

3.1 Public Education and Outreach

27. Provide a brief summary of the ongoing public education and outreach program. *Schedule A.3.a*

RVSS has a robust year-round public education and outreach program reaching diverse audiences in the jurisdiction through numerous communication channels and methods. RVSS participates in or leads numerous collaborative projects and programs, attends events, gives presentations, and engages community and school groups as well as individuals on a variety of topics and activities all related to increasing the understanding of stormwater issues, the impacts of stormwater on water quality, and ways to reduce pollutants in stormwater.

28. Were the required components in place by the implementation date? *Schedule A.3.a.i*

Yes ☒ No ☐ *(Implementation date: Feb. 28, 2020 for Existing Registrants and Sept. 1, 2023 for New Registrants)*

29. Provide the number of education and outreach activities conducted: *Schedule A.3.a.iii*

During this reporting year: 37 outreach and education activities were completed in FY19. Please see Table 2 for a complete listing of events and number of individuals reached.

30. During the permit term:

If necessary, provide an explanation:

31. Indicate target audiences addressed during this reporting year: *Schedule A.3.a.iv*

☒ General public, homeowners, homeowner association, schoolchildren, and businesses
☒ Local elected officials, land use planners and engineers
☒ Construction site operators

32. Have each target audience been addressed during the permit term? *Schedule A.3.a.iv*

Yes ☒ No ☐

33. Indicate target topics addressed during this reporting year: *Schedule A.3.a.iv*

☒ Impacts of illicit discharges on receiving waters and how to report them
☒ Impacts from impervious surfaces and appropriate techniques to avoid adverse impacts
☒ BMPs for proper use, application and storage of pesticides and fertilizer
☒ BMPs for litter and trash control
☐ BMPs recycling programs
☐ BMPs for power washing, carpet cleaning and auto repair and maintenance
☒ Low impact development/green infrastructure
☐ Septic systems, information pertaining to maintenance of septic systems
☒ Watershed awareness and how storm drains lead to local creeks and rivers, and potential impacts to fish and other wildlife
☒ Other: Erosion & sediment control measures for construction operators

34. Describe the types of educational messages or activities distributed and/or offered during this reporting year. *Schedule A.3.a.iii*

A variety of communication means were employed during the period as shown in Table 1, a brief description of some larger events is provided below. and Table 2.

- RVSS is a co-coordinator with the Rogue Valley Council of Governments Natural Resources Department of the Salmon Watch outdoor education program. This program has operated as a consortium for six years in the Rogue basin and brings students to local rivers and streams to experience spawning salmon. In FY 2019, Rogue Valley Sewer Services partnered with 14 regional organizations and served over 1200 students from 16 participating schools in the Rogue basin. Additionally RVSS staff offered in-class presentations and had contact with 300 students prior to their Salmon Watch field trips. The in-class presentations prepare students for the field trip by teaching the concepts of watershed, water cycle, water quality, and habitat. A classroom visit by RVSS staff also includes an activity and discussion of stormwater pollution prevention and reduction as well as an analysis of stormwater movement and possible sources of pollution in the schoolyard.
- RVSS contributed to the Middle Rogue Pesticide Stewardship Partnership (PSP) education and outreach program development with Jackson Soil and Water Conservation District and other entities. RVSS staff contributed to strategic planning of education and outreach oriented towards encouraging pesticide BMPs for homeowners. A

pesticide pledge was developed and RVSS staff provided the Spanish translation of the pledge, which will be posted on the Stream Smart website. A website, pledge map, and handouts (in English and Spanish) were developed and produced.

- Two different organizations, the Rogue River Keepers and the Southern Oregon Landscape Architects, requested presentations from RVSS on Low Impact Development stormwater management. For the Riverkeeper event, RVSS gave a walking tour of the LID facilities in the City of Talent and discussed their function and benefits. For the Landscape Architect event, RVSS gave a presentation on function, design and maintenance of LID facilities.
- A banner with the message "Only Rain In The Drain" was displayed at the high school gym and sports field serving two towns in the jurisdiction. Signage in these locations are viewed multiple times by students, staff, faculty, and others (clubs, visiting teams, etc.) participating or attending sporting events, practices, and activities or classes in these locations. The high school enrollment is over 700; unique views of the banners could be estimated at well over 2000.
- Electronic media:

o RVSS administers its own website and Facebook page, both of which cover stormwater topics and provide information to various audiences. RVSS is an active participant in the Rogue Basin Stream Smart collaborative, a group made up of MS4 and TMDL communities to deliver a unified brand and message to our region focused on protecting water quality. The Stream Smart collaborative hosts a website, Facebook page and Instagram account to connect to a varied audience with stormwater related content. RVSS is responsible for coordinating Facebook posts and is working with the collaborative to update the website.

35. Was outreach to construction site operators working within your community offered during this reporting year? *Schedule A.3.a.v*

    Yes ☒ No ☐

36. Total number during the permit term: Formal outreach to construction site operators was provided through Designated Erosion Prevention and Sediment Control Inspector Certification classes offered by RVSS at least twice a year for construction contractors, public works employees and engineers. RVSS is listed in the 2015 1200-C permit as an approved provider of certification classes. In FY19, 51 individuals received first time certification and 76 individuals received recertification. Numerous incidences of informal outreach occur throughout the year during on-site inspections.

37. Identify and describe the assessment/evaluation of, at least, one education and outreach activity that occurred during this reporting year. Include the assessment process or metric for evaluation, and why this activity was considered successful. *Schedule A.3.a.vi*

    The Salmon Watch program is a field trip with extensive water quality and watershed related curriculum primarily for students grades 4-8. Students are given pre and post field trip quizzes covering some of the basic concepts covered by the program curriculum. Student scores are compared from the pre and post field trip quizzes to inform the effectiveness of student learning. In 2018, pre and post field trip quiz average score rose from 6.6 to 10.2 out of a total score of 16 with a 139 student respondents. Students overall show consistent improvement on understanding the basic concepts covered in the field trip (including topics covering stormwater), indicating that the activity is successful. Additionally, classroom teachers and program instructors are asked to complete feedback forms to evaluate various aspects of the program administration, implementation, and impact on students. Classroom teachers consistently give a majority of "excellent" ratings on a variety of aspects of the program including logistics, communication, value of the program to students, and likelihood they will utilize the program again. Program instructors give feedback on sites, logistics, and communications which are used for administrative decisions the following year to improve instructor and program effectiveness.

38. Will the assessment be used to inform future stormwater education and outreach efforts? *Schedule A.3.a.vi*

    Yes ☒ No ☐

39. Provide an explanation:

    Data from pre and post field trip student quizzes inform areas where instructors need to adjust or focus on student learning. In general, data supports an increase in student learning on the topics covered. Data from teacher and program instructor evaluations forms result in changes in program administration and implementation. For example, instructors in 2018 requested more training so the 2019 training time was more than doubled to allow for more in-depth coverage of the four topic areas. Instructors in 2018 also had problems with some school chaperones not effectively managing students so in 2019 the program is implementing a briefing with instructors, teachers, and chaperones prior to starting gathering students for field trip.

3.2 Public Involvement and Participation

40. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.b*

The Rogue Valley MS4 permittees formed the Stormwater Advisory Team (SWAT) in 2014 to work collaboratively on Stormwater Management Plan development and implementation. The SWAT is open to the public and anyone is able to comment on the topics and proposals discussed. Voting is limited to MS4 permit holders. RVSS has been a leading member of the SWAT, which continues to meet quarterly, ever since.

Additionally, RVSS makes a concerted effort to engage with each of its co-implementer's staff specifically to seek their input into our Stormwater Management program and to identify opportunities for collaboration. In addition, RVSS specifically attends community events in each of our co-implementers jurisdictions to educate the public about stormwater issues and to seek their input in our program.

41. Were the required components in place by the implementation date? *Schedule A.3.b.i*

Yes ☐ No ☐ *(Implementation date: Feb. 28, 2020 for Existing Registrants and Sept. 1, 2023 for New Registrants)*

42. Is the SWMP Document posted on a publicly accessible website? *Schedule 2.c & A.3.b.ii*

Yes ☒ No ☐

43. Was the publicly accessible website updated during this reporting year? *Schedule 2.c & A.3.b.ii*

Yes ☒ No ☐

If necessary, provide an explanation:

44. Does the publicly accessible website include illicit discharge complaint/reporting information or procedures? *Schedule A.3.b.ii.A*

Yes ☒ No ☐

If necessary, provide an explanation:

45. Does the publicly accessible website include draft documents issued for public comment, final reports, plans and other official SWMP policy documents? *Schedule A.3.b.ii.B*

Yes ☒ No ☐

If necessary, provide an explanation:

46. Does the publicly accessible website include links to all ordinances, policies and/or guidance documents related to the construction and post-construction stormwater management control programs, including education, training, licensing, and permitting? *Schedule A.3.b.ii.C*

Yes ☒ No ☐

If necessary, provide an explanation:

47. Does the publicly accessible website include contact information for relevant staff, including phone numbers, mailing addresses and email addresses? *Schedule A.3.b.ii.D*

Yes ☒ No ☐

If necessary, provide an explanation:

48. During this reporting year, was a stewardship opportunity created or partnered with another entity? *Schedule A.3.b.iii*

Yes ☒ No ☐

If "Yes", summarize the stewardship opportunity(s).

- RVSS is a leading member of the "Stream Smart" collaborative, which maintains a publically accessible website focused on conveying information to the public on how they can help protect and improve water quality and promotes watershed stewardship as well as outreach and education events and opportunities.

RVSS contributed to several stewardship opportunities through the reporting period including storm drain marking, facility maintenance, stream clean-ups, and riparian restoration.

- Stream Clean-ups. In FY19, RVSS participated in two stream clean-ups, collaborating with numerous other entities in the region as part of the bi-annual "Bear Creek Stewardship Day" held in the fall and spring. This event uses the SOLVE platform to organize and implement a watershed-wide stewardship event which can include stream clean-up, riparian restoration, or stormwater quality facility improvement work at multiple sites. RVSS partcipates at both the fall and spring events in Talent and Phoenix. Total public involvement for both events in FY19 was over 300 people, with over 9,000 lbs. of trash collected from 8-9 sites.
- Adopt-a-Swale. RVSS works closely with schools in their jurisdiction and has developed an on-going relationship with the STEM program at Talent Middle School. Several times a year, RVSS staff bring student groups to nearby vegetated stormwater facilities to discuss stormwater runoff pollution and the function and benefits of vegetated stormwater management facilities. The students also obtain hands on experience performing maintenance tasks on the facilities.
- Storm Drain Marking. RVSS staff coordinated with the City of Talent Community Development Director and the middle school to utilize student volunteers to mark approximately 80 storm drains with a new or replacement “Dump No Waste, Drains To Stream” storm drain markers in the downtown Talent area.

3.3 Illicit Discharge Detection and Elimination

49. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.c*

In FY19 RVSS continued to implement this MCM as we have for the past 12 years. Currently, we are reviewing existing code and standard operating procedures to determine whether updates are required to meet the new permit requirements. We are in the process of updating our GIS stormwater maps through on the ground GPS data collection, a process that will take a few more years. RVSS led the effort to get our own and other local jurisdictions to work towards "EcoBiz" certification to address pollution prevention BMPs. RVSS was awarded the Eco-Biz Certification for Fleets in FY19.

50. Were the required components in place by the implementation date? *Schedule A.3.c.i*

Yes ☐ No ☐ *(Implementation date: Feb. 28, 2022 for Existing Registrants and Sept. 1, 2023 for New Registrants)*

51. Is the MS4 map(s) current? *Schedule A.3.c.ii.A*

Yes ☐ No ☒

52. Describe the MS4 map(s) format(s):

Maps of RVSS' MS4 are available in ArcPro, GIS.

53. Is the MS4 map(s) included as attachment? Yes ☐ No ☒

Or are the digital shapefiles available for electronic submittal? Yes ☒ No ☐

(Existing Registrants must submit their MS4 map with the third Annual Report; New Registrants must submit by Sept. 1, 2023)

If necessary, provide an explanation:

54. Is the digital inventory of all known outfalls, with the associated receiving waterbody current? *Schedule A.3.c.ii.A*

Yes ☐ No ☒

If necessary, provide an explanation:

An initial assessment of all outfalls was conducted in 2005. Since then RVSS has revisited a different portion of the MS4 during each dry season to update our maps and assess outfalls for illicit discharges. Our MS4 boundary was expanded in 2016 and we are continuing to work on adding the new areas to our digital map.

55. Indicate if the following features are included on your MS4 map:

☒ Location of all known outfalls, included the requirements in *Schedule A.3.c.ii.B*

☒ Stormwater collection and conveyance system, included the requirements in *Schedule A.3.c.ii.C*

☐ Stormwater structural controls, included the requirements in *Schedule A.3.c.ii.C*

☐ Location of known chronic discharges *Schedule A.3.c.ii.D*

If necessary, provide an explanation:

All known outfalls are included on the map, however as stated above, we are working on updating this. We are in the process of adding stormwater control structures to our GIS map.

56. Have non-stormwater discharges into the MS4 been prohibited through enforcement of an ordinance or other regulatory mechanism? *Schedule A.3.c.iii*

Yes ☒ No ☐

If necessary, provide an explanation:

57. Indicate which of the following have an ordinance or other regulatory mechanism to prohibit discharge to the MS4: *Schedule A.3.c.iii*

☒ Septic, sewage, and dumping or disposal of liquids or materials other than stormwater into the MS4

☒ Discharges of washwater resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities

☒ Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility, including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.

☒ Discharges of washwater from mobile operations, such as mobile automobile or truck washing, steam cleaning, power washing, and carpet cleaning, etc.

☒ Discharges of washwater from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, or residential areas (including parking lots, streets, sidewalks, driveways, patios, plazas, work yards

and outdoor eating or drinking areas, etc.) where detergents are used and spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed)

☒ Discharges of runoff from material storage areas, which contain chemicals, fuels, grease, oil, or other hazardous materials from material storage areas

☒ Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water

☒ Discharges of sediment, unhardened concrete, pet waste, vegetation clippings, or other landscape or construction-related wastes

☒ Discharges of trash, paints, stains, resins, or other household hazardous wastes.

☒ Discharges of food-related wastes (grease, restaurant kitchen mat and trash bin washwater, etc.)

If necessary, provide an explanation:

RVSS code currently addresses this in Section 4.05.100 with the following language: 3) Discharge. a) Prohibition of Illegal Discharges. No person shall throw, dump, drain, or otherwise discharge, cause, or allow others under its control to throw, dump, drain, or otherwise discharge into the public storm sewer system any pollutants or waters containing any pollutants, other than Stormwater. The commencement, conduct, or continuance of any illegal discharge into the storm sewer system is prohibited. If any discharge is determined by the manager, or designee, to cause, or threaten to cause, a condition of pollution, contamination or nuisance, the discharge shall be stopped, treated and cleaned up to the maximum extent practicable by the person responsible for the discharge. The prohibition shall not apply to any non-Stormwater discharge permitted under an NPDES permit,…"

58. Is the written escalating enforcement and response procedure included as an attachment? *Schedule A.3.c.iv*

Yes ☒ No ☐

(For Existing Registrant must be submitted with the third Annual Report. New Registrants must submit by September 1, 2023)

If necessary, provide an explanation:

59. Is there a phone number, webpage, and/or other communication channel publicized for the public use to report illicit discharges? *Schedule A.3.c.v.A*

☒ Phone number(s)

☐ Webpage(s)

☐ Other communication channels

If necessary, provide an explanation:

60. Provide the number of complaints received during this reporting year. *Schedule A.3.c.v.D*

Number: 10 *(complaints related to IDDE)*

61. On average, how long did it take to respond to complaints? *Schedule A.3.c.v.B*

In working days: 1

62. Provide the number of complaints that included notification of the Oregon Emergency Response System during this reporting year. *Schedule A.3.c.v.B*

Number of notification: 0

63. Provide the number of complaints where staff performed an investigation during this reporting year. *Schedule A.3.c.v*

Number: 10 *(investigations related to IDDE)*

64. On average, how long did it take to conduct an initial investigation? *Schedule A.3.c.v.B*

In working days: 1

65. Provide the number of illicit discharges discovered and eliminated during this reporting year. *Schedule A.3.c.v*

Number: It is unclear whether DEQ is asking about chronic discharges or one time discharges. All one time ID incidents reported to RVSS were investigated and actions taken to eliminate the discharge. Sometimes the action taken was to educate the offender that the discharge was not allowed and hope that they would not repeat the offense. One example of this was a food truck discharging to the stormwater system. RVSS educated the owner about proper discharge and has not received a repeat complaint, therefore we assume the discharge has not been repeated. See Table 3. Hotline Tracking for FY19 for a complete description of incidents and responses.

66. On average, how long did it take to eliminate an illicit discharge? *Schedule A.3.c.v.B*

In working days:

67. Provide the number times escalating enforcement procedure was use to eliminate an illicit discharge during this reporting year. *Schedule A.3.c.v.B*

    Number of times: 1

Do any of the illicit discharges involve the repair or replacement of the wastewater and/or storm sewer conveyance systems? *Schedule A.3.c.v.B*

Yes ☐ No ☒ NA ☐

If necessary, provide an explanation:

68. Provide the number of illicit discharges that were referred to another entity during this reporting year. *Schedule A.3.c.v.C*

    Number: 0

69. On average, how long did it take to notify the entity(s)?

    In working days: NA

    If necessary, provide an explanation:

70. Indicate which of the following are included in the complaints or reports tracking documentation: *Schedule A.3.c.v.D*

    ☒ Date the complaint was received and, if available, the complainant's name and contact information
    ☒ Name of staff responding to the complaint
    ☒ Date the investigation was initiated
    ☒ The outcome of the staff investigation
    ☒ Corrective action(s) taken to eliminate the illicit discharge
    ☒ The responsible party for the corrective action(s)
    ☒ The status of enforcement procedure(s), when necessary
    ☒ The date the corrective action(s) was completed and staff that evaluated final compliance

    If necessary, provide an explanation:

71. Provide percentage of outfalls inspected. *Schedule A.3.c.vi.A/B*

    Known outfalls screened this reporting year: 32

72. Known outfalls screened during the permit term:

    If necessary, provide an explanation:

73. Provide percentage of outfalls inspected as part of field screening of priority location. *Schedule A.3.c.vi.C*

    Priority location outfalls screened this reporting year: No priority location screening occurred in FY19.

74. Priority location outfalls screened during the permit term:

    If necessary, provide an explanation:

75. Indicate which of the following dry-weather field activities are performed and documented in accordance with dry-weather field: *Schedule A.3.c.vi*

    ☒ General observation
    ☒ Field Screening and Analysis
    ☐ Pollutant Parameter Action
    ☒ Laboratory Analysis

    If necessary, provide an explanation:

76. If flow is observed and the source is unknown, provide a brief description of the field investigation and analysis process. *Schedule A.3.c.vi.D,E,G*

See the attached QAPP which is followed for all flowing outfalls.
77. Have pollutant parameter action levels been established and are they included as an attachment? *Schedule A.3.c.v.G* Yes ☐ No ☒ *(For Existing Registrant must be submitted with the third Annual Report. New Registrants must submit by September 1, 2023)* If necessary, provide an explanation:
78. Are all persons responsible for investigating and eliminating illicit discharges and illicit connections into the MS4 are appropriately trained to conduct such activities? *Schedule A.3.c.vii* Yes ☒ No ☐ If necessary, provide an explanation:
79. Are all new staff working to implement the IDDE program within 30 days of their assignment to this program*? Schedule A.3.c.vii* Yes ☒ No ☐ If necessary, provide an explanation:

3.4 Construction Site Runoff Control

80. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.d*

RVSS has had a robust construction site runoff control program since issuance of the initial Phase 2 permit in 2007. In FY20 we will begin to evaluate our existing program against the requirements of the new permit to do determine what changes are required. RVSS does not currently require a site specific Erosion and Sediment control plan for construction sites less than one acre.

81. Were the required components in place by the implementation date? *Schedule A.3.d.i*

Yes ☐ No ☐ *(Implementation date: Feb. 28, 2023 for Existing Registrants and Sept. 1, 2023 for New Registrants)*

82. Do ordinances or other regulatory mechanism require erosion controls, sediment controls, and waste materials management controls used and maintained at all qualifying construction projects? *Schedule A.3.d.ii*

Yes ☒ No ☐ NA ☐

If necessary, provide an explanation:

83. RVSS' code requires construction projects less than one acre to abide by the prohibition on illicit discharges. The code does not specifically require erosion, sediment or waste management controls.

84. Indicate the minimum land disturbance where construction site operators are required to complete and implement an Erosion and Sediment Control Plan (ESCP) for construction project sites: *Schedule A.3.d.ii*

In square feet or portion of an acre: 1 ft^2 ☐, acres ☒

If necessary, provide an explanation:

Projects greater than one acre are required to create and implement an ESCP in accordance with the 1200-C/CN permit. Projects less than one acre currently sign a one page "Small site stormwater permit" that lists BMPs that the developer agrees to follow. The permits are not site specific and no plan for the project is required.

85. For construction projects that disturb one or more acres (or that disturb less than one acre, if it is part of a "common plan of development or sale" disturbing one or more acres), provide a brief description how these project are referred to DEQ or the appropriate DEQ agent, to obtain a NPDES Construction Stormwater General Permit. *Schedule A.3.d.iii*

RVSS is a 1200-C and 1200-CN agent. All projects within our MS4 boundary that disturb greater than one acre must apply for a 1200-C or CN permit through our office. We coordinate review of the erosion control, sanitary sewer and post-construction designs so that a single project approval is issued when all parts meet our standards.

86. Proved the written specifications that address the proper installation and maintenance of such controls during all phases of construction activity as an attachment *Schedule A.3.c.iv*

Attached: Yes ☒ No ☐

If necessary, provide an explanation:

RVSS served on an ACWA committee in 2013 to create the ACWA Construction Site Stormwater Guide, which we distribute in our Designated Erosion Control Inspector Certification classes.

87. Provided the Erosion and Sediment Control Plan template as an attachment? *Schedule A.3.d.iv.A*

Attached: Yes ☒ No ☐

If necessary, provide an explanation:

88. Indicate which of the following are required for qualifying construction projects: *Schedule A.3.d.iv*

☒ Site operator are required to complete an ESCP template prior to beginning construction/land disturbance
☒ Site operator are required to be kept the ESCP on site
☒ Site operator are required maintain and update the ESCP as site conditions change, or as needed.
☒ Site operator are required to provide the ESCP to the permit registrant, DEQ, or another administrating entity

If necessary, provide an explanation:

Yes, for all projects disturbing one acrea or greater.

89. ESCP templates [from construction projects that will result in land disturbance of one or more acres (or that disturb less than one acre, if it is part of a "common plan of development or sale" disturbing one or more acres)] are reviewed using a checklist or similar document to determine compliance? *Schedule A.3.d.v*

Yes ☒ No ☐

90. Provide the ESCP review template as an attachment? *Schedule A.3.d.v*

Attached: Yes ☒ No ☐

91. Indicate the minimum land disturbance where you require the ESCP to be review, if different than one acre: ft^2 ☐, acres ☐

If necessary, provide an explanation:

92. All construction projects [that will result in land disturbance of one or more acres (or that disturb less than one acre, if it is part of a "common plan of development or sale" disturbing one or more acres)] are expected or scheduled to be inspected at least once per permit term? *Schedule A.3.d.vi.A.1*

Indicate the number of inspections completed to comply with this requirement during this reporting year: 31 projects greater than one acre in area were inspected in FY19. Questions 92 and 96 are not worded specifically enough to provide different data. They should be reworded or one of them eliminated. DEQ should note that question 92 is confusingly worded such that no useful data will be provided. The number of inspections completed during a permit year may include many repeat inspections at a single project and will not reveal whether inspections were completed in compliance with this requirement. DEQ has not asked for the number of projects permitted in a year, or even the number of active projects in a year. Without this associative information, the number of inspections completed in a year does not mean much.

93. Number of inspections completed to comply with this requirement during the permit term:

If necessary, provide an explanation:

94. Are construction projects with visible sediment in stormwater/dewatering discharge or when a complaint is received inspected? *Schedule A.3.d.vi.A.2*

Yes ☒ No ☐

95. Indicate number of projects that were inspected bases on this inspection trigger: 0

If necessary, provide an explanation:

96. Indicate the total number of construction projects that were inspected this monitoring year: 39
97. Indicate the total number of construction projects that were inspected during the permit term:

98. Indicate which of the following are documented during an inspection: *Schedule A.3.c.vi.B*

- ☐ That the ESCP is reviewed to determine if the described
- ☒ Control measures were installed, implemented, and maintained appropriately
- ☐ Assessment of the site's compliance with the ordinances or requirements
- ☒ Visual observation of any existing or potential non-stormwater discharges, illicit connections, and/or discharge of pollutants from the site
- ☒ Recommendations to the construction site operator for follow-up
- ☐ Education or instruction provided to the site operator related to stormwater pollution prevention practices

If necessary, provide an explanation:

99. If available, provide a copy of the written or electronic inspection report form. *Schedule A.3.c.vi.B*

Attached: Yes ☒ No ☐

100. For Existing Large Communities: indicated number of new construction projects inspected that disturb less one acre during this monitoring year. *Schedule A.3.c.vi.B*

91

If necessary, provide an explanation:

Sites less than one acre receive a driveby inspection once, these inspections are not documented.

101. Provide the written escalating enforcement and response procedure as an attachment? *Schedule A.3.d.vii*

Yes ☒ No ☐

(For Existing Registrant must be submitted with the third Annual Report. New Registrants must submit by September 1, 2023)

If necessary, provide an explanation:

This document is provided in response to question 58 above.

102. Was the escalating enforcement procedure used to achieve compliance at any construction projects? *Schedule A.3.d.vii*

Yes ☒ No ☐

Indicate number of time during this reporting year: 5

103. Indicate number of time during the permit term:

If necessary, provide an explanation:

Five Brown Tags, a first step in our enforcement procedure, were issued this year and resulted in compliance.

104. Were all persons responsible for ESCP reviews, site inspections, and enforcement are appropriately trained to conduct such activities? *Schedule A.3.d.viii*

Yes ☒ No ☐

If necessary, provide an explanation:

RVSS is listed in the 1200-C permit as an approved provider of Designated Erosion and Sediment Control Inspector training. We hold trainings for new inspectors twice a year and recertification trainings at least twice a year. RVSS' own inspectors also have CESCL certification. See Table 4 for testing results.

105. Were all new staff working to implement the construction site runoff control program appropriately trained within 30 days of their assignment to this program? *Schedule A.3.d.viii*

Yes ☒ No ☐

If necessary, provide an explanation:

No new staff hired this year.

3.5 Post-Construction Site Runoff for New Development and Redevelopment

106. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.e*

RVSS initated the creation of a Post-Construction Working Group among MS4 permittees in the Rogue Valley. This group has been meeting monthly to discuss changes needed to bring the Rogue Valley Stormwater Design Manual into compliance with the new permit. We have also initiated internal discussions about raising our current threshold for stormwater management from 2500sf up to 5000sf.

107. Were the required components in place by the implementation date? *Schedule A.3.d.i*

Yes ☐ No ☐ *(Implementation date: Feb. 28, 2023 for Existing Registrants and Sept. 1, 2023 for New Registrants)*

108. For projects creating or replacing impervious area, indicate the area (or threshold) where the site is required to implement the post-construction site runoff program requirements: *Schedule A.3.e.ii*

In square feet: 2500 ft^2

109. If necessary, provide an explanation:

Question 108 and 125 are collecting the same info. The current threshold of the Rogue Valley Stormwater Design Manual is 2500sf. Single family homes and three lot partitions are exempt from this threshold. Because no exemptions are allowed under the new permit RVSS is considering raising the threshold to 5000sf in the future.

110. Indicate which of the following are required at qualifying sites: *Schedule A.3.e.ii*

☒ The use of stormwater controls

☒ A site-specific stormwater management approach that targets natural surface or predevelopment hydrological function through the installation and long-term operation and maintenance of stormwater controls

☒ Long-term O&M of stormwater controls at project sites that are under the ownership of a private entity

If necessary, provide an explanation:

111. Were ordinance(s), code(s) and development standards reviewed to identify, minimize or eliminate barriers that inhibit design and implementation techniques intended to minimize impervious surfaces and reduce stormwater runoff? *Schedule A.3.e.iii*

Yes ☐ No ☒

112. If barriers were identified or if necessary, provide an explanation:

113. Provide an explanation of the timeline for removal of barriers or if removal is outside your authority:

114. Indicate which of the following technical standards are used to determine the retention requirement: *Schedule A.3.e.iv.A*

☐ Volume-based method

☐ Storm event percentile-based method

☐ Annual average runoff-based method

If necessary, provide an explanation:

Not yet applicable.

115. For projects that are unable to meet the retention requirement, is the remainder of the rainfall/runoff treated prior to discharge with a structural stormwater control? *Schedule A.3.e.iv.B*

Yes ☐ No ☐

116. Was the stormwater structural control designed to remove, at minimum, 80 percent of the total suspended solids?

Yes ☐ No ☐

If necessary, provide an explanation:

Not yet applicable.

117. Are the allowable structural stormwater controls and specifications available for review? *Schedule A.3.e.iv.C*

Yes ☒ No ☐

118. Indicate if they are attached or the location where they can be viewed:

Attached ☐

Location:
https://www.rvss.us/pilot.asp?pg=StormwaterDesignManual
If necessary, provide an explanation:

119. Have alternatives for projects complying with the retention requirement been approved? *Schedule A.3.e.iv.D*
Yes ☐ No ☐

120. If yes, are the written technical justifications evaluated? *Schedule A.3.e.iv.D*
Yes ☐ No ☐

121. Provide a brief description of the factors of technical infeasibility or site constraints that prevented the on-site management of the runoff amount stipulated in the stormwater retention requirement or a portion thereof. *Schedule A.3.e.iv.D*

If necessary, provide an explanation:
Not yet applicable.

122. Before the allowance of alternative compliance, were mitigation options established? *Schedule A.3.e.iv.E*
Yes ☐ No ☐
If necessary, provide an explanation:
Not yet applicable.

123. If applicable, indicate which of the following mitigation options have been used and provide a narrative description of the implementation of the mitigation option? *Schedule A.3.e.iv.E*
☐ Off-Site Mitigation

☐ Groundwater Replenishment Projects

☐ Treatment Equivalent to the Retention Requirement

If necessary, provide an explanation:

124. Was a procedure developed for the review and approval of structural stormwater control plans for new development and redevelopment projects? *Schedule A.3.e.v*
Yes ☒ No ☐
If necessary, provide an explanation:
This has been in place since at least 2012.

125. Indicate the minimum land disturbance or creation of new impervious area where plans are required to be review:
2500 ft^2 ☒, acres ☐ of land disturbance ☐ creation of new impervious area ☒

126. Are all sites that use alternative compliance to meet the retention requirement reviewed?
Yes ☐ No ☐
If necessary, provide an explanation:
Question 125 is collecting the same info. as question 108.

127. Indicate if an inventory and implementation strategy is used to ensure that all stormwater controls are operated and maintained to meet the site performance standard in Schedule A.3.e.iv of the permit? *Schedule A.3.e.vi*
Yes ☒ No ☐
If necessary, provide an explanation:

128. Indicate which of the following strategies have been developed to ensure that all stormwater controls are operated and maintained to meet the site performance standard in Schedule A.3.e.iv.: *Schedule A.3.e.vi*
☒ Legal authority to inspect and require effective operation and maintenance of privately owned and operated stormwater controls

☒ Inspection procedures and an inspection schedule to ensure compliance with the O&M requirements of each stormwater control operated by the permit registrant and by other private entities

☒ A tracking mechanism for documenting inspections and the O&M requirements for each stormwater control

☒ Reporting requirements for privately owned and operated stormwater controls that document compliance with the O&M requirement in Schedule A.3.f.

If necessary, provide an explanation:

129. Are the location of all public and private stormwater controls installed during this permit term are documented on the MS4 Map? *Schedule A.3.e.vi*

Yes ☐ No ☒

If necessary, provide an explanation:

In progress.

130. Were all persons responsible for performing post-construction runoff site plan reviews, administrating the alternative compliance program, or performing O&M practices or evaluating compliance with long-term O&M requirements are appropriately trained to conduct such activities? *Schedule A.3.e.vii*

Yes ☒ No ☐

If necessary, provide an explanation:

131. Were all new staff working to implement the post-construction site runoff for new development and redevelopment program appropriately trained within 30 days of their assignment to this program? *Schedule A.3.e.vii*

Yes ☒ No ☐

If necessary, provide an explanation:

3.6 Pollution Prevention and Good Housekeeping for Municipal Operations

132. Provide a brief summary of the overall progress towards implementation of this control measure. *Schedule A.3.f*

In spring of 2019 RVSS earned the EcoBiz certification for Fleet indicating that RVSS maintains its vehicle fleet in accordance with the metrics established by the EcoBiz program. Our next goal is to work with our co-implementing cities to review their policies and determine what improvements are needed.

133. Were the required components in place by the implementation date? *Schedule A.3.f.i*

Yes ☐ No ☐ *(Implementation date: Feb. 28, 2022 for Existing Registrants and Sept. 1, 2023 for New Registrants)*

134. Were O&M strategies for existing controls developed for both permit registrant-owned controls and controls owned and operated by another entity discharging to the MS4? *Schedule A.3.f.ii*

135. Yes ☐ No ☐ N/A ☐

If necessary, provide an explanation:

RVSS has standard operating procedures for many of its routine tasks. We will be working with our co-implementers over the next couple years to determine what practices they have and what improvements are needed. As for controls owned and operated by "another entity", that is very difficult to govern as we don't necessarily know where they exist or what they are. Some of the other entities discharging to the MS4 are goverened by 1200-Z permits, which RVSS has no jurisdiction over.

136. Indicate the percentage of catch basins inspected/cleaned: *Schedule A.3.f.iii*

Percentage inspected this reporting year: Phoenix 30. Talent 31. Jackson County unknown, JACO lumps cleaning of catch basins with pipe cleaning. We will work with them to modify this for the future. ; Percentage cleaned: Phoenix 30%, Talent 10%, Jackson County unknown.

137. If known, estimate of material removed: Phoenix 9. Talent 25. Jackson County unknown cy

138. Percentage inspected during the permit term: Is this the same as Q136??; Percentage cleaned:

139. If know, estimate of material removed: Is this the same as Q137? units

If necessary, provide an explanation:

140. Indicated if a catch basin inspection prioritization system and/or an alternate inspection frequency has been established. *Schedule A.3.f.iv*

Yes ☐ No ☒

If necessary, provide an explanation:

141. During the permit term were existing procedures for inspection and maintenance schedules reviewed/updated to ensure pollution prevention and good housekeeping practices are conducted for the following activities? *Schedule A.3.f.iv*

- ☐ Pipe cleaning for stormwater and wastewater conveyance systems
- ☐ Cleaning of culverts conveying stormwater in roadside ditches
- ☐ Ditch maintenance
- ☐ Road and bridge maintenance
- ☐ Road repair and resurfacing including pavement grinding
- ☐ Dust control for roads and municipal construction sites
- ☐ Winter road maintenance, including salt or de-icing storage areas
- ☐ Fleet maintenance and vehicle washing
- ☐ Building and sidewalk maintenance including washing
- ☐ Solid waste transfer and disposal areas
- ☐ Municipal landscape maintenance
- ☐ Material storage and transfer areas, including fertilizer and pesticide, Hazardous material, used oil storage, and fuel
- ☐ Fire fighting training activities
- ☐ Maintenance of municipal facilities including public parks and open space, golf courses, airports, parking lots, swimming pools, marinas, etc.

If necessary, provide an explanation:

142. Do any permit registrant-owned facilities have coverage under DEQ's 1200-Z Industrial Stormwater Discharge Permit? *Schedule A.3.f.v*

Yes ☐ No ☒ NA ☐

If "Yes", provide DEQ File Number(s):

If necessary, provide an explanation:

143. Are practices in place to reduce the discharge of pollutants to the MS4 associated with the application and storage of pesticides and fertilizers? *Schedule A.3.f.vi*

Yes ☒ No ☐

If necessary, provide an explanation:

he city of Talent in FY19 adopted a revised IPM policy that will phase out the use of synthetic pesticides within three years.

144. Are methods/practices in place to reduce the discharge litter within the jurisdiction? *Schedule A.3.f.vii*

Yes ☒ No ☐

If necessary, provide an explanation:

All the co-implementers have street sweeping programs in place through which all roads are swept at least annually, many more frequently based on traffic volume. Jackson County hires the Community Justice Crew to perform litter collection on county roads, covering 888 miles of roads in the county this year, there are 756 miles of roads in the county, but not all areas may have been visited as some areas were visited more than once. The Jackson County parks program removed 1.070 cubic yards of trash from homeless camps in the Bear Creek riparian corridor, dump fees alone for this debris were $18,000.

145. Are practices in place to ensure that collected material or pollutants removed in the course of maintenance managed and disposed of in a manner such as to prevent such pollutants from entering the waters of the state in accordance with state and federal rules? *Schedule A.3.f.viii*

Yes ☐ No ☐

If necessary, provide an explanation:

This will be evaluated over the next few years as we review standard procedures in all co-implementer communities.

146. Were all persons responsible for evaluating O&M practices, evaluating compliance with long-term O&M requirements or ensuring pollution prevention at facilities and during operation appropriately trained to conduct such activities? *Schedule A.3.f.ix*

Yes ☐ No ☐

If necessary, provide an explanation:

Staff did receive training during the year, at this time it is not possible to say whether all staff received training on this within 30 days of assignment.

147. Were all new staff working to implement the pollution prevention and good housekeeping for municipal operations program appropriately trained within 30 days of their assignment to this program? *Schedule A.3.f.ix*

Yes ☐ No ☐

If necessary, provide an explanation:

Staff did receive training during the year, at this time it is not possible to say whether all staff received training on this within 30 days of assignment.

4.0 Monitoring

If the requirement does not apply, mark "NA" and explain why it does not apply to you in the comments field.

148. Was municipal stormwater monitoring performed at outfall locations, in the receiving waterbody, or to demonstrate compliance with this permit? *Schedule B.3*

Yes ☒ No ☐

149. If "Yes" is the data included in the Annual Report?

Yes ☒ No ☐

If necessary, provide an explanation:

Stream monitoring and outfall sampling is conducted on a rotating basis throughout the MS4 during the dry season. In FY19, Horn, Daisy and Mingus creeks in Central Point were sampled and all flowing outfalls to these creeks were sampled. Instream sample data was submitted to the Volunteer Monitoring Coordinator. Water Quality data from flowing outfalls is attached to this report.

4.1 Wood Village Monitoring Requirements

150. Provide a summary of the following to evaluate the control strategies established for the Lower Columbia Slough Phosphate, Lead, and Bacteria TMDLs: *Schedule D.1.b*

Phosphate:

Lead:

Bacteria:

151. Indicated which of the following were completed:

☐ For phosphate, monitor influent and effluent dissolved orthophosphate concentrations and total phosphate concentrations at a representative site in Fairview Lake (Reach 4) and Fairview Creek (Reach 5)

☐ For lead, estimates of the effectiveness of controls to remove TSS

☐ For bacteria, measuring E. coli concentrations and its distribution over flows (for example, flow duration intervals) to demonstrate compliance with E. coli criteria

If necessary, provide an explanation:

5.0 Water Quality Standards

152. During this monitoring year was it determined or reported that the MS4 discharge caused or contributed to an excursion of an applicable water quality standard? *Schedule A.1.b*

Yes ☐ No ☒

If necessary, provide an explanation:

153. How and when did the excursion of an applicable water quality standard occur? *Schedule A.1.b*

If necessary, provide an explanation:

154. Was the excursion self-reported or did DEQ send written notification? *Schedule A.1.b*

Self-reported: Yes ☐ No ☐

If necessary, provide an explanation:

155. Within 48 hours was an investigation started into the cause of the water quality excursion? *Schedule A.1.b.i*

Yes ☐ No ☐

If necessary, provide an explanation:

156. Within 30 days of becoming aware of the excursion, was DEQ notified in writing, if self-reporting? *Schedule A.1.b.ii*

Yes ☐ No ☐

If necessary, provide an explanation:

157. Within 60 days of becoming aware of or being notified of the excursion, was a report submitted to DEQ that documents the following: *Schedule A.1.b.iii*

☐ The results of the investigation, including the date the excursion was discovered
☐ A brief description of the conditions that triggered the violation or the cause
☐ Corrective actions taken or planned, including the date corrective action was completed or is expected to be completed

If necessary, provide an explanation:

158. Were the corrective actions implemented in accordance with the schedule approved by DEQ? *Schedule A.1.b*

Yes ☐ No ☐

If necessary, provide an explanation:

159. Provide any additional comments or narrative description, if necessary:

Appendix Table of Contents

APPENDIX A: Section 2.0 General Information

2.3 Table 1. MS4 Receiving Water Body 303d and TMDL Information

Question 18.

- Intergovernmental Agreement between RVSS and the City of Phoenix
- Intergovernmental Agreement between RVSS and the City of Talent

Table 1. RVSS MS4 Receiving Water Body 303d and TMDL listings *, **.

Stream	Sub-Stream	RVSS Stream code	Total Outfalls	Last sampled (calendar year)	303d listed Y/N	Impairment	TMDL Y/N	Impairment
Rogue River		0			Y	DO, mercury	Y	Fecal coliform, Temp.
Bear Creek		1	15	2019	Y	Arsenic, DO	Y	aquatic weeds, DO, pH, E. coli, P, Temp.
Willow		2					N	
Jackson		4	30	2013	Y	Biological criteria, DO	N	Fecal coliform, Temp.
	Dean	5			N		N	
	Horn (W Fork Jackson) LLID 1229318423752	6	30	2018	Y	DO	Y	E. coli
Griffin		7	66	2013	Y	DO, pH	Y	DO, fecal coliform
	Daisy	8	24	2018	N		N	
Mingus		9	65	2018	N		N	
Elk		10	13		N		N	
Lone Pine		11			Y	DO, pH	Y	Temp., E. coli
Hopkins Canal		12			N		N	
	Bear Cr Feeder Canal	13			N		N	
	Coker Butte Canal	14			N		N	
Crooked		15	7	2018	N		N	
Gore		20	5	2018	N		N	
Coleman		21	11	2015	N		Y	DO, E. coli, fecal coliform, Temp.
Payne		22	8	2015	N		Y	DO, fecal coliform, Temp.
East Main Canal		23		2016	N		N	
Anderson		24	1	2015	N		N	
Phoenix Canal (West Main canal)		26	9	2016	N		N	
Wagner		27	24	2016	Y	DO	Y	E. coli, Temp.
Meyer		28			N		Y	Fecal coliform, Temp.
Talent Canal	Canal	29			N		N	
Butler		30			N		Y	DO, Temp., Fecal Coliform
Lower East Canal		32			N		N	

Table 1. RVSS MS4 Receiving Water Body 303d and TMDL listings *, **.

Stream	Sub-Stream	RVSS Stream code	Total Outfalls	Last sampled (calendar year)	303d listed Y/N	Impairment	TMDL Y/N	Impairment
Neil Creek		44			N		Y	Do, E. Coli, Temp.
Emigrant Creek		45			N		Y	Temp., P
Upton Slough		35	2		N		N	
	Upton Lateral	36			N		N	
	Coker Butte Lateral				N		N	
Whetstone		37	4		N		N	
	Ave. A Trib./Agate Slough	41	5	2018	N		N	
	Swanson	42		2018	N		N	
	N. fork of Whetstone: LLID 1228851424204	43	1	2018	Y	aquatic weeds/ algae	N	
Little Butte		38			N		N	
	Dutton Pond	39			N		N	
Denman		40			N		N	
	Total outfalls		**335**					
	Total without CP		**67**					
	40% of outfalls screened by 2022		26.8					
	20% screened each subsequent y		33.5					

*303d and TMDL status listings as of September 2019.

**Based on MS4 boundary prior to Central Point secession.

INTERGOVERNMENTAL AGREEMENT

BETWEEN CITY OF PHOENIX AND

ROGUE VALLEY SEWER SERVICES

THIS AGREEMENT is made and entered into as of the 3rd day of June, 2019, between the **City of Phoenix**, a municipal corporation of the State of Oregon, hereinafter referred to as "Phoenix", and **Rogue Valley Sewer Services**, a Sanitary Authority formed under the provisions of Oregon Revised Statutes 450.705 to 450.980, hereinafter referred to as "RVSS".

RECITALS

WHEREAS RVSS has the legal authority under ORS 450.705 to 450.980 to provide sanitary sewer and surface water management within its boundaries; and

WHEREAS Phoenix has the authority to operate and maintain surface water management systems as provided for under its charter and relevant laws; and

WHEREAS RVSS has managed surface water quality since 2004 and held the National Pollutant Discharge and Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit since 2007, on behalf of Phoenix and other local municipalities; and

WHEREAS the Oregon Department of Environmental Quality (DEQ) has issued a new NPDES MS4 permit that went into effect on March 1, 2019; and

WHEREAS both Phoenix and RVSS desire to have RVSS continue to hold and manage the NPDES MS4 permit; and

WHEREAS both Phoenix and RVSS have the authority to enter into contracts for the cooperative operation of service facilities under ORS Chapter 190,

NOW, THEREFORE, in consideration of the covenants and agreements to be kept and performed by the parties hereto, it is agreed as follows:

Section 1. Definition of Terms

Wherever the following terms are used in this agreement they shall have the following meaning unless otherwise specifically indicated by the context in which they appear:

A. **Area of Geographic Responsibility** of this agreement means the limits of the City of Phoenix.

B. **Municipal Separate Storm Sewer System (MS4)** is defined in 40 CFR §122.26(b) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer

district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the Clean Water Act that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works as defined at 40 CFR §122.2.

C. **National Pollution Discharge Elimination System (NPDES)** is the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of Clean Water Act [40 CFR §122.2].

D. **Regulated small MS4** is a municipal separate storm sewer that is not a medium or large MS4. Large MS4 is defined in 40 CFR §122.26(b)(4). Medium MS4 is defined in 40 CFR § 122.26(b)(7). For the purposes of this permit, a small MS4 is any municipal separate storm sewer system located within a Census-defined Urbanized Area. Regulated small MS4s are automatically designated as needing a NPDES permit pursuant to federal requirements found in 40 CFR § 122.30-37. Regulated small MS4 also mean any MS4 designated by DEQ pursuant to 40 CFR §122.26((a)(1)(v) and/or 123.35 as needing a NPDES permit.

E. **Stormwater Advisory Team (SWAT)** is a committee made up of representatives of the jurisdictions and agencies that require the use of the "Rogue Valley Stormwater Quality Design Manual". The purpose of this committee is to support and assist the member agencies with all aspects related to each member agency's MS4 Permit.

F. **Stormwater Management Program (SWMP)** refers to a comprehensive program to manage the quality of stormwater discharged from the MS4. For the purposes of this permit, the SWMP consists of the actions and activities conducted by the permit registrant as required by the permit and described in the permit registrant's' SWMP Document.

G. The **Rogue Valley Stormwater Design Manual (Design Manual)** governs management of stormwater runoff resulting from redevelopment and development.

Section 2. Duties of RVSS

2.1 RVSS will hold the MS4 permit on behalf of Phoenix and will develop and implement a Stormwater Management Program to meet all requirements and timelines stated in the MS4 Phase II permit. In general terms, this involves the following actions:

a. **Public Education and Outreach:** RVSS will develop and implement a program to inform the public about the impacts of stormwater discharges on waterbodies and steps they can take to reduce pollutants in stormwater runoff.

b. **Public Participation:** RVSS will develop and implement a program that provides opportunities for the public to effectively participate in the development of the Stormwater Management Program control measures.

c. **Illicit Discharge Detection and Elimination:** RVSS will develop and implement a program to detect and eliminate illicit discharges in to the MS4, to the extent allowable by state laws.

d. **Construction Site Stormwater Management:** RVSS will develop and implement a program to enforce construction site runoff to reduce discharges of pollutants from construction sites in its coverage area.

e. **Post-Construction Stormwater Management:** RVSS will continue to implement the post-construction site runoff program as it has been adopted thus far, while developing and implementing the requirements of Schedule A.3.e to reduce discharges of pollutants and control stormwater runoff from new development and redevelopment project sites in its coverage area.

f. **Pollution Control in Municipal Operations:** RVSS will properly operate and maintain its facilities, using prudent pollution prevention and good housekeeping to reduce the discharge of pollutants through the MS4 to waters of the state. Stormwater facilities designed to manage water quality are under the jurisdiction of RVSS.

2.2 RVSS will establish and collect a stormwater quality management fee that will be assessed against property within Phoenix. The fee structure and amount will be the same in Phoenix as in other areas covered by RVSS' MS4 permit.

2.3 RVSS will, at the request of the City, collect an additional fee to support the operation and maintenance of the storm drainage system. Fees collected under this provision will be forwarded to the City monthly.

2.4 RVSS will prepare an annual report in compliance with the MS4 permit. This report will be submitted to DEQ no later than the due date of the annual report each year. A copy of the report will be provided to the City.

2.5 RVSS will complete those portions of the annual Total Maximum Daily Load (TMDL) report covered by the MS4 SWMP and will provide the text to the City no later than 30 days prior to the City's deadline for submitting the TMDL report to DEQ.

2.6 RVSS will give the City Council an update of the stormwater program at a regular council meeting during the first quarter of each calendar year.

Section 3. Duties of Phoenix

Phoenix will perform the following functions in support of the MS4 permit:

3.1 **Construction Site Runoff:** The City will require that Small Site Storm Drain Protection Permits are signed by the developer for all ground disturbing activities that do not meet the minimum size to require Erosion and Sediment Control plans under the MS4 guidelines. City will provide the signed Permit to RVSS.

3.2 **Pollution Control in Municipal Operations:** The City will properly operate and maintain its facilities, using prudent pollution prevention and good housekeeping to reduce the discharge of pollutants through the MS4 to waters of the state. Stormwater facilities designed for collection and conveyance of stormwater are under the jurisdiction of the City.

3.3 **Tracking and Assessment:** The City will be responsible for tracking and maintaining records of its activities to meet the requirements of Pollution Control in Municipal Operations. Records of annual

activities, as well as a descriptive summary of the activities, will be provided to RVSS 60 days prior to the due date of the annual report each year, for inclusion in the annual MS4 report.

Section 4. Coordination

4.1 Both RVSS and Phoenix will be full voting members of the Stormwater Advisory Team (SWAT).

4.2 The City will require that Small Site Storm Drain Protection Permits are signed by the developer for all ground disturbing activities that do not meet the minimum size to require Erosion and Sediment Control plans under the MS4 guidelines. City will provide the signed Permit to RVSS.

4.3 The City will require compliance with the Design Manual as a condition of approval for all new developments that require planning approval.

4.4 RVSS will review proposed plans and will notify the City, in writing, when plans have been approved.

4.5 City will not issue Certificate of Occupancy until RVSS has notified City, in writing, that installation of the stormwater facility has been accepted.

4.6 The City will incorporate stormwater quality facilities in all city funded capital improvement projects in compliance with the approved Design Manual. To the extent that RVSS has funds available for stormwater quality capital improvements, such funds will be made available to the City to the same extent as they are available to other communities covered by the RVSS MS4 permit.

4.7 The City will schedule time for RVSS to update the City Council on the stormwater program at a regular council meeting during the first quarter of each calendar year.

4.8 The City will provide timely input and approvals to programs and projects developed by RVSS for compliance with the MS4 permit.

Section 5. Dispute Resolution

In the event of a dispute between the parties regarding their respective rights and obligations pursuant to this Agreement, the parties shall first attempt to resolve the dispute by negotiation. If a dispute is not resolved by negotiation, the exclusive dispute resolution process to be utilized by the parties shall be as follows:

5.1 **Step 1.** The nature of the dispute shall be put in writing and submitted to the City Manager and RVSS Manager, who shall meet and attempt to resolve the issue. If the issue in dispute is resolved at this step, there shall be a written determination of such resolution, signed by the City Manager and RVSS Managers, which determination shall be binding on the parties. Resolution of an issue at this step requires concurrence of both parties' representatives. If not resolved in 30 days, this issue may be taken to Step 2.

5.2 **Step 2.** In the event a dispute cannot be resolved at Step 1, the parties shall submit the matter to mediation. The parties shall first attempt to agree on a mediator. In the event that they cannot agree, the parties shall request a list of five (5) mediators from the American Arbitration Association, or such other entity or firm providing mediation services to which the parties may further agree. Each party shall strike a name in turn, until only one name remains. The order of striking names shall be determined by lot. Any common costs of mediation shall be borne equally by the parties,

who shall bear their own costs and fees therefor. If the issue is resolved at this step, a written determination of such resolution shall be signed by both parties. Resolution of an issue at this step requires concurrence by both parties.

5.3 **Step 3.** If any dispute is not settled in Step 2, either party may request binding arbitration. The parties shall agree on an arbitrator, who shall be an attorney licensed to practice law in Oregon (or retired) or a retired Oregon judge, to resolve the dispute. If the parties are unable to agree on an arbitrator within ten (10) days after the request for arbitration, each party shall appoint an arbitrator. The two arbitrators shall choose a third, who will then arbitrate the dispute. If the two arbitrators are unable to agree on a third arbitrator within 10 days, either party may apply to the presiding judge of the judicial district of Jackson County to appoint an arbitrator. The arbitrator shall proceed according to the Oregon statutes governing arbitration, and the award of the arbitrator shall have the effect therein provided. The arbitration shall take place in Jackson County. Costs of a single or any third arbitrator shall be shared equally by the parties. Each party shall pay its own arbitrator. The arbitrator may allow discovery, as provided by Oregon law, and may grant any remedy or relief which the arbitrator deems just and equitable and within the scope of the agreement of the parties, including, but not limited to, specific performance of any obligation created under the agreement, any interim or provisional relieve that is necessary to protect the rights or property of the parties, or imposition of sanctions for abuse or frustration of the arbitration process.

Parties may mutually agree in writing to waive any of the above steps, or to enter into alternative or additional processes.

Section 6. Modifications or Amendments

Any change, amendment, or modification to this Agreement must be in writing and signed by all parties hereto.

Section 7. Term of Agreement

This agreement shall be in effect for the duration of the MS4 permit, unless terminated as provided below.

Section 8. Termination

Either party may terminate this Agreement for the reasons listed below. Oregon DEQ shall be notified of any/all termination notices.

8.1 If one party materially breaches the terms of this Agreement the non-breaching party shall provide a written notice specifying the nature of the breach. The non-breaching party may terminate this Agreement if the breach is not corrected within 30 days, or, if the breach cannot be corrected in 30 days, if the breaching party fails to commence and pursue curative action with reasonable diligence.

8.2 If the provisions of this Agreement become impractical due to a change in the law or other changed circumstances, which did not exist at the time of the signing of this Agreement.

Section 9. Severability

If any provision of this Agreement shall be invalid or unenforceable in any respect for any reason, the validity and enforceability of any such provision in any other respect and of the remaining provisions of this Agreement shall not be in any way impaired.

IN WITNESS WHEREOF, this instrument has been executed in duplicate by the authority of lawful actions by the Phoenix City Council and the Rogue Valley Sewer Services Board of Directors and is effective July 1, 2019.

ROGUE VALLEY SEWER SERVICES
JACKSON COUNTY, OREGON

By _____
Chairman, Board of Directors

Attest: _____
Manager

CITY OF PHOENIX, OREGON

By _____
Chris Luz, Mayor

Attest: _____
Aaron Prunty, City Manager

Attachment:

National Pollutant Discharge Elimination System: Municipal Separate Storm Sewer Systems, Phase II General Permit
Issued November 30, 2018, Expires March 1st, 2019

INTERGOVERNMENTAL AGREEMENT

BETWEEN CITY OF TALENT AND

ROGUE VALLEY SEWER SERVICES

THIS AGREEMENT is made and entered into as of the 12th day of July, 2019, between the **City of Talent**, a municipal corporation of the State of Oregon, hereinafter referred to as "Talent", and **Rogue Valley Sewer Services,** a Sanitary Authority formed under the provisions of Oregon Revised Statutes 450.705 to 450.980, hereinafter referred to as "RVSS".

RECITALS

WHEREAS RVSS has the legal authority under ORS 450.705 to 450.980 to provide sanitary sewer and surface water management within its boundaries; and

WHEREAS Talent has the authority to operate and maintain surface water management systems as provided for under its charter and relevant laws; and

WHEREAS RVSS has managed surface water quality since 2004 and held the National Pollutant Discharge and Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit since 2007, on behalf of Talent and other local municipalities; and

WHEREAS the Oregon Department of Environmental Quality (DEQ) has issued a new NPDES MS4 permit that went into effect on March 1, 2019; and

WHEREAS both Talent and RVSS desire to have RVSS continue to hold and manage the NPDES MS4 permit; and

WHEREAS both Talent and RVSS have the authority to enter into contracts for the cooperative operation of service facilities under ORS Chapter 190,

NOW, THEREFORE, in consideration of the covenants and agreements to be kept and performed by the parties hereto, it is agreed as follows:

Section 1. Definition of Terms

Wherever the following terms are used in this agreement they shall have the following meaning unless otherwise specifically indicated by the context in which they appear:

A. **Area of Geographic Responsibility** of this agreement means the limits of the City of Talent.

B. **Municipal Separate Storm Sewer System (MS4)** is defined in 40 CFR §122.26(b) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer

district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the Clean Water Act that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works as defined at 40 CFR §122.2.

C. **National Pollution Discharge Elimination System (NPDES)** is the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of Clean Water Act [40 CFR §122.2].

D. **Regulated small MS4** is a municipal separate storm sewer that is not a medium or large MS4. Large MS4 is defined in 40 CFR §122.26(b)(4). Medium MS4 is defined in 40 CFR § 122.26(b)(7). For the purposes of this permit, a small MS4 is any municipal separate storm sewer system located within a Census-defined Urbanized Area. Regulated small MS4s are automatically designated as needing a NPDES permit pursuant to federal requirements found in 40 CFR § 122.30-37. Regulated small MS4 also mean any MS4 designated by DEQ pursuant to 40 CFR §122.26((a)(1)(v) and/or 123.35 as needing a NPDES permit.

E. **Stormwater Advisory Team (SWAT)** is a committee made up of representatives of the jurisdictions and agencies that require the use of the "Rogue Valley Stormwater Quality Design Manual". The purpose of this committee is to support and assist the member agencies with all aspects related to each member agency's MS4 Permit.

F. **Stormwater Management Program** (**SWMP**) refers to a comprehensive program to manage the quality of stormwater discharged from the MS4. For the purposes of this permit, the SWMP consists of the actions and activities conducted by the permit registrant as required by the permit and described in the permit registrant's' SWMP Document.

G. The **Rogue Valley Stormwater Design Manual (Design Manual)** governs management of stormwater runoff resulting from redevelopment and development.

Section 2. Duties of RVSS

2.1 RVSS will hold the MS4 permit on behalf of Talent and will develop and implement a Stormwater Management Program to meet all requirements and timelines stated in the MS4 Phase II permit. In general terms, this involves the following actions:

a. **Public Education and Outreach:** RVSS will develop and implement a program to inform the public about the impacts of stormwater discharges on waterbodies and steps they can take to reduce pollutants in stormwater runoff.

b. **Public Participation:** RVSS will develop and implement a program that provides opportunities for the public to effectively participate in the development of the Stormwater Management Program control measures.

c. **Illicit Discharge Detection and Elimination:** RVSS will develop and implement a program to detect and eliminate illicit discharges in to the MS4, to the extent allowable by state laws.

d. **Construction Site Stormwater Management:** RVSS will develop and implement a program to enforce construction site runoff to reduce discharges of pollutants from construction sites in its coverage area.

e. **Post-Construction Stormwater Management:** RVSS will continue to implement the post-construction site runoff program as it has been adopted thus far, while developing and implementing the requirements of Schedule A.3.e to reduce discharges of pollutants and control stormwater runoff from new development and redevelopment project sites in its coverage area.

f. **Pollution Control in Municipal Operations:** RVSS will properly operate and maintain its facilities, using prudent pollution prevention and good housekeeping to reduce the discharge of pollutants through the MS4 to waters of the state. Stormwater facilities designed to manage water quality are under the jurisdiction of RVSS.

2.2 RVSS will establish and collect a stormwater quality management fee that will be assessed against property within Talent. The fee structure and amount will be the same in Talent as in other areas covered by RVSS' MS4 permit.

2.3 RVSS will, at the request of the City, collect an additional fee to support the operation and maintenance of the storm drainage system. Fees collected under this provision will be forwarded to the City monthly.

2.4 RVSS will prepare an annual report in compliance with the MS4 permit. This report will be submitted to DEQ no later than the due date of the annual report each year. A copy of the report will be provided to the City.

2.5 RVSS will complete those portions of the annual TMDL report covered by the MS4 SWMP and will provide the text to the City no later than 30 days prior to the City's deadline for submitting the TMDL report to DEQ.

2.6 RVSS will give the City Council an update of the stormwater program at a regular council meeting during the first quarter of each calendar year.

Section 3. Duties of Talent

Talent will perform the following functions in support of the MS4 permit:

3.1 **Construction Site Runoff:** The City will require that Small Site Storm Drain Protection Permits are signed by the developer for all ground disturbing activities that do not meet the minimum size to require Erosion and Sediment Control plans under the MS4 guidelines. City will provide the signed Permit to RVSS.

3.2 **Pollution Control in Municipal Operations:** The City will properly operate and maintain its facilities, using prudent pollution prevention and good housekeeping to reduce the discharge of pollutants through the MS4 to waters of the state. Stormwater facilities designed for collection and conveyance of stormwater are under the jurisdiction of the City.

3.3 **Tracking and Assessment:** The City will be responsible for tracking and maintaining records of its activities to meet the requirements of Pollution Control in Municipal Operations. Records of annual

activities, as well as a descriptive summary of the activities, will be provided to RVSS 60 days prior to the due date of the annual report each year, for inclusion in the annual MS4 report.

Section 4. Coordination

4.1 Both RVSS and Talent will be full voting members of the Stormwater Advisory Team (SWAT).

4.2 The City will require that Small Site Storm Drain Protection Permits are signed by the developer for all ground disturbing activities that do not meet the minimum size to require Erosion and Sediment Control plans under the MS4 guidelines. City will provide the signed Permit to RVSS.

4.3 The City will require compliance with the Design Manual as a condition of approval for all new developments that require planning approval.

4.4 RVSS will review proposed plans and will notify the City, in writing, when plans have been approved.

4.5 City will not issue Certificate of Occupancy until RVSS has notified City, in writing, that installation of the stormwater facility has been accepted.

4.6 The City will incorporate stormwater quality facilities in all city funded capital improvement projects in compliance with the approved Design Manual. To the extent that RVSS has funds available for stormwater quality capital improvements, such funds will be made available to the City to the same extent as they are available to other communities covered by the RVSS MS4 permit.

4.7 The City will schedule time for RVSS to update the City Council on the stormwater program at a regular council meeting during the first quarter of each calendar year.

4.8 The City will provide timely input and approvals to programs and projects developed by RVSS for compliance with the MS4 permit.

Section 5. Dispute Resolution

In the event of a dispute between the parties regarding their respective rights and obligations pursuant to this Agreement, the parties shall first attempt to resolve the dispute by negotiation. If a dispute is not resolved by negotiation, the exclusive dispute resolution process to be utilized by the parties shall be as follows:

5.1 **Step 1.** The nature of the dispute shall be put in writing and submitted to the City Manager and RVSS Manager, who shall meet and attempt to resolve the issue. If the issue in dispute is resolved at this step, there shall be a written determination of such resolution, signed by the City Manager and RVSS Managers, which determination shall be binding on the parties. Resolution of an issue at this step requires concurrence of both parties' representatives. If not resolved in 30 days, this issue may be taken to Step 2.

5.2 **Step 2.** In the event a dispute cannot be resolved at Step 1, the parties shall submit the matter to mediation. The parties shall first attempt to agree on a mediator. In the event that they cannot agree, the parties shall request a list of five (5) mediators from the American Arbitration Association, or such other entity or firm providing mediation services to which the parties may further agree. Each party shall strike a name in turn, until only one name remains. The order of striking names shall be determined by lot. Any common costs of mediation shall be borne equally by the parties,

who shall bear their own costs and fees therefor. If the issue is resolved at this step, a written determination of such resolution shall be signed by both parties. Resolution of an issue at this step requires concurrence by both parties.

5.3 **Step 3.** If any dispute is not settled in Step 2, either party may request binding arbitration. The parties shall agree on an arbitrator, who shall be an attorney licensed to practice law in Oregon (or retired) or a retired Oregon judge, to resolve the dispute. If the parties are unable to agree on an arbitrator within ten (10) days after the request for arbitration, each party shall appoint an arbitrator. The two arbitrators shall choose a third, who will then arbitrate the dispute. If the two arbitrators are unable to agree on a third arbitrator within 10 days, either party may apply to the presiding judge of the judicial district of Jackson County to appoint an arbitrator. The arbitrator shall proceed according to the Oregon statutes governing arbitration, and the award of the arbitrator shall have the effect therein provided. The arbitration shall take place in Jackson County. Costs of a single or any third arbitrator shall be shared equally by the parties. Each party shall pay its own arbitrator. The arbitrator may allow discovery, as provided by Oregon law, and may grant any remedy or relief which the arbitrator deems just and equitable and within the scope of the agreement of the parties, including, but not limited to, specific performance of any obligation created under the agreement, any interim or provisional relieve that is necessary to protect the rights or property of the parties, or imposition of sanctions for abuse or frustration of the arbitration process.

Parties may mutually agree in writing to waive any of the above steps, or to enter into alternative or additional processes.

Section 6. Modifications or Amendments

Any change, amendment, or modification to this Agreement must be in writing and signed by all parties hereto.

Section 7. Term of Agreement

This agreement shall be in effect for the duration of the MS4 permit, unless terminated as provided below.

Section 8. Termination

Either party may terminate this Agreement for the reasons listed below. Oregon DEQ shall be notified of any/all termination notices.

8.1 If one party materially breaches the terms of this Agreement the non-breaching party shall provide a written notice specifying the nature of the breach. The non-breaching party may terminate this Agreement if the breach is not corrected within 30 days, or, if the breach cannot be corrected in 30 days, if the breaching party fails to commence and pursue curative action with reasonable diligence.

8.2 If the provisions of this Agreement become impractical due to a change in the law or other changed circumstances, which did not exist at the time of the signing of this Agreement.

Section 9. Severability

If any provision of this Agreement shall be invalid or unenforceable in any respect for any reason, the validity and enforceability of any such provision in any other respect and of the remaining provisions of this Agreement shall not be in any way impaired.

IN WITNESS WHEREOF, this instrument has been executed in duplicate by the authority of lawful actions by the Talent City Council and the Rogue Valley Sewer Services Board of Directors and is effective July 1, 2019.

ROGUE VALLEY SEWER SERVICES
JACKSON COUNTY, OREGON

By Kay M Harrison
Chairman, Board of Directors

Attest:
Manager

CITY OF TALENT, OREGON

By: Sandra Spellman
City Manager

Date: 6/21/19

APPENDIX B: Section 3.1 Public Education and Outreach Documentation

Question 29. Table 2. RVSS Public Education and Outreach Events for FY19

RVCOG Annual Report of E and O Activities

Table 2. Rogue Valley Sewer Services Public Education and Outreach Events FY 2019

Event	Audience	Location	Date	People contacted directly	Activity	Target topic covered
July 4 parade	All Ages	Central Point	7/4/2018	190	distribute dog waste bag holders	
Jackson Soil & Water Conservation District Natural Resources Day Camp	Youth	North Mtn. Park, Ashland	8/13/2018	40	stormwater lesson/activity	
Present at August Institute (teacher training)	educators	OSU Southern Oregon Research & Extension Center	8/18/2018	20	promote stormwater education opportunities	
Salmon Watch pre-trip presentation	Youth	Orchard Hill Elem. School	9/25/2018	90	stormwater lesson/activity	
Salmon Watch field trip	Youth	Kennedy Elem. @ McGregor Park	9/25/2018	60	water quality/stormwater lesson/activity	
Talent Middle School (School of Design & Innovation) community service/stormwater facility maintenance (weeding)	Youth	Front St. rain gardens	9/26/2018	50	stormwater & green infrastructure lesson/activity	
Salmon Watch pre-trip presentation	Youth	Oak Grove Elem. School	9/27/2018	60	stormwater lesson/activity	
Bear Cr. Fall Festival	All Ages	Bear Cr. Park	9/29/2018	50	stormwater outreach	
Talent Harvest Fest	All Ages	Talent City Hall	10/6/2018	175	stormwater outreach/display on LID	
Salmon Watch field trip	Youth	Talent Middle School (School of Design & Innovation) @ Touvelle park	10/9/2018	55	water quality/stormwater lesson/activity	
Salmon Watch field trip	Youth	Logos Charter School at McGregor Park	10/2/2018	60	water quality/stormwater lesson/activity	
Salmon Watch pre-trip presentation	Youth	Talent Elem. School	10/10/2018	60	stormwater lesson/activity	
Wagner Cr. Park stormwater facility planting event	All Ages	Wagner Cr. Park, Talent	10/13/2018	20	Discussion of benefits of LID, bioswale planting	
Salmon Watch field trip	Youth	Talent Outdoor Discover Program & Kennedy Elem. at Valley of the Rogue State Park	10/9/2018	60	water quality/stormwater lesson/activity	
Salmon Watch pre-trip presentation	Youth	Talent Elem. School	10/23/2018	29	stormwater lesson/activity	
Field trip to view salmon	HS	Armadillo Tech.@ US Cellular Park Nature Center	10/24/2018	20	water quality/salmon lesson/activity	
Salmon Watch field trip	Youth	Talent Elem. School @ Cantrall Buckley Co. Park	10/25/2018	27	water quality/stormwater lesson/activity	
Salmon Watch pre-trip presentation	Youth	Talent Elem. School	10/29/2018	30	stormwater lesson/activity	
Salmon Watch pre-trip presentation	Youth	Hanby Middle School Comet Academy Magnet Program	10/29/2018	30	stormwater lesson/activity	
Classroom visit	HS	Phoenix High School, Environmental Science (4 classes)	11/9/2018	100	stormwater lesson/activity	
ESC Inspector Training	Engineering and Construction Professionals	RVSS	11/7/2018	23	ESC training	
ESC Inspector Recertification	Engineering and Construction Professionals	RVSS	12/13/2018	21	ESC recertification	

Table 2. Rogue Valley Sewer Services Public Education and Outreach Events FY 2019

Event	Audience	Location	Date	People contacted directly	Activity	Target topic covered
Talent Middle School (School of Design & Innovation) storm drain marking with Talent Community Development Director	Youth	Talent	12/18/2018	50	stormwater lesson/activity	
ESC Inspector Recertification	Engineering and Construction Professionals	RVSS	1/24/2019	26	ESC recertification	
Talent Community Development Fair booth	Adults	Talent Comm. Ctr.	2/5/2019	20	Stormwater education, promote storm drain art project	
ESC Inspector Recertification	Engineering and Construction Professionals	RVSS	2/28/2019	27	ESC recertification	
Integrated Pest Management education event	Adults	Talent Community Center	4/13/2019	12	Stormwater education, pesticide BMP outreach	
Talent Middle School (School of Design & Innovation) storm drain marking with Talent Community Development Director	Youth	Talent	4/17/2019	15	stormwater lesson/activity	
Bear Creek Stewardship Day/stream clean-up	All Ages	Talent/Lynn Newbry Park	4/20/2019	14	trash clean-up	
Bear Creek Stewardship Day/stream clean-up	All Ages	Phoenix/Blue Heron Park	4/20/2019	13	trash clean-up	
Presentation to Southern OR Landscape Assoc.	landscape professionals	RVSS	4/23/2019	10	Presentation on green infrastructure	
LID walking tour (w/Rogue Riverkeeper)	Adults	Talent	4/24/2019	7	Tour of green infrastructure sites	
Presentation at ACF West Inc. conference	Adults	Presentation to engineers, construction professionals and others	5/16/2019	24	Presentation on green infrastructure	
ESC Inspector Training	Engineering and Construction Professionals	RVSS	5/9/2019	31	ESC training	
Talent Middle School (School of Design & Innovation) community service/stormwater facility maintenance (weeding)	Youth	Front St. rain gardens	5/28/2019	50	stormwater & green infrastructure lesson/activity	
Talent Middle School (School of Design & Innovation) community service/stormwater facility maintenance (weeding)	Youth	Front St. rain gardens	6/3/2019	50	stormwater & green infrastructure lesson/activity	
Friends of Wagner Cr. stormwater facility maintance event	All Ages	Wagner Cr. Park, Talent	6/8/2019	6	bioswale maintenance	
Total contacts by RVSS:				**1625**		

KEY:

Impacts of illicit discharges on receiving waters and how to report them		Low impact development/green infrastructure	
Impacts from impervious surfaces and appropriate techniques to avoid adverse impacts		Watershed awareness and how storm drains lead to local creeks and potential impacts	
BMPs for proper use, application, and storage of pesticides and fertilizer		Erosion & sediment control measures for construction operators	

BMPs for litter and trash control	

Phase II Stormwater Implementation –
Public Education and Outreach, Public Involvement and Participation Summary

Milestones and Report for Work Conducted July 1, 2018– June 30, 2019

Report Prepared by the Rogue Valley Council of Governments

RVCOG is funded by Rogue Valley Sewer Services (RVSS) to implement Public Education and Outreach and Public Involvement and Participation Activities to meet the obligations of the NPDES Phase 2 Regional Stormwater Management permit. RVCOG works with RVSS Staff, the RVSS communities (Talent, Phoenix, and Jackson County), other MS4s, local, state, and regional groups, NGO's, Watershed Councils, Federal, State, and local agencies, schools, volunteer groups, nature centers, the Stream Smart Program, and the public to achieve the goals outlined in the permit and in Stormwater Management Plan (SWMPs).

Examples of activities conducted include developing stormwater educational materials for local programs including hands-on activities and exhibits for events, presenting the materials and activities at local events, implementing programs including Salmon Watch, Community Clean-up Events, and the Adopt-A-River Program, contributing to the regional Stormwater Advisory Team, distributing information to the news media and through online platforms including Stream Smart, evaluating programs (Salmon Watch), and using the information to revise and update the stormwater outreach and education program as needed. In 2018 and 2019, RVCOG worked with RVSS and local MS4s to develop recommendations for meeting the new DEQ general permit issued in November 2018. The draft report is available at **http://rvcog.org/wp-content/uploads/2017/01/SWMP-Draft-June-28th-2019.pdf**. Changes adopted for the program will be included in the 2019-2020 annual report.

Highlights:

- Programs reached over 1,700 people (not including visitation to the Stream Smart website).
- The top 10 Stream Smart Pages received over 12,000 visits (12,320)
- Over 300 brochures, post cards, stickers, and activities (e.g., word searches, mazes) were distributed at local libraries, events, front counters, meetings, and businesses.

- Continued the Salmon watch program for a sixth consecutive season. Conducted 25 Salmon Watch field days with 17 schools. *1,224 students reached in the program overall (488 in RVSS jurisdictions).*
- Salmon Watch Partners included the Bear Creek MS4s and TMDL DMAs, the Bear Creek Watershed Education Partners (BCWEP), RVSS, Oregon Department of Fish and Wildlife, O.S.U. Extension, the Rogue River Watershed Council (RRWC), the Rogue Basin Partnership (RBP), the Medford Water Commission, Jackson Soil and Water Conservation District (SWCD), BLM, the Freshwater Trust (TFT), Lomakatsi, Oregon State Parks, and local schools.
- Secured funding to support continuation of the Salmon Watch Program for 2019 from the Gray Family Foundation. Grant funding supports transportation, contracted instructors, supplies, and fees related to the program (parking, permits).
- Participated in and helped coordinate volunteer clean-ups including two Bear Creek Stewardship Days in September and April. Multiple starting locations along Bear Creek were offered to residents from Central Point to Ashland, with several locations in Medford. *325 participants.*
- Presented education and outreach information at 7 local events in a partnership with the Stream Smart and/or TMDL programs, schools, and partners. Events included 3 working with schools and students, 4 general community events. *425 people reached.*
- Conducted an on-air program with the Jefferson Exchange in August to promote the Stream Smart Program, the Bear Creek Fall Festival, Salmon Watch, and the Bear Creek Clean ups.
- Participated in RVTV's Adventures in Education TV Series on the Salmon Watch Program (https://archive.org/details/PA4839827).

Public Education and Outreach Program

Task 1: School Age Public Education Meetings, Presentations, Events, and Activities

Task 1.a: Maintain relationships/communication between the Phase 2 municipal stormwater programs and school districts within the stormwater management boundary

Partnered with local schools, education groups, and others to provide program support in the region including loaning of materials to schools and partners, attending meetings/education fairs, meeting with students for project/internships, recruiting students for volunteer project needs, promoting programs through listserves (SOREEL), working with Nature Centers, and assisting with programs as needed or requested. Activities included loaning equipment and tools to school programs, working with schools directly (e.g., Scenic Middle School), and forwarding contacts onto RVSS if the school is located in an RVSS jurisdiction. A list of resources and programs to support

schools, volunteer groups, and partners is found in Attachment A. Specific activities are summarized in the table below.

Date(s)	Organization(s)	Activity
July 2018 through March 2019	Southern Oregon University (SOU)	**SOU Internship.** Worked with an SOU intern on a stormwater project to design and implement a project to treat rooftop runoff from a school. The end product was a design for a rain garden to treat the runoff.
7/17/18	Jackson SWCD, RRWC, North Mountain Park, RVSS	Attended the **Jackson SCWD Forest and Range Day Camp** to run a field day modeled after the Salmon Watch program. Ran the water quality station for the program. In addition, loaned equipment for the program (macros and water quality). *50 attendees.*
8/13/2018	SOREEL	Attended the **August Institute Educators Resource Fair**. Staffed a booth with information about resources and programs including brochures and also were at the event to recruit class participation in the Salmon Watch program and other activities and instructors for the program through student attendance (primarily from SOU). *40 attendees*.
January through March 2019	Crater High School	**Crater Intern**. We worked with a student on a project focused around water quality and restoration at Crater Land lab which included developing a monitoring plan and collecting data. Impacts of urban runoff was included as part of the monitoring objectives.
4/6/2019	RRWC	Loaned macro equipment to the Rogue River Watershed Council for **World Fish Migration Day**
4/25/2019	Southern Oregon Land Conservancy, Local Schools	Loaned macro equipment to support **SOLC's Loving the Land Program**. The program offers a week-long educational program for kids, grades 4-5, following Earth Day in late April. This hands-on opportunity takes place in the Oredson-Todd Woods, a city-owned conserved park south of Ashland. For five days the park is transformed into a learning center for adventure, exploration and creativity, under the guidance of stewardship staff and enthusiastic volunteer educators.
4/29/2019	**CTE Advisory Board Annual Meeting** - Crater High School	RVCOG is serving as part of the Advisory Board for the CTE program at Crater Renaissance. The purpose of the annual meeting was to review the program to determine if it is meeting the requirements for CTE and Industry.

5/15/2019	Kennedy Elementary School, City Staff, RVSS, Jackson SWCD	Participated in an **educational program** with four classes at **Kennedy Elementary School** with Jackson SWCD, RVS, and the City of Medford. Our portion of the program focused on pollutants, watersheds, storm drain connections to creeks, the connection from Bear Creek to the Rogue to the Pacific Ocean. Activities included the stormwater pollutants in a jar and the watershed model. *88 participants*
5/24/19	Cantrall Buckley, Applegate Partnership, Ruch Outdoor School	Loaned Salmon Watch equipment to the Applegate Partnership and Cantrall Buckley for **Outdoor Day** with Ruch Outdoor School.
6/24/19	Jackson SWCD, RRWC, North Mountain Park,	Attended the **Jackson SCWD Forest and Range Day Camp** to run a field day modeled after the Salmon Watch program. Ran the water quality station for the program. Format was similar to the summer of 2017 with a station on fish art replacing the volunteer station. In addition, loaned equipment for the program (macros and water quality). *50 attendees.*
May/June 2019	SOU	Met with a potential intern regarding potential work for the summer of 2019.

Task 1.b: Salmon Watch.

Worked with RVSS, local MS4s, and other partners to coordinate and implement the program for a 6th year. Classes were held from September through November 1st. Activities included project meetings, assisting and coordinating Salmon Watch field days, teaching classes as both a lead and regular instructor, coordinating and maintaining gear, reporting, and administering program logistics including handling contracts, recruiting schools, recruiting instructors, training instructors, revising curriculum/field sheets, obtaining permits and permissions for field sites, completing surveys, and writing a report for and obtaining additional funding from the Gray Family Foundation for Salmon Watch funding. Overall the program had 25 field days reaching 1,220 students from 16 schools. The participation represents our most successful year since the program returned in 2014. A program summary is attached in Attachment B.

In addition, we filmed the Adventures in Education Program with Rogue Valley Community Television (RVTV) featuring Salmon Watch in January 2019. The program runs approximately 30 minutes and is available on RVTV's website.

Task 1.c: Bear Creek Stewardship Day

Clean up events were held in the fall of 2018 and spring of 2019 and focused on picking up trash along Bear Creek including around some storm drains. Activity related to the clean-up event is summarized in the table below.

In addition, RVCOG assisted in the development of the Bear Creek Fall Festival and attended it as an exhibitor. Activities includes attending planning meetings, leveraging

funding for the event from the Bear Creek Watershed Working Group administered through the Rogue River Watershed Council and sponsorships from local organizations, obtaining permits for the event, advertising, event logistics, event attendance, and other activities.

Date(s)	Organization(s)	Notes
July 2018 through June 2019	Jackson County, Gordon Elwood Foundation, Phoenix, RBP, Medford Food Co-op	Participated as part of the planning committee for the Clean-up events. Planning for the events included overall coordination, multiple meetings, volunteer recruitment, organizing and staffing check in locations, ordering supplies, advertising, and getting donations for the event participation.
9/29/2018	Multiple partners including SOLVE, the Gordon Elwood Foundation, local businesses and MS4s.	Bear Creek Stewardship day (Fall). Volunteers cleaned up 6.5 miles of the Bear Creek Corridor at 8 check-in locations in Ashland, Central Point, Medford, Phoenix and Talent. This SOLVE sponsored event drew *93 participants*.
4/21/2019	Multiple partners including SOLVE, the Gordon Elwood Foundation, local businesses and MS4s.	Bear Creek Stewardship day (Spring). Volunteers cleaned up the Bear Creek Corridor at 9 check-in locations in Ashland, Central Point, Medford, Phoenix and Talent. *232 participants*.

Task 2: Adult Public Education and Outreach

Task 2.a: Informational Brochures

- Distributed and restocked brochures. Brochures distributed included the Stream and Wetland Enhancement Guide, Streams in Jackson County, Yard Care, Stream Smart Pledge Cards (English and Spanish), the Stormwater Brochure, Erosion Prevention and Sediment Control, and the NOAA Salmon brochure. Over 500 brochures and educational materials were distributed in 2018-2019.
- Brochures were available at front counters, at local libraries in English and Spanish, posted in common areas (Festival Flyers), and at local business including coffee shops.
- Brochures are also available online at http://rvcog.org/what-we-do/natural-resources/stormwater-101/. Additional resources include OSU's Rain Garden Guide, How Trees Tame Stormwater, and links to EPA's Barrier Buster Fact Sheets.
- Worked with SWAT and the Stream Smart Advisory Committee on priorities for updating and/or creating new brochures over the next few years. Brochures identified as needing revisions and/or replacement include the Erosion Prevention and Sediment Control (EPSC), Yard Care, Painting, and Concrete. The EPSC

was identified as the greatest need and will be the focus of planned updates in 2019-2020.

Task 2.b: Serve as media contact

Interviews were conducted with local media outlets for the Bear Creek Clean-ups prior to the event and with participants on the 20th (Channel 5, Channel 12, and the Mail Tribune). An in-depth interview with KOBI on the Bear Creek Greenway including restoration (stream, swales), water quality including sources of pollution, and other issues of concern. In addition, we conducted an on air interview at the Jefferson Exchange in August 2018. The interview focused on the Stream Smart Program and upcoming events and activities including the Adopt-A-River Program, Go Blue, the Bear Creek Clean-ups, the Bear Creek Fall Festival, and Salmon Watch.

Task 2.c: Stream Smart.

Continued active participation in the Stream Smart Program. Activities completed to support program activities supported by Phase II MS4s including RVSS and TMDL DMAs include:

- Arranged for hosting and maintenance of Stream Smart website. Activities included
    - Domain name registration and providing for hosting services
    - Added software monitor and scan the website for threats
    - Added a program to remove malware that was found on the site
    - Worked with a web consultant to repair the pledge links for the maps
    - Updating the website and plug-ins
- Revised and updated the Stream Smart Website. Example activities included:
    - Added upcoming events and volunteer opportunities
    - Updated and revised content and pictures
    - Added pages on the Stream Smart website for new programs (e.g., Imagine A Day Without Water)
    - Updating existing pages with new/updated information (e.g., Home Page, Salmon Watch, EcoBiz, Clean-ups, Fall Festival).
- Worked with partners to promote the program through Social Media (Instagram and Facebook)
- Continued to facilitate and host the Stream Smart Advisory Committee. Meetings were held in September, December. March, and June.
- Promoted website at events, meetings, presentations, through program implementation, in marketing materials, event flyers, on brochures, and on social media.
- Continued to work to expand program with new partners (e.g., Army Corps of Engineers for Salmon Watch) and pledges (see next bullet).
- Worked with the Rogue River Watershed Council (RRWC) and a web designer to integrate a pesticide pledge on the Stream Smart Website. The pledge was developed using a similar format to the other pledges (map, pledge page,

information, etc.). Funding for the pledge page was provided from the RRWC through a grant.
- Talked with Stream Smart partners about needs for the program including a website redesign.
- Received bids for the website redesign.
- Worked on fundraising for the website updates from partners.

Task 2.d: Displays/Posters

- Participated in 3 events focused on schools (students) and detailed in Task 1 table: the Jackson Soil and Water Conservation Districts Field Camp (July 2018 and June 2019), and a program for 1st graders at Kennedy Elementary School on May 15th, 2019. *188 participants*.
- Participated in 4 community events RCC's Earth Day (April 18th, 2019), Rogue Valley Earth Day (April 20th, 2019), the Land Steward Workshop (April 27th, 2019), and the Bear Creek Fall Festival (September 29th, 2018). *462 participants*
- Activities, posters, and other materials were updated for the events to reflect a better integration with the Stream Smart Program and the target audience of the events.
- Researched additional hands on activities and added new materials to our education kits (mazes, coloring pages, stickers, temporary tattoos, etc.)

Task 3. Public Involvement Event and Miscellaneous

Task 3. Public Involvement Event. Public involvement for the MS4 programs was achieved through the community clean up events and Bear Creek Fall Festival. RVCOG participated in the development and coordination of both events. In 2018, the Festival was paired with the Stewardship Day to tie in volunteer activities with educational materials. Information on both the events is summarized under item 1.c. No additional events were completed.

Task 3a: Stormwater Advisory Team (SWAT)

RVCOG attended all quarterly SWAT meetings in 2018-2019. RVCOG reviewed and provided comments on drafts and provided regular updates to the SWAT on outreach and public involvement activities. In addition, provided updates on the Stream Smart Program and the SWMP Framework document developed with RVSS.
At the meetings, we presented updates of activities completed for the Education and Outreach and Public Involvement and Public Participation Programs.

Task 3b. Monitoring Results

RVCOG collected and analyzed data on hot spots and storm drains as part of the TMDL monitoring program. Data is distributed to DMAs and other interested parties, and is available online http://rvcog.org/what-we-do/natural-resources/water-quality-monitoring/.

Task 3c. Miscellaneous. Completed quarterly and annual reporting. In addition, we worked with RVSS and local MS4s to develop SWMP recommendations for meeting the new DEQ general permit issued in November 2018. The recommendations were started in the winter and spring and finished in the summer of 2019 and involved several meetings with the Stormwater Education and Outreach Working Group and RVSS.

Activity Photos and Examples of selected deliverables


Salmon Watch
What the Program Offers:
● Established curriculum (meets NGSS).
● Field day for students with hands-on educational activities.
● Coordination, equipment, location, transportation (limited) and instructors for program provided.
● No/limited cost to schools (transportation).
. Optional program add-ons (service learning
. projects, in classroom visits (limited)).
Funding for Salmon Watch and Stream Smart by the local Stormwater Communities (MS4s) and TMDL Designated Management Agencies (DMAs)


School Resources
Selected Resources Available:
● Education Kits (BCWEP)
● Clean-up Supplies - (bags, gloves, trash picker uppers, canopies, gloves).
● Tools - shovels, rakes, wheelbarrow, auger.
● Microscopes and binoculars
● Car Wash Kit—currently housed at Ashland Public Works
Educational and Volunteer Program Examples:
● Salmon Watch - Fall (September/October)
● Community Clean-Ups - September 29th, 2018
● Stream Smart Program (www.stream-smart.com)
● Volunteer Planting/Stewardship Activities
● Event Participation (Provide information, Hands-on activities)
● Internships/Senior Projects

Agencies, Groups, and funders that RVCOG worked with on stormwater and water quality issues and volunteering for program activities:

- Bear Creek Watershed Education Partners (a former 501c(3) organization, now a volunteer organization)
- OSU Extension Service
- Oregon Department of Fish and Wildlife
- Oregon State Parks
- Siskiyou Environmental Education Center (SEEC)
- Regional Environmental Education Leaders (REEL)
- Coyote Trails Nature Center
- Freshwater Trust (TFT)
- Renaissance Academy at Crater High School
- Rogue River Watershed Council (RRWC)
- Rogue Basin Partnership (RBP)
- Cooperative Weed Management Areas in Jackson and Josephine County
- Local schools – elementary, middle school, and high school, public and private
- Local Scouts (clean-ups)
- Oregon Stewardship
- Lomakatsi Restoration Council
- North Mountain Park Nature Center
- Southern Oregon Education Service District
- Jackson Soil and Water Conservation District (SWCD)
- Rogue Riverkeeper (RRK)
- Bureau of Land Management
- Medford Water Commission
- Scenic Middle School
- SOLVE
- Gray Family Foundation
- Siskiyou Field Institute (SFI)
- Gordon Elwood Foundation
- Local communities (Ashland, Talent, Phoenix, Medford, Central Point, Jacksonville, Grants Pass, and Rogue River)
- Jackson and Josephine Counties
- World Salmon Council
- Southern Oregon University
- Southern Oregon Land Conservancy
- Applegate Partnership
- Cantrall Buckley Park

Other tasks completed:

- Applied for and received small stipends for supporting the Clean-up events through SOLVE and the Rogue Basin Partnership. Grants funding received was

used to provide supplies (gloves, trash picker uppers, snacks for volunteers), signs and marketing materials, and other expenses.

- Continued participation in the Rogue Basin Partnership, a collaborative of agencies and entities partnering to implement an action plan to conserve and restore the Rogue Basin. A portion of the plan is dedicated to stormwater and urban runoff impacts. In addition, a directory of resources for schools was created which includes the stormwater education programs, Salmon Watch, and Stream Smart. The phase II programs supported RVCOG's participation in the process.
- Maintained geocache locations related to stormwater, and other water quality related features. 29 visits were logged to the Swale, Isn't It? and Wait, that's used for what? Caches. Information on Geocaching is available online at https://www.geocaching.com/play/search.
- Worked with local schools to conduct before and after surveys with Salmon Watch classes from Central Point.
- Completed a detailed report for the Salmon Watch program activities for the fall of 2018.
- Loaned tools for schools and community groups to maintain stormwater management features including swales.
- Created additional kits for the Salmon Watch Program for use in 2019.
- Worked with a local artist to develop Salmon signs for use with riparian restoration activities and for the Salmon Watch Program.
- Obtained and printed anatomy posters for the Salmon Biology dissection portion of Salmon Watch.
- RVCOG created new banners, signs, and provided other materials for the clean-up check in stations.

Attachments:

Resource List (Updated for 2019 August Institute)

Salmon Watch Program Report

Attachment A: Resource List

Rogue Valley Council of Governments (RVCOG) Resource List

The Rogue Valley Council of Governments works with communities and schools in both Jackson and Josephine Counties, to provide educational programs, technical assistance, and resources (in-kind and equipment) for water quality, urban runoff/stormwater management, riparian restoration, environmental stewardship, and other topics. Programs are provided through the Stream Smart Program, Stormwater Phase II Education programs, TMDL (water quality) education programs, in conjunction with partners, or through partner organizations. Funding for many of the programs are provided through local Phase II Stormwater Communities (MS4s) and TMDL Designated Management Agencies (DMAs).

Examples include implementing the Salmon Watch program, in conjunction with local Communities, Rogue Valley Sewer Services, watershed councils, Federal, State, and Local agencies, and others, organizing community clean-ups along Bear Creek in the spring and fall, and providing tours of restoration sites (e.g., the Gold Ray Dam site for high school students). RVCOG is also the home of many resources of the Bear Creek Watershed Education Partners (BCWEP).

For information on programs listed on this sheet or to reserve tools and resources, please contact Greg Stabach (information below). Tools and resources are available on a first-come, first-served basis (reservation required) and can be picked up and dropped off during normal business hours (M-F, 8:00 a.m. to 5:00 p.m.) at our office located at 155 North First Street in Central Point.

Contact:

Greg Stabach
Natural Resources Program Manager
(541) 423-1370
gstabach@rvcog.org
www.rvcog.org

Resources:

- Planting – shovels, gloves, rakes, wheelbarrow, auger
- Invasive Species Management/Maintenance – weed whacker, loppers, hand clippers, rakes
- Education Kits (BCWEP) – water quality, macroinvertebrate, salmon, riparian, and amphibian
- Clean-Up Supplies – trash bags, trash picker-uppers, buckets, tent canopies, gloves
- Monitoring Equipment – discharge meter, suspended sediment sampler, hand held meters, temperature loggers, turbidimeter
- Car Wash Kit – currently housed at Ashland Public Works (541) 488-5587
- Watershed Model – Rogue Valley Sewer Services, Jennie Morgan (541) 664-6300
- Microscopes and binoculars
- Soil sieves
- Measuring tapes, rulers, stadia rod

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Rogue Valley Council of Governments (RVCOG) Resource List

- Posters, maps, brochures, reference books
- Drone services – Partnership possibility. RVCOG licensed pilots
- Mapping services- GIS

Program Examples:

- SalmonWatch classes – generally offered in the fall (September – November). RVCOG recruits qualified educators to serve as volunteer or paid educators (stipend offered for classes taught).
- Community Clean-Ups – Fall (September) and Spring (April) annually along Bear Creek coinciding with SOLVE events.
- Volunteer plantings/stewardship – opportunities vary throughout the year.
- Event participation – Bear Creek Fall Festival, Earth Day, Education Symposiums, and others.
- Presentations – available upon request.
- Technical assistance – available upon request.
- Technical assistance referrals.
- Internships/Senior Projects (Capstone) – opportunities vary annually.
- Provide trees – Native trees and shrubs can be provided to schools on a limited basis.
- Grants – Work with schools and others to get funding for programs and projects including partnering on, writing, and administering grants.
- Stream Smart – http://www.stream-smart.com/. A Rogue Basin-centered program that serves as a regional clearinghouse for information on water quality, urban runoff, riparian restoration, and other topics. The site also helps encourages local residents to take pledges to help improve water quality and watershed conditions. An events calendar highlights events, meetings, and volunteer opportunities that are available to anyone.

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Attachment B: Salmon Watch Summary Report Fall 2018

2018 Program Summary

In the fall of 2018, the Rogue Valley Council of Governments working on behalf of the NPDES Phase II Stormwater Communities (Phoenix, Talent, Medford, Ashland, Jackson County, and Central Point), Rogue Valley Sewer Services and local water quality programs (TMDLs) partnered with the Gray Family Foundation, Bear Creek Watershed Education Partners (BCWEP), the Rogue River Watershed Council, and others to implement the Salmon Watch Program. Classes were conducted in September, October, and early November (November 1st). Overall, 25 field days were conducted with 46 classes and over 1,200 students. Classes represented schools from the Bear Creek Valley, Greater Jackson County, and Josephine County. In addition, 17 organizations, agencies, and municipalities donated their time to the program and provided in kind match to the program. The match reduces program costs and also allows us to leverage grant funding for the program. Details on the class dates, field locations, schools involved, number of students, and other information (e.g., volunteer instructors) can be found in the Table 1.

New to the program in 2018 was the Gray Family foundation financial support of the program. The initial grant application included provisions for three years of total funding at a reduced level each subsequent year if the program continues to be a success. We applied for Year 2 funding in December 2018 and were approved in March 2019. In 2019, we are working with the Army Corps of Engineers for long term use of McGregor Park for the Salmon Watch Program. The Corps is also a new partner for the program.

In addition to the field classes, there are a number of other program activities that are conducted to implement the program. Activities include an instructor training held on September 12th for 19 contracted educators and volunteer instructors, recruiting schools and instructors through emails, personal contacts, and at the August Institute and other events, advertising the program, completing before and after program surveys, providing in school presentations (limited outside of RVSS jurisdictions), coordinating logistics for the program (schools, sites, programs,

instructors), obtaining permits for site use (TouVelle and Valley of the Rogue), managing contracts for instructors, providing reimbursements for program expenses (transportation, parking fees), maintaining and stocking kits, and other logistics.

Salmon Watch Field Day

For most classes, the format is the same in terms of timing, modules, and other logistics. There are exceptions for classes that make special arrangements (e.g., Scenic Middle School).

Salmon Watch field days are scheduled for around 4 hours at field locations spread throughout Bear Creek and the Middle Rogue Watershed. Field sites include McGregor Park, Valley of The Rogue State Park, Tou Velle State Park, Cantrall Buckley Park, Griffin Creek at Scenic Middle School, Reinhart Park, Fish Hatchery Park, and numerous sites along Bear Creek (Blue Heron Park, Lynn Newbry Park, Bear Creek Park, Coyote Trails Nature Center, North Mountain Park).

The "classic" four module model is used from the Salmon Watch Curriculum for the programs. Instructors are assigned stations to discuss Salmon Biology/Salmon Life Cycle (station 1), water quality (station 2), macroinvertebrates (station 3), and riparian areas (station 4). Each station also has activities for students including salmon viewing (when spawning), salmon dissection, water quality testing, macroinvertebrate sampling, native plant identification, drawing riparian cross sections and longitudinal profiles, scavenger hunts, and shade surveys. Classes are divided up into 4 groups and rotated through the stations every 35 minutes, so every student participates in the four stations. Examples of completed activity forms are included in Appendix A and an example schedule is presented below.

Schedule

9:00-9:15	Intro (Lead Instructor)
9:15-9:50	Rotation 1
9:55-10:30	Rotation 2
10:35-11:10	Rotation 3
11:15-12:00	Lunch
12:05-12:40	Rotation 4
12:45 - 1:30	Wrap Up (Lead Instructor)

2018 Field Day Statistics

Table 1 summarizes all of the Salmon Watch classes completed in the Fall of 2018. Information on the field location, schools, grade levels, number of students, and contributing partner organizations (volunteer instructors) are included in the table.

Table 1: 2018 field trip dates, location, schools, # students, grade, # classes, partners

Date	Location	School/District	# Students	Grade	# Classes	Contributing Partners
Sept 25	McGregor	Kennedy Elementary	60	4th	2	BLM, RVSS
Sept 26	McGregor	Phoenix Elementary	57	3-5	2	BLM, BCWEP
Sept 27	McGregor	Bellview/Orchard Hill	60	4th	2	BLM, TFT, SWCD
Oct 2	McGregor	LOGOS Charter School	60	3rd – 6th	2	BLM, RVSS
Oct 3	McGregor	North Medford HS	50	High School	2	BLM, BCWEP
Oct 4	McGregor	Orchard Hill	60	4,5	2	BLM, BCWEP, OSU Extension
Oct 8-Oct 12	Scenic Middle School (Griffin Creek)	Scenic Middle School (Central Point)	268	8	Multiple (10)	RVCOG, City of Central Point
Oct 9	Touvelle	Talent Middle School SDI	55	7,8	2	RVCOG, RVSS
Oct 10	Valley of the Rogue (VOTR)	Orchard Hill Elementary	60	4,5	2	SFI
Oct 16	VOTR	Talent Outdoor Discovery Program	57	3,4,5	2	RVSS
Oct 17	Coyote Trails	Talent Elementary School	60	3,4	2	RRK
Oct 18	VOTR	Oak Grove	60	6	2	MWC, BCWEP
Oct 19	VOTR	Rogue River Elementary	70	5	2	RRED, City of Rogue River
Oct 24	Cascade Christian	Cascade Christian	48	7	2	TFT
Oct 25	Cantrall Buckley (CB)	Ruch School,/Talent Elementary	43	3,8	2	RVSS, ARWC
Oct 30	Reinhart Park	Parkside Elementary	72	5	3	BLM, RVCOG
Oct 31	CB	Hidden Valley High School	30	9-12	1	RRWC
Nov 1	VOTR	Hanby Middle School, Talent Elementary	54	5-8	2	TFT, RVCOG, RRWC, BCWEP
TOTAL	**8 LOCATIONS**	**16 Schools**	**1224 Students**			

Table 2: Key to instructional partners

ARWC	Applegate River Watershed Council
BLM	US Dept. of Interior, Bureau of Land Management
JSWCD	Jackson Soil & Water Conservation District
MWC	Medford Water Commission
ODFW	OR Dept. of Fish & Wildlife
OSU Ext.	Oregon State Univ. Extension
RBP	Rogue Basin Partnership
RRED	Rogue River Education District
RRK	Rogue RiverKeeper
RRWC	Rogue River Watershed Council
RVCOG	Rogue Valley Council of Governments
RVSS	Rogue Valley Sewer Services
SFI	Siskiyou Field Institute
TFT	The Freshwater Trust
BCWEP*	Bear Creek Watershed Education Partners (*Volunteers – Former Board Members)

Pre and Post Program Surveys

Surveys are used to evaluate what students learned in the program and provide a measure of the effectiveness of the program. Surveys are provided to classes prior to and after the field day is completed. Any changes in survey results provide an indication of what the students learned, and how effective the instructors were.

A general survey is sent out to all participants and additional surveys are provided to select classes (Scenic Middle School in 2018)

Survey Results- Scenic Student Surveys

Students were scored on 10 questions given to Scenic Middle School students (8^{th} graders) pre and post the field days. Results were compiled from randomly selected respondents in several classes. Average scores pre test were 2.34. Scores increased to an average of 6.32 in the pre-test, which is a 176% increase in the scores.

Other students survey results in Appendix B. Appendix B also contains instructor and teacher survey results which provide feedback on field locations, trainings, preparation, and other program elements. Changes are incorporated into the next field season. For example, we are changing our training program to allow for more time for new instructors to test the kits and also see how the kits are incorporated into the curriculum. In addition, we offer shadowing for new instructors at programs with experienced instructors.

Next Steps/Recommended Program Changes

- Continue to work with MS4s, DMAs, and other partners to continue the program. We are working on a long term MOU with the Army Corps of Engineers to use McGregor Park for classes every year for two weeks for the program.
- Continue to work with regional (e.g., Rogue Basin Partnership) and statewide groups (e.g., World Salmon Council) to expand the program in the Rogue Basin and tie in with statewide programs. We have talked with the Applegate Partnership and Watershed Council, the Illinois Valley Soil and Water Conservation District, and Lower Rogue Watershed Council regarding program expansion. In 2019, the Applegate is working to create additional program at and manage classes at Cantrall Buckley Park.
- Consider adding programs in the Spring. There are several partner organizations including ODFW who are interested in developing a spring program schedule.
- Add additional program ties to other programs including ODFW's Salmon rearing and release program to tie in the service learning aspect.
- Reassess the feasibility of bringing back the Student Education Symposium.
- Integrate the Salmon Watch Program into a larger program (e.g., Stream Smart) to assist with long term funding needs. Salmon Watch was added as a program under Stream Smart in 2016. In 2019, the Salmon Watch Program is being incorporated into SWMPs to meet the conditions of the Stormwater General Permit (released November 2018).
- Establish permanent locations for the modules at the established field locations (in development).
    - Map locations of sites
    - Flag areas and/or map locations of the class layouts for each field site

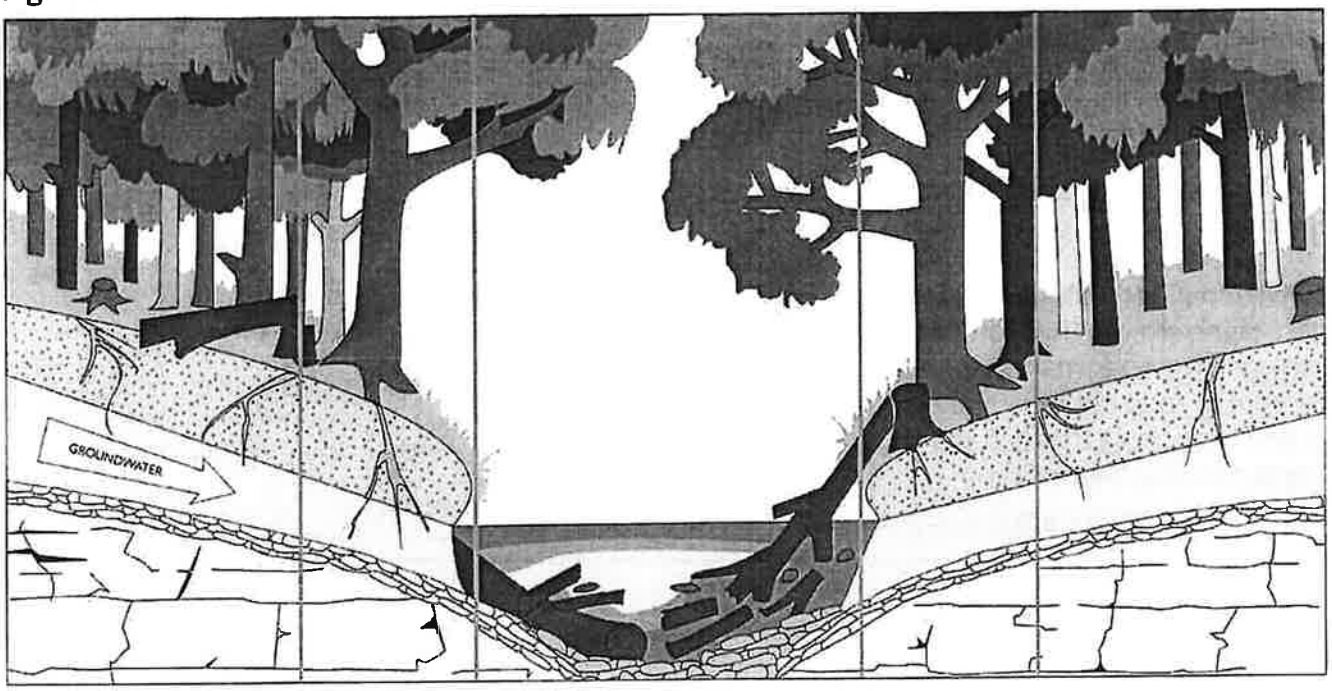
Program Photos

Appendix A: Data Sheet Examples

RIPARIAN AREA PROFILE DATA FORM

Directions: Pick a place along the stream that you particularly like. Draw a profile (cross-section, see **Figure 2**) of this place. Include the near bank, stream, and opposite bank in your drawing. If you aren't sure how to do this, ask your adult group leader. Show the water level in your drawing. Now, draw in features of the riparian zone that you think are important to salmon.

Figure 2



Athena Villa

RIPARIAN SCAVENGER HUNT

Please find or answer the following items. Draw or describe in writing.

1. How many **different kinds of evergreen trees** are there in this area? |||| ||
2. How many **different kinds of deciduous trees** are there in this area? |||| |||| |||
3. Can you identify any **kinds of berries, fruits, or seeds**? (Do not eat them!)
4. What are some **examples of human impacts to streams?** All around creeks
   Concrete pumps, houses, near school, fence
5. Is there an **eroded stream bank** in the area? If so, what do you think caused the erosion?
6. Is there a place where **tree roots** are holding the stream bank? Or where tree roots are needed to help stabilize the banks? Yes
7. Looking around the stream and riparian area, find **3 different types of cover** that help protect fish from predators bushes, logs, [illegible] rocks, snack
8. Find an **insect or sign** of an insect. Garden Spider
9. Find different types of **evidence that birds** occur in the area. Birds in sky
10. Did you see any wildlife, fish, or aquatic species?

NO

RIPARIAN SCAVENGER HUNT

Sophie Quackenbush

Please find or answer the following items. Draw or describe in writing.

1. How many **different kinds of evergreen trees** are there in this area? |||| ||||
2. How many **different kinds of deciduous trees** are there in this area? |||| |||| ||
3. Can you identify any **kinds of berries, fruits, or seeds**? (Do not eat them!) Blackberries all along creek
4. What are some **examples of human impacts to streams?** Concrete pumps, pipes, houses, by a school
5. Is there an **eroded stream bank** in the area? If so, what do you think caused the erosion? Water over time
6. Is there a place where **tree roots** are holding the stream bank? Or where tree roots are needed to help stabilize the banks? Yes
7. Looking around the stream and riparian area, find **3 different types of cover** that help protect fish from predators Bushes, logs, water fall
8. Find an **insect or sign** of an insect. Garden spider
9. Find different types of **evidence that birds** occur in the area. Birds in the sky
10. Did you see any wildlife, fish, or aquatic species?

NO

The Freshwater Trust™

Salmon Watch®

RIPARIAN AREA MAPPING DATA FORM

School: Scenic Middle School

Teacher: Mrs. Kusher

Date: 10-8-18 Time: 9:27 a.m.

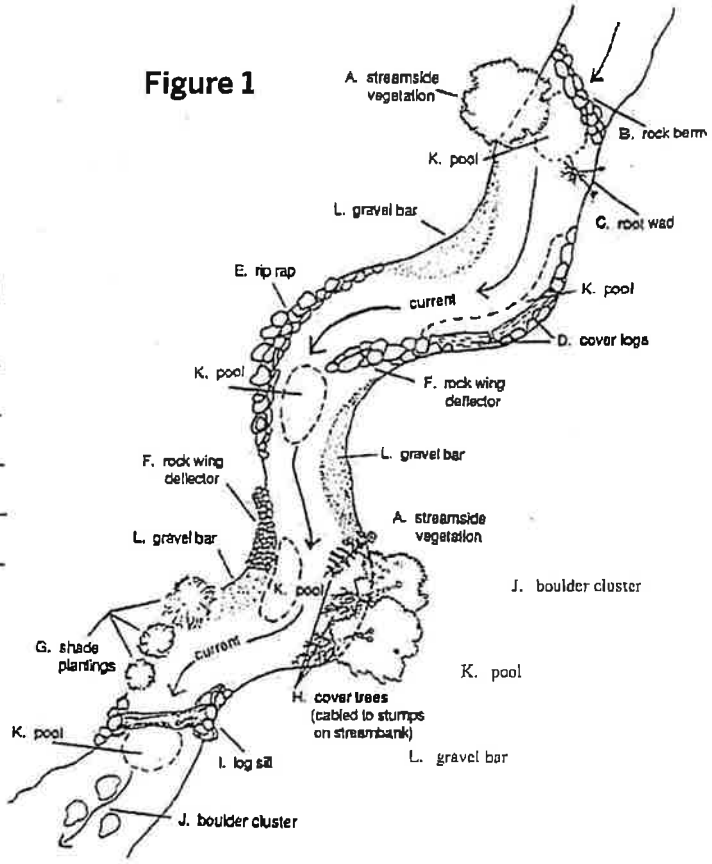
Weather: Cloudy

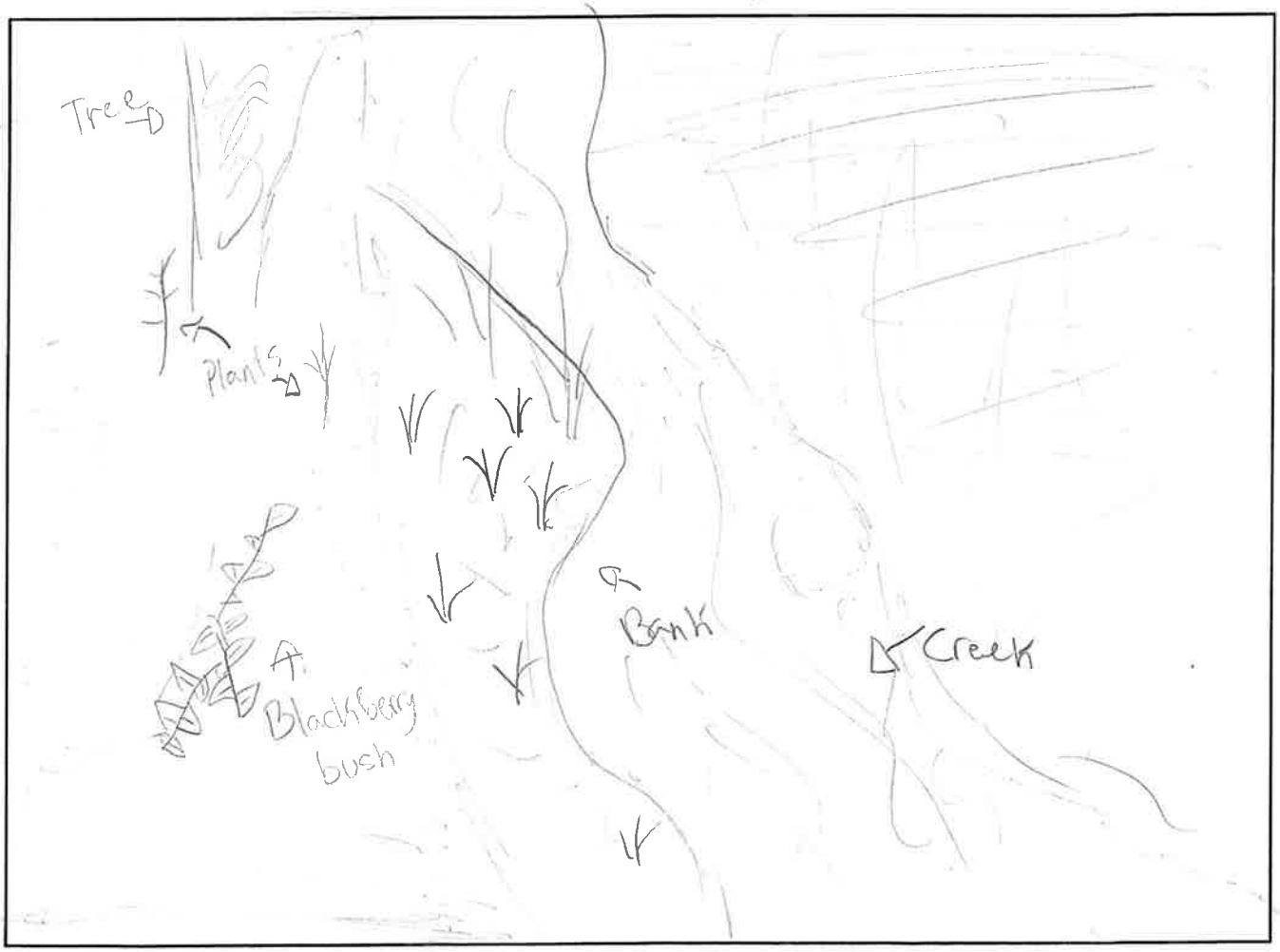
Stream/Site Name: _____

Directions: Use this space to make a map of the part of the stream that you think is important (imagine the stream from a "bird's-eye-view"). Be sure to map both the aquatic and riparian zones. Draw in all the features you think are important (see **Figure 1**).

Turn over for profile activity. ⟶

Figure 1





Real

The Freshwater Trust™

Salmon Watch®

RIPARIAN AREA MAPPING DATA FORM

School: Scenic Middle School

Teacher: Mrs. Fisher

Date: 10/8/18 Time: 9:24

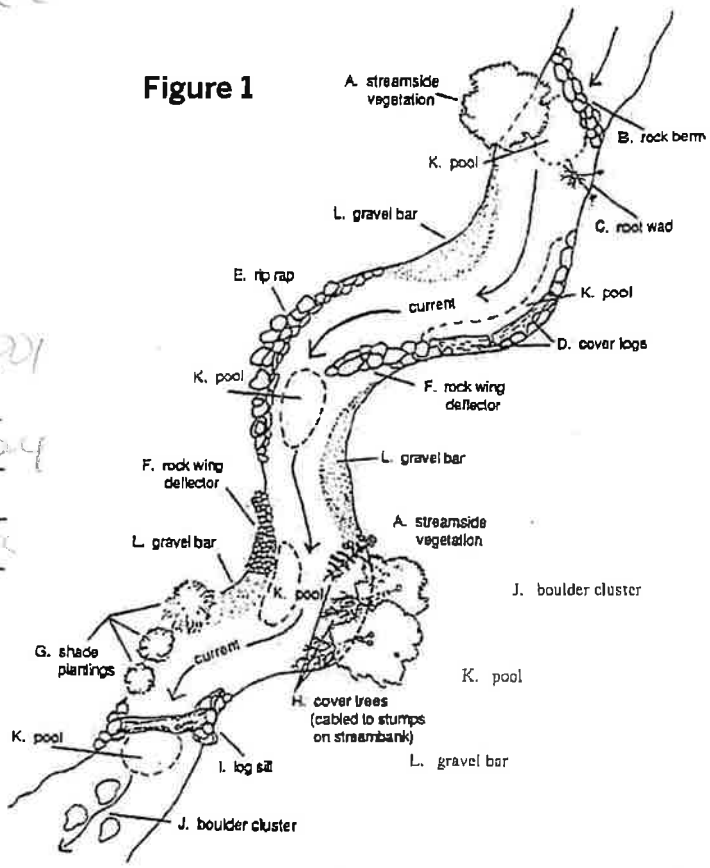
Weather: Cloudy

Stream/Site Name: Gribich Creek

Directions: Use this space to make a map of the part of the stream that you think is important (imagine the stream from a "bird's-eye-view"). Be sure to map both the aquatic and riparian zones. Draw in all the features you think are important (see **Figure 1**).

Turn over for profile activity. ⟶

Figure 1



OSU Oregon State University Extension Service

StreamWebs™

Student Stewardship Network

CANOPY COVER SURVEY

Share your field data quickly and easily using StreamWebs. Find out what the macroinvertebrates you found say about your stream, keep track of your photopoints, graph water quality data, upload a video, and much more.

www.streamwebs.org

Name: Bianca Tartaglio

School: SMS

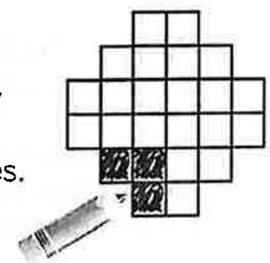
Teacher: Mrs. Bishop

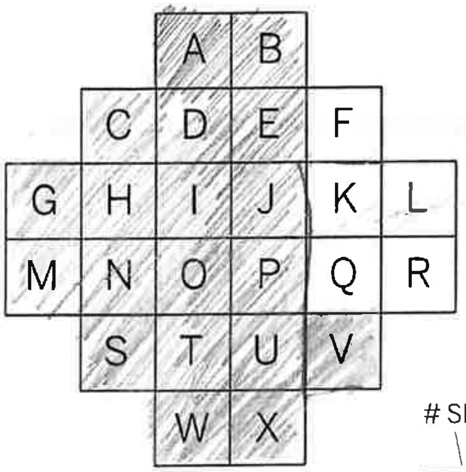
Date: 10/18/18 Time: 9:20

Stream/Site Name: Griffen creek

Weather: Cloudy

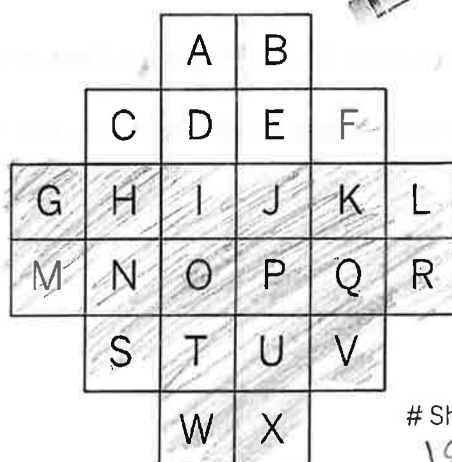
Directions: Working with a partner, take one sample of canopy cover in each cardinal direction using the spherical densiometer. Once you have the densiometer positioned correctly, fill in the areas on this worksheet that are covered with canopy shade. If the square is 50% shaded or more, fill in the entire square. Record the number of shaded boxes for each sample. Add up the numbers for all four samples. The result is your estimated percent canopy for your location.





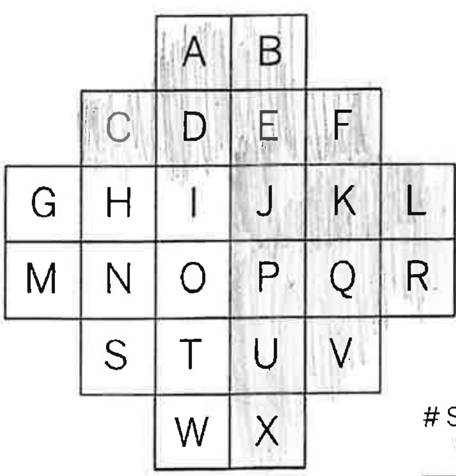
North

Shaded Boxes 19



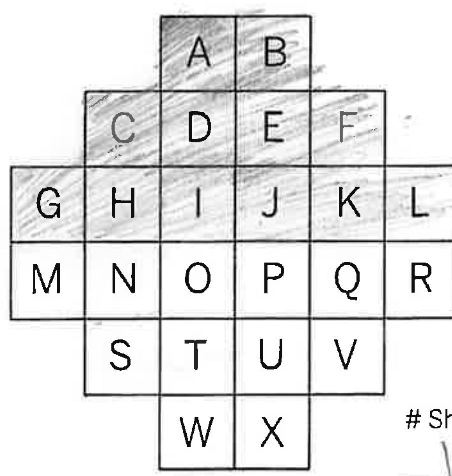
East

Shaded Boxes 18



South

Shaded Boxes 15



West

Shaded Boxes 12

19 **North** + 18 **East** + 15 **South** + 12 **West** = 64% ***Estimated % Canopy***

Appendix B: Program Survey Results

APPENDIX C: Section 3.3 Illicit Discharge Detection and Elimination

Question 58. RVSS SOP for Escalating Enforcement
Question 65. Table 3. Hotline Tracking
Question 76. RVSS DEQ Approved QAPP

Standard Operating Procedures

Title: **14.06 Stormwater Quality Enforcement**

Department: **Stormwater**

Approved by: **Carl Tappert, Manager**

Responsible Person: **Stormwater Program Manager**

Participants: **Stormwater and Engineering Dept.s**

Background: Rogue Valley Sewer Services Code Section 4.05.100 identifies prohibited discharges and other activities that affect stormwater quality. This section of code can be enforced by Section 8.50 which establishes penalties for code violations including Stop Work Orders and monetary penalties of up to $2,000 per day per violation. As the holder of the NPDES Phase II permit, and an agent of DEQ for the enforcement of the RVSS Construction & 1200-C permits, Rogue Valley Sewer Services is responsible for enforcing stormwater protection requirements within the Phase II area (See RVSS website). In late 2008, RVSS started issuing Stop Work Orders and monetary penalties for construction sites with a discharge or imminent threat of a discharge. Prior to this time, RVSS conducted education classes and issued Brown Tags to encourage compliance with the Stormwater Ordinance. The different levels of violation and appropriate enforcement actions are defined below:

Point of Contact for Violation: All correspondence pertaining to a violation will be conducted through the following responsible persons as described below.

- Erosion and Sediment Control Inspector and Property Owner or Developer for RVSS Construction and 1200-C permitted sites.
- Contractor or Property Owner for non-RVSS Construction and 1200-C permitted sites.

Acceptable Offsite Soil Transport: Soil leaving a jobsite uncontrolled shall not exceed 0.3 cubic foot per day per acre.[1] (0.3 Cu. Ft/(day*acre)

Violation Class - Threat: A threat exists when site conditions have the potential to discharge pollutants into the stormwater system, and/or when stormwater protections,

[1] based on the Modified Universal Soil Equation as Calculated with the USDA-NCRS RUSLE2. The Following assumptions apply, Jackson County Oregon, long flat site profile, long term vegetation-weeds/blade cut, silty loam.)

known as BMPs, have not been installed in accordance with an approved Erosion and Sediment Control Plan or Action Plan.

> **Enforcement Action:** The violator will be issued a Brown Tag by either an RVSS Inspector or Stormwater Coordinator which will identify the site deficiencies. If requested by the violator, an Inspector or Stormwater Coordinator will arrange a site visit to discuss actions needed to correct the threat. RVSS staff will re-inspect the site within the time frame specified on the Brown Tag. If the threat has not been corrected, a second Brown Tag or Stop Work Order will be issued. Stop Work Orders will be issued under the direction of the District Engineer or Stormwater Coordinator.

Violation Class – Imminent Threat: A threat becomes imminent when threat conditions exist and there is rain predicted within the next 24 hours.

> **Enforcement Action:** The violator will be issued a Brown Tag and/or Stop Work Order. The Brown Tag will be issued by an Inspector or Stormwater Coordinator. The Stop Work Order will be issued by the Inspector only with the Stormwater Coordinator or District Engineers verbal approval and will include specific actions that must be taken and a time limit for completion of these actions. The time limits imposed will be based on the extent of the threat, the amount of rain predicted, and the amount of time before the predicted rain. Failure to comply with the Stop Work Order will result in the issuance of a Notice of Non-Compliance with an assessment of a monetary penalty by the Stormwater Coordinator with verbal approval of the District Engineer.

Violation Class – Illicit Discharge: A violation occurs when pollutants are discharged into the stormwater system.

> **Enforcement Action:** The violator will be issued a Brown Tag, Stop Work Order and/or a Notice of Non-Compliance including a monetary penalty by RVSS as described above. The violator may be ordered to take remedial action to clean the stormwater system of any pollutants that are discharged. The monetary penalty may be imposed for each day that the remedial action is incomplete, or may be issued for a specific number of days. If significant environmental harm or a large economic benefit resulted from non-compliance the violator will be referred to DEQ.

Violation Class – Willful Discharge: A discharge may be considered willful when any of the following conditions exist:

- The discharge is intentional (i.e. dumping paint into a storm drain)
- The discharge is caused by action or inaction that could be reasonably expected to cause a discharge of pollutants.

- An approved Erosion and Sediment Control Plan or Action Plan was not properly implemented.
- The violator has been issued a Brown Tag for a Threat or Imminent Threat and has not corrected the violation. (This criteria is not site-specific. For example, if a landscape contractor is issued a Brown Tag for failing to protect inlets in White City, then causes a discharge for a similar situation in Central Point, the second discharge will be considered a Willful Discharge).

  Enforcement Action: The violator will be issued a Stop Work Order and/or Notice of Non-Compliance and may be issued an assessment of a monetary penalty as described below. The violator will be ordered to take remedial action to clean the stormwater system of any pollutants that are discharged. The monetary penalty will be imposed for every day until the remedial action is complete, or may be issued for a specific number of days. Willful violators must be forwarded to DEQ with documentation.

Monetary Penalty: Monetary penalties will be assessed through the issuance of a Notice of Non-Compliance.

- Minimum Base Penalty
  - Illicit Discharge $250
  - Willful Discharge $500
- Cleanup Costs: If the violator cleans up the discharged pollutant there will be no charge for this. If the cleanup is done by RVSS the monetary penalty will include the actual cost incurred by RVSS to complete the cleanup.

Each day that a violation continues is considered a separate violation, except that the Cleanup Costs will only be assessed once. The maximum penalty is $2,000 per day per violation. The violations may be for a specific number of days or until the cleanup is completed.

Procedure: Complete the Notice of Non-Compliance form, have it reviewed by the District Engineer. Notice is signed by the Stormwater Coordinator. Prior to mailing the NONC, send an email to the city or county stormwater contact in whose area the project is located, notifying them that fine will be issued for a project in their area. The email should detail the project history, any previous brown tags and the reason for the fine.

Have the O&M Accounting Clerk prepare an invoice in the amount of the total penalty. Submit the notice and invoice to the RVSSS Construction Permit Applicant.

Referral to DEQ: Under RVSS' 2010-2015 IGA with DEQ, RVSS is required to refer to DEQ violations of the permit that meet the following criteria:

1. Repeat or chronic violators;
2. Willful violators;

3. Recalcitrant violators;
4. Violations where there is significant environmental harm (for example, where there is a large discharge to sensitive habitat); or
5. Situations where there was a large economic benefit resulting from non-compliance.

Appeals Process: If an Applicant wishes to appeal a fine, they may request a meeting with the District Engineer and Stormwater Program Coordinator to discuss the site history and reason for the fine.

Record Keeping: A copy of the notice will be filed in the project file and an electronic copy will be saved in the project file. Engineering Staff will maintain a database of Brown Tags, Stop Work Orders, Notice of Non-Compliance, and monetary penalties that are issued. This database is located at K:\DATA\Stormwater Post 2011\Construction Site SW Control\Enforcement Actions (add current fiscal year). Each month a summary of the enforcement actions will be provided to the District Engineer one week prior to the board of directors meeting.

Quality Assurance Project Plan

Volunteer Water Quality Monitoring:
Rogue Valley Sewer Services' Illicit Discharge Detection and Elimination Plan

State of Oregon
Department of Environmental Quality

Rogue Valley Sewer Services
138 W. Vilas Rd
Central Point, OR 97502
Phone: 541-779-4144
Fax: 541-664-7171

www.rvss.us

Group A: PROJECT MANAGEMENT

A1. Title and Approval Sheet

Jennie Morgan 10.23.18

Jennie Morgan, RVSS / Project Manager — Date

10.23.18

Nick Haxton / DEQ Volunteer Monitoring Specialist — Date

Last Update 09/14/18
RVS18-VOL-0061-QAPP
Version 1.0

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A2. Table of Contents

A3. List of Tables

A4. List of Figures

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ACRONYMS
AWQMS- Ambient Water Quality Monitoring System
CBO- Community Based Organization (DEQ's volunteer monitoring program monitoring partners)
CCV- Continuing Calibration Verification (quality control test)
DEQ- The Oregon Department of Environmental Quality
DQL- Data Quality Level
DQM- Data Quality Matrix
EMAP- Environmental Monitoring and Assessment Program
ICV- Initial Calibration Verification (quality control test)
LCS- Laboratory Control Sample (quality control test)
LEAD- Laboratory and Environmental Assessment Division (official name of the DEQ laboratory)
PM-Project Manager
MS- Matrix Spike (quality control test)
MS4- Municipal Separate Storm Sewer System
OWEB- Oregon Watershed Enhancement Board
ORELAP- Oregon Environmental Laboratory Accreditation Program
QA- Quality Assurance
QAO- Quality Assurance Officer
QAPP- Quality Assurance Project Plan
QC-Quality Control
RVSS- Rogue Valley Sewer Services

A5. Distribution List

This project will be managed by Jennie Morgan, Stormwater Program Manager for Rogue Valley Sewer Services (RVSS). The Project manager will coordinate with Oregon Department of Environmental Quality's (DEQ) Rogue Basin Coordinator, Bill Meyers, as well as the DEQ Volunteer Monitoring Specialist to facilitate review, approval and addendum (if needed) of this Sampling Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP). The final signed SAP/QAPP will be filed at the RVSS office and will be available upon request to any individual or organization seeking to learn about RVSS' Illicit Discharge Detection and Elimination sampling plan.

A6. Project/Task Organization

The Project manager will conduct field sampling, lab analysis, data management, data review, data analysis and reporting. An additional RVSS staff member may assist with field sampling, under the direction of the PM.

Table A–1 Key Personnel

Name	Project Title/Responsibility	Phone	Email
Jennie Morgan	Program Manager	541-727-6876	jmorgan@rvss.us
Bill Meyers	Rogue Basin Coordinator	541-776-6272	Meyers.bill@deq.state.or.us
Nick Haxton	DEQ Vol. Mon. Specialist	503.693.5731	Haxton.nick@deq.state.or.us

A7. Purpose Statement/Problem Definition/Background

Bear Creek is a 5th field sub-watershed of the Rogue River located within Jackson County, Oregon. There are 13 6th field sub-watersheds to Bear Creek which drain approximately 361 square miles, and comprise 8% of the Rogue River Basin, Figure A-1 (DEQ, 2007[1]; Olson, 2000[2]). Bear Creek and its tributaries provide habitat and spawning grounds for

[1] DEQ, 2007. Bear Creek Watershed TMDL. Oregon Department of Environmental Quality.
[2] Olson, L., 2000. Bear Creek Water Quality Summary Report.

anadromous fish species, such as Winter Steelhead and Fall Chinook, as well as Coho and trout populations and a number of non-native species (DEQ, 2007). However, Bear Creek was listed as a 303D impaired stream in 1987, following which TMDLs were developed for ammonia, biological oxygen demand, and total phosphorus, which were approved by the U.S. Environmental Protection Agency (EPA) in 1992. Sediment, bacteria, and temperature TMDLs were added in 2007. There are several major urban centers in the watershed: Jacksonville (2,235), Phoenix (4,060), Talent (5,589), Central Point (12,493), Ashland (19,522), and Medford (63,154) (USCB, 2000[3]). All but Jacksonville are currently Municipal Separate Storm Sewer System (MS4), Phase II communities.

Rogue Valley Sewer Services (RVSS) holds the MS4 Phase II permit for the cities of Central Point, Phoenix, Talent, and urbanized unincorporated Jackson County. Several tributaries to Bear Creek that flow through RVSS' MS4 boundary including Coleman and Wagner Creeks also have TMDLs for *E. coli*. However, the relative contributions of *E. coli* from rural and urban areas are not well understood. A specific aim of this study is to assess the concentrations of *E. coli* present within sixth field sub-watersheds prior to entering the Phase II boundary and upon exiting the Phase II boundary. This will help ascertain whether urban or rural areas are contributing more *E. coli* to the streams.

In order to determine whether any of the tributaries to Bear Creek are a significant contributor to the Phosphorus load in Bear Creek, Total Phosphorus as Phosphorus will be sampled for in some streams based on availability of personnel and budget for the fiscal year.

Over the course of several years, normally the five year MS4 permit period, all 6th field sub-watersheds within RVSS' Phase II boundary will be sampled. Each year, streams will be identified for sampling based on their location within RVSS' MS4 boundary, last sampled date and known concerns within the basin such as illicit discharges and relative bacterial contribution to Bear Creek (DEQ, 2007). Sample points will be established at the most upstream publicly accessible location within the MS4 boundary and at the most downstream publicly accessible location within the MS4 boundary. All parameters being investigated will be collected from each location.

The specific aims of this SAP/QAPP are:

1. Assess the existence of dry weather illicit discharge inputs into the 6th field sub-watersheds of Bear Creek, and determine the concentration of *E. coli* within the discharge.
2. Determine the relative concentrations of *E. coli* and Total Phosphorus (TP) present within the sub-watersheds prior to entering the Phase II boundary and again at the exit. This will help ascertain whether urban or rural areas are contributing more *E. coli* and TP to the streams.
3. Collect in situ water quality parameters to help understand the condition of the stream.

The overall goal of the Illicit Discharge Detection and Elimination (IDDE) sampling is to detect illicit discharges within RVSS' MS4 Phase II boundary, so that the discharges can be addressed either through elimination of the sources, such as repair of sewer lines, or education programs targeted at the discharge source(s). The data will also be used by RVSS to focus investigations into illicit discharge source detection. RVSS and DEQ will use the data to ascertain the geographic areas within the sub-watersheds that are contributing significant loads of *E. coli* and TP to the streams.

[3] USCB, 2000. Census 2000. US Census Bureau. http://www.census.gov/main/www/cen2000.html

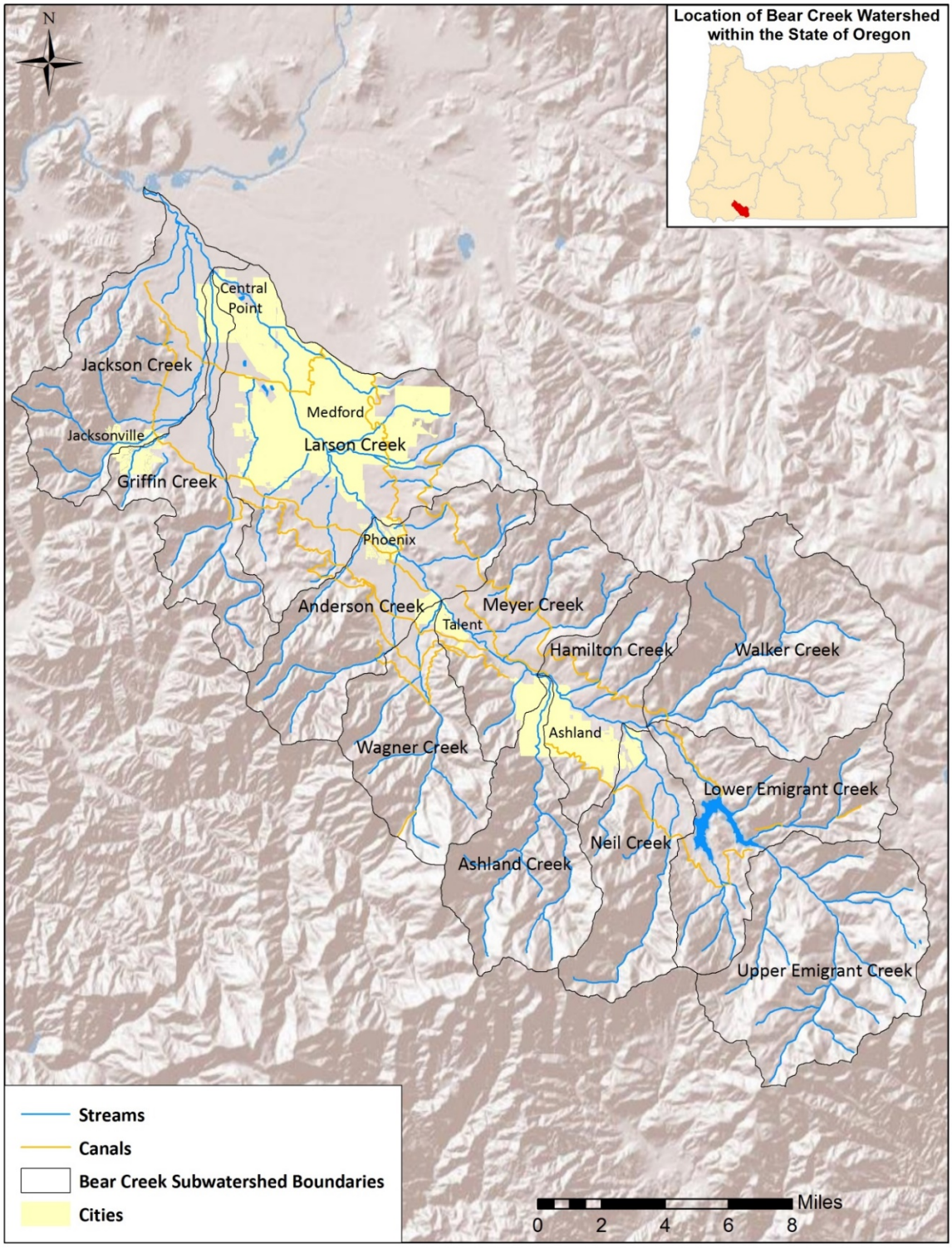

N
Location of Bear Creek Watershed within the State of Oregon
Central Point
Jackson Creek
Medford
Jacksonville
Larson Creek
Griffin Creek
Phoenix
Anderson Creek
Meyer Creek
Talent
Hamilton Creek
Walker Creek
Ashland
Wagner Creek
Lower Emigrant Creek
Neil Creek
Ashland Creek
Upper Emigrant Creek
Streams
Canals
Bear Creek Subwatershed Boundaries
Cities
Miles
0 2 4 6 8

Figure 1

A8. Bear Creek Watershed (RVCOG, 2011[4]).Project Task/Description

During the summer dry season, RVSS will collect water samples at flowing stormwater outfalls and analyze them for *E. coli* and in situ water quality parameters. Additionally, in-stream samples will be collected weekly, for a ten week period, upstream and downstream of the Phase II boundary. In stream samples may also be analyzed E. coli and in-situ parameters. Based on criteria described in section A5, instream samples may also be analyzed for total phosphorus. Over the course of several years, (under normal circumstances the five year Phase II permit period) all 6th field sub-watersheds of Bear Creek located within RVSS' Phase II boundary will be sampled.

The outfall data will be analyzed to determine if there are any exceedances of the single sample *E. coli* concentration limit of 406 cfu/100ml. The weekly in-stream samples will be analyzed to determine if there are any exceedances of the 126 cfu/100ml standard and whether there are significant differences in concentration between upstream and downstream samples.

Table A–2 RVSS IDDE Annual sampling Timeline

	Months of year											
Tasks to be completed	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Sampling planning and revision	x	x	x	x								
Outfall sampling for *E. coli*							x	x	x			
Weekly *E. coli* sampling							x	x	x			
Data entry							x	x	x	x		
Data analysis and reporting	x	x									x	x
Submit data to DEQ			x									

- The major constraint to completing the sampling as proposed is staff time. Currently, one staff member is assigned for managing the project and two staff will be used for field sampling.

A9. Measurement Quality Objectives

The specific data quality objectives of this study are:

- Collect a sufficient number of samples, sample duplicates, and field blanks to evaluate the sampling and measurement error.
- Analyze a sufficient number of quality control (QC) standards, blanks, and duplicate samples in the laboratory to effectively evaluate results against numerical QA goals established for precision and accuracy.
- Implement sampling techniques in such a manner that the analytical results are representative of the media and conditions being sampled.

Data quality will be evaluated through the use of the traditional data quality indicators:

- ***Precision / Accuracy***. Precision targets for *E. coli* are ± 0.6 log and the measurement range is ≤ 1 to >2419 colony forming units per 100ml, there are no accuracy limits for *E. coli* data. The precision limits represent "A" level data as defined by the DEQ's field Data Quality Matrix[5] (DQM) Version 5.0 unless noted otherwise. Any data collected that does not meet the accuracy and precision limits will be downgraded to a lower data quality level (DQL) in accordance with the DQM and will only be considered in analysis after considering the cause of the data quality

[4] Rogue Valley Council of Governments (RVCOG), 2011. Bear Creek Monitoring Plan Quality Assurance Plan.

[5] https://www.oregon.gov/deq/FilterDocs/DataQualMatrix.pdf

downgrade. To assign "A" level accuracy for analytical data, QC criteria must be met for blanks and checks against known standards at an absolute minimum. These results must be reported to DEQ. Known standards include laboratory control samples and matrix spikes.

- ***Representativeness***: The sampling procedures described in this plan are designed to most accurately represent the matrix being sampled. Sample handling protocols for storage, preservation, and transportation have been developed to preserve the representativeness of the collected samples. Proper documentation will establish that protocols have been followed and sample identification and sample integrity assured. If it is determined that sample integrity has been compromised, data will be flagged as "B" data. In-stream samples will be collected from the center of the stream where the water is well-mixed. Outfall samples will be collected only from flowing water, at the center of the flow stream. The date and time at which samples are collected will be recorded to the nearest five minutes. The physical location of each sample point will be recorded with a GPS unit.
- ***Comparability***. This monitoring program will ensure comparability with similar projects by following the standardized sampling protocols and procedures outlined in this plan. Data quality determinations by DEQ will be determined following the Data Quality Classification for Volunteer Monitoring Grab Water Quality standard operating procedures (DEQ06-LAB-0027-SOP) and the Data Validation and Qualification quality assurance guidance document (DEQ09-LAB-006-QAGv2.1)
- ***Completeness***. It is expected that samples will be collected from all sites described in this SAP/QAPP unless seasonal-related events or safety issues prevent sampling. The Project Manager may authorize re-sampling to obtain more information of qualified data. Any revisions to this project, after all the appropriate signatures are obtained, will be reflected in an addendum to this document. If insufficient QC records are reported to the DEQ for assigning data quality levels, the data will be downgraded to "B- estimate" or "E- data of unknown quality" according to standard operating procedures and quality assurance guidance documents (DEQ06-LAB-0027-SOP & DEQ09-LAB-006-QAGv2.1, respectively).
- ***Sensitivity***. Blanks must be less than the limit of quantification for each parameter. Laboratory method blanks (MB) will be used to assess the sensitivity of the method. If corrective action measures fail to resolve MB errors, results batched with the MB will be flagged as "B" data. After 5 years of monitoring at the recommended frequency, the following minimum amounts of change will be detectable at a 90% confidence level:
    - A minimum detectable change (MDC) in *E. coli* of 32 MPN/100 mL per year.

A10. Training Requirements and Certification

No special training and/or certifications are required. The Project Manager is trained in sample collection and analysis and will either conduct or provide training to those individuals conducting laboratory analyses. The Project Manager will oversee any sample collection by person's other than the Project Manager. All methods and SOPs will be followed as outlined in both the DEQ Quality Assurance Project Plan (DEQ QAPP) and DEQ's Watershed Assessment Section Mode of Operations Manual (MOMs). Details of Oregon DEQ's quality assurance program may be found in the following documents: DEQ Laboratory Quality Manual (DEQ 2013)[6] and DEQ Field Sampling Reference Guide (DEQ 2010).

A11. Documentation and Records:

Any revisions to this SAP/QAPP will be approved by those listed in Table A-1. The most current version of this SAP/QAPP will be stored at the RVSS office and will be available upon request. The Project manager will conduct field sampling, lab analysis, data management, data review, data analysis and reporting. An additional RVSS staff member may assist with field sampling, under the direction of the PM.

Table A–13 will be used to record the changes made to each SAP revision.

[6] https://www.oregon.gov/deq/FilterDocs/DEQ91LAB0006QMP.pdf

Table A–3 Revision History

Revision	Date	Changes	Author
1	5-30-18	Updated table A.2 to remove chlorine collection	J. Morgan
2	5-30-18	Update section A.8 to reflect other RVSS staff conducting laboratory analysis under direction of the project manager	J. Morgan
3	5-30-18	Update B.1 to reflect sampling at different locations each year	J. Morgan
4	5-30-18	Update B.2 to reflect collection of additional water quality parameters	J. Morgan
5	5-30-18	Updated B.5, B.6 and B.7 to match accuracy and precision requirements provided in DEQ's volunteer water quality monitoring QAPP guidance document.	J. Morgan

Storage requirements for documents and records pertinent to this project are detailed in Table A-4.

Table A–4 Document Retention Policy

Document or Record Name and Description	Storage Location	Storage Time
QAP/SAPP	RVSS Office	7 years
Field data sheets, Lab data sheets	RVSS Mezzanine	7 years
Equipment Notebooks - records of quality control checks, calibrations and maintenance.	RVSS Mezzanine	7 years

Group B: DATA GENERATION AND ACQUISITION

B1. Sampling Process Design

The overall goal of this sampling plan is to detect illicit discharge within RVSS' MS4 Phase II boundary, so that the discharges can be addressed either through repair of sewer lines or education programs targeted at the discharge source(s). Illicit discharge through the stormwater system is of particular concern and is targeted in this sampling plan. Each year, streams will be identified for sampling based on their location within RVSS' MS4 boundary, last sampled date and known concerns within the basin such as illicit discharges.

Location data for all stations will be collected with a handheld Trimble GeoXT.

Illicit discharge sampling will be conducted during the dry season, defined officially as May 31st to September 30th. Dry season sampling is chosen as there should be no flow from the stormwater system during the dry season. If flow is present, it is likely to be coming from an illicit discharge, possibly a sewer cross connection. Sample points will be established at the most upstream and downstream accessible locations. Upstream and downstream sample locations will be sampled weekly for a period of 10 weeks during the dry season.

Streams will be walked starting at the downstream end of the MS4 boundary and moving upstream. Access to the streams will be through public access points unless permission is obtained, in writing, from private property owners. Any flowing outfalls will be sampled for *E. coli*, temperature and flow.

In addition, all streams will be sampled for pH, conductivity and temperature at the upstream and downstream locations in order to further understand the water quality in these 6th field streams.

B2. Sampling Method Requirements

Sampling methods will generally follow those detailed in the OWEB Water Quality Monitoring Guidebook. Samples from flowing outfalls will be collected by holding the sample bottle at the midpoint of the flow and filling the bottle. Flow will be measured from outfalls by timing how long it takes to fill a bottle of known volume. The measurement will be repeated three times for each outfall. Temperature will be measured with a NIST certified temperature probe at the time of sampling.

Weekly grab water samples will be collected in-stream. Grab samples will be collected by walking upstream and collecting the sample from a well-mixed zone while facing upstream. Care should be taken while walking upstream to avoid disturbing the sediment. Streams that are inaccessible for wading will be sampled using the bucket method. Samples will be collected by lowering a stainless steel sampling bucket provided by DEQ from a bridge into the centerline of the stream.

E. coli samples will be collected in 120ml sterile bottles and then stored in a cooler on ice at 4C for a maximum holding time of 6 hours until analysis in a laboratory. In some creeks, samples will be collected and analyzed for total phosphorus.

Samples for TP analysis will be collected in sterile bottles provided by a certified lab, stored in a cooler at 4C and delivered to the lab within the maximum hold time.

Ambient water quality parameters pH, temperature, conductivity and total dissolved solids will be measured using a handheld HACH PCS Tester 35 probe.

Flow measurements will be collected either using the Neutrally-Buoyant Object method (USEPA 1998) or a digital flow meter such as Sontek's FlowTracker 2.

B3. Sample Handling and Custody Procedures

- For samples collected from outfalls, the sample bottle will be labeled with the outfall number, date and time of collection. The latitude and longitude of the outfall as well as the outfall number will be recorded on the field data sheet.
- For the weekly sampling, sample bottles will be labeled with the date, time, and location at the time of collection.
- Immediately upon collection, samples will be placed in coolers with ice and kept at 4C until analysis in RVSS' lab, within six hours of collection. Samples to be analyzed by an outside lab will be tracked on a chain of custody sheet and stored in a sealed cooler for transport by car to the laboratory.
- The laboratory's chain of custody form will be used for any samples that need to be transferred to another lab for analysis.

B4. Analytical Methods Requirements

- *E. coli* samples will be analyzed using the Idexx Colilert 24 with QT/2000 method as described in Chapter 15 of the OWEB Water Quality Monitoring Guidebook.

Waste generated from bacterial analyses will be chemically sterilized prior to disposal in municipal trash collection. Positive cells of the Idexx tray will be opened with a razor knife and soaked overnight in 5.25% sodium hypochlorite. A pH of around 11 is reached with this method resulting in sterilization of the tray.

- Samples will be analyzed for Total Phosphorus as phosphorus by Neilson Research Corporation using Standard Method 4500-PE. The laboratory's Limit of Quantitation for this method is 0.025mg/L and the Limit of Detection is 0.006mg/L.

B5. Quality Control Requirements

Precision of grab samples will be evaluated by measuring the difference in duplicate samples--samples collected within 15 feet and 15 minutes of each other. Duplicate grab samples will be collected on the first sampling trip and then again after every ten samples. The same duplicate sampling procedure will be used for parameters measured in the water body. Precision for Total phosphorus, E. coli, pH, conductivity, total dissolved solids and temperature will be assessed following the protocols outlined in Table B-3.

- IDEXX Colilert reagents will be tested with IDEXX Quanti-Cult or equivalent culture to test the media at the start and end of the monitoring year. Incubator temperatures will be checked at the beginning and end of each incubation with an NIST thermometer and recorded in a log book kept with the incubator along with date, time, and the name of the person who checked the equipment. Quality control checks on dilution and blank water will be run using Quanti-Cult® spikes to test for promotion or inhibition of *E. coli* growth. If sampling conditions require use of a secondary sampling container frequent blanks should be conducted at targeted locations most likely to be contaminated to assess possible serial contamination. These tests will be completed by RVSS.
- Accuracy checks for pH , total dissolved solids and conductivity will be conducted at the beginning and end of each sampling day in accordance with Table B-3.
- Any additional laboratory analysis desired for water samples will be conducted by Neilson Research Corporation in Medford, Oregon, an entity that is certified through the Oregon Environmental Laboratory Accreditation program, Certificate No. OR100016-015.
- Routine ambient split sampling will be conducted by ODEQ Lab staff as described in the ODEQ Volunteer Monitoring QAPP DEQ04-LAB-0047-QAPP.
- If data do not meet the data quality objectives described in section B5, the QC status codes for all affected results will be adjusted to the appropriate code defined in DEQ's Data Quality Matrix DEQ04-LAB-0003-QAG.

Table B-3: Water quality parameters and tests for accuracy and precision.

Parameter	Accuracy	Precision
E. coli[a]	(1) Upon receipt of reagents.[3] (2) Estimates can be done by doing side by side samples with DEQ (3) A level is difference of the logs of the side by side samples ≤ 0.6 log units	(1) Every day or at 10% of sampling sites, whichever is greater[1] (2) Duplicate samples (3) A level is a difference between the logs of the values ≤ 0.6.
pH	(1) Bracketing each day's samples at a minimum. (2) Tests against 7 and 10 buffers, recalibrate if off by 0.1 from buffer (3) A level is difference from buffer of ≤ 0.2pH	(1) Every day or at 10% of sampling sites, whichever is greater[1] (2) Duplicate samples (3) A level is difference between duplicates of ≤ 0.3 S.U.

Specific Conductivity	(1) Bracketing sample results at the start and end of each day (2) Tests against secondary standard in the ranges of 1400 and/or 84 µS/cm (3) A level is difference from standard of ≤ 7% of standard value	(1) Every day or at 10% of sampling sites, whichever is greater (2) Duplicate samples, in stream measurements are done sequentially (3) A level is relative percent difference1 ≤ 10%
Grab Temperature	(1) Annually (2) 5 temperature water baths (3) Acceptable level is difference from master thermometer of ≤ 0.5 C°	(1) Every day or at 10% of sampling sites, whichever is greater (2) Duplicate samples, in stream measurements are done sequentially (3) A level difference between duplicates of ≤ 0.5 C°
Total Dissolved Solids	(1) Bracketing sample results at the start and end of each day (2) A level is difference from standard of ± 20%	(1) Every day or at 10% of sampling sites, whichever is greater (2) Current DEQ control limit: ± 20% for Laboratory control samples
Total Phosphorus	(1) Each analytical batch processed (2) Method blanks, laboratory control samples, calibration verifications, and matrix spikes. (3) Current DEQ control limit: ± 10% for Matrix Spike; ± 5% for control samples and calibration verifications	(1) Every day or at 10% of sampling sites, whichever is greater (2) Field duplicate and lab duplicate samples (3) Current DEQ control limit: ± 10%

a. Quality control checks on dilution and blank water will be run using spikes comparable to Quanti-Cult® to test for promotion or inhibition of *E. coli* growth.

B6. Instrument/Equipment Testing, Inspection, and Maintenance Requirements

All equipment will be examined in accordance with the procedures outlined in the ODEQ QAPP DEQ04-LAB-0047-QAPP, Table B-4. Specifically, the IDEXX QuantiTray sealer will be taken apart and cleaned as needed if there is an overflow. Thermometer readings on the incubator will be checked at the start and stop of incubation. Accuracy checks of equipment will be done when the acceptable levels of accuracy described in Table B-3 are not met. Reagents for calibration of the water quality probe will be checked for expiration dates, damage and contamination or degradation.

B7. Instrument Calibration and Frequency

Instruments will be calibrated when their accuracy does not meet the levels described in Table B-3.

B8. Inspection/Acceptance Requirements

Field equipment will be kept in a storage container specific to stormwater program supplies. Lab equipment is kept in RVSS' lab at the Shady Cove Wastewater Treatment Plant in Shady Cove, Oregon. The Project manager will be

responsible for keeping the equipment in working order and supplies available. The supply and Inspection/Acceptance requirements specified below, in accordance with DEQ04-LAB-0047-QAPP will be followed.

Supply	Location	Inspection	Responsible Party
Field sheets, clip board and pen	CBO	Presence	Field personnel
Sample collection bottles	CBO	Quantity and contamination	Field personnel
Cooler and Ice	CBO	Quantity	Field personnel
Permanent marker	CBO	Presence and condition	Field personnel
Safety cone and Orange safety vest	CBO	Presence and condition	Field personnel
IDEXX 120 mL Sterile sample bottles	storage container	Quantity and condition of sterile cap seal	Field personnel
Quanti-Tray 2000	Lab at treatment plant	Quantity and contamination	Lab personnel
Colilert	Lab at treatment plant	Quantity, expiration and contamination	Lab personnel

B9. Data Acquisition Requirements

Streamflow and weather data may be retrieved by CBO's online or by contacting directly the USGS, OWRD, and Oregon Climate Center for analysis and presentation purposes. Unless noted otherwise in the retrieved data, the quality of these results will be assumed to be of sufficient quality to use when analyzing CBO data. The limitations of all data collected will be referenced in any reports or presentations. Streamflow or weather data acquired from third parties will not be uploaded into the Ambient Water Quality Monitoring System (AWQMS).

B10. Data Management

Field data sheets will be maintained for throughout the sampling period. Information recorded on data sheets is to include: project name, date and time of sampling events, water body name, basin name, , general weather conditions, names of field staff, time of each sample or measurement, results and equipment ID numbers. Field data will be entered into an MSAccess database by the Project Manager, or staff under PM's direction, who will review the field and electronic sheets for completeness. Lab data will be entered into MSExcel database for statistical analyses. Field data sheets will be stored in RVSS' annex for a period of seven years. Electronic data will be stored on RVSS' server which is backed up daily to an external hard drive using NovaBackup Business Essentials. Completed electronic data will be sent to the DEQ Volunteer Monitoring Coordinator as an MSExcel 2010 file for review and ultimately for entry into the DEQ AWQMS database.

Group C: ASSESSMENT AND OVERSIGHT

C1. Assessment and Response Actions

Surveillance and data management will be performed by the Project Manager, to ensure collected data will meet the needs of the project. Precision will be checked by examining duplicate sample results against the precision level stated in section A7. Method blanks should be less than the reporting limit and laboratory control standards should be within the control limits. If data quality problems occur during assessment the Project Manager will attempt to resolve the problem through: re-sampling; checking for unusual sampling or analytical conditions documented in the comments; inspecting and testing equipment used to generate questionable results; and reviewing procedures to identify potential procedural errors or biases. The project manager will contact the DEQ volunteer monitoring specialist if problems persist after reviewing sampling and analysis procedures. Any change in project scope or methods will come from the Project Manager. Corrective actions will be documented as addendums to this QAPP.

C2. Reports to Management

Results of the performance assessments will be recorded on the lab data sheets and the electronic data sheets, which will be provided to the DEQ volunteer monitoring specialist at the end of the season.

Group D: DATA VALIDATION AND USABILITY

D1. Data Review, Validation, and Verification

All data will be reviewed by the Project Manager, DEQ Volunteer Monitoring Coordinator, and DEQ QAO to determine if the data meet the project's objectives. The DEQ Volunteer Monitoring Coordinator and the DEQ QAO will determine if the data collected meet the objectives of the data quality matrix and general method requirements. Decisions to accept, qualify, or reject data will be made by the Project Manager, DEQ Volunteer Monitoring Coordinator, and DEQ QAO.

D2. Validation and Verification Methods

Validation and verification procedures will include the following basic steps:

- ***Completeness:*** Each step of the data generation and management will be assessed for completeness as soon as possible. Both missing parameter results and sample information, such as time, collector, equipment, etc., will be reviewed. Missing information may warrant qualifying data (i.e., classification as "B" data).
- ***Reasonableness:*** Data generated will be reviewed for reasonableness to help catch any significant errors in result values and sample information. Data which appears unreasonable will be investigated and qualified when appropriate. At a minimum, a comment will be added to explain unusual values.
- ***QC Data Review:*** All available QC data will be analyzed to estimate the accuracy and precision of generated results. All result values will be classified with a data quality level based on the Oregon DEQ's Data Quality Matrix Version 4.0[7] or later for field data or the Data Validation for the LASAR Database quality assurance guidance document DEQ09-LAB-0006-QAG for laboratory analytical data.
- ***Data Transfer Errors:*** At least 10% of data will be verified against original records whenever data are transferred either electronically or manually from one system to another. This includes transcribing field sheet data to databases at RVSS, or when DEQ reformats submitted data for upload into AWQMS.

The DEQ Volunteer Monitoring Coordinator will verify that these validation procedures relevant to upload of data to AWQMS are completed.

D3. Reconciliation with Data Quality Objectives

RVSS and DEQ are ultimately responsible for determining when data do not meet the data quality objectives. The DEQ strives to use only the highest quality of data and generally only use "A" level and sometimes "B" level data. Data that are designated as "E" level may be used to assist planning additional monitoring or for other uses that do not make a determination about a site's water quality. If data are found to insufficiently address a monitoring objective, then the monitoring plan and QAPP will be revised or appended to describe any changes to the monitoring program to help better achieve their objectives.

[7] https://www.oregon.gov/deq/FilterDocs/DataQualMatrix.pdf

Table 3. RVSS Hotline Tracking for FY19

Date Reported	Reported by:	Location of Incident	Type of Incident	Incident Response and Dates	Follow-Up
7/15/2018	City of Central Point	1350 Plaza Blvd Central Point, OR	pump station overflow to SW drain	Hukills responded, fixed pump.	$500 fine issued, FOG surcharge assessed 11-19-18 fine paid
8/17/2018	Oyung	1141 Lathrop Dr. CP	FO observed dirt/construction waste in gutter.	FO talked to resident, gave printed info and asked that they clean up and not allow waste into street/gutter. Resident was agreeable.	none
11/6/2018	City of Medford	3400 Crater Lk Hwy	Guaranteed Carpet Cleaning workers observed dumping into open drain	Ribeiro & Oyung investigate 10/11/18, find open drain, it is later determined to be hooked to sanitary.	called registered owner (Marshall) who acknowledged he knows wastewater should not be dumped in open drains. RVSS sent property owner letter re. drain and changing it out.
12/7/2018	City of Talent	270 St. Ives	Guaranteed Carpet Cleaning truck w/workers observed dumping into street	J. Wilcox & FO responded, no longer on scene	Sent letter to registered owner (Marshall), then letter to new owners w/no fine assessed as it is 1st offense. 1/10/19: met w/owners Dirk & Tony to discuss BMPs
12/21/2018	DEQ incident report passed to RVSS.	Muphy Veneer, Ave. C. White City	Report of "black water" along Ave. C.	FO investigated 12/21, collected sample, traced source to Murphy Veneer.	Rpt sent to DEQ, A. Ullrich to follow up re. DEQ permit
1/4/2019	City of Central Point	Grange Co-op 28 S. Front St. CP	Sani. Sewer lateral backed up 1/3, potential sewage into storm drain system	B. Johnson responded, noted sewage on east side of Grange elevator and small amt. in gutter pan & catch basin.	Grange Co-op employees instructed to place powdered lime along affected area and have Hukill's clean out catch basin and affected area. Johnson saw employees spreading lime and inspected to see affected areas had been cleaned, no trace amts. Of raw sewage left in spill area.

Table 3. RVSS Hotline Tracking for FY19

Date Reported	Reported by:	Location of Incident	Type of Incident	Incident Response and Dates	Follow-Up
1/25/2019	J. Morgan	Pine St. CP	Kelly's Carpet Cleaning truck observed leaking water while driving.	Oyung left VM w/business #. 1/25/19	Lance Kelly called on 1/28 and discussed wastewater disposal w/Oyung. He understood acceptable methods of disposal and described what they generally do: down client sewer/toilet or onto permeable surface w/permission. He was not sure what the leaking water was, though he said the vans do have a clean water tank. He did not remember a problem that day but said there should not have been a tank of dirty water on board as they empty at client locatoin.
2/12/2019	Morgan, Cox	Plaza Blvd Shopping Ctr	2/12/19 Cox sent Morgan photos w/sewage remnants at outfall to ditch along I-5 on ramp.	3/1/19 Oyung spoke to property owner on phone and emailed them request to clean stormwater line and outfall area. Property manager is requested to contact RVS when work completed.	3/27/19: Property owner stated in email that clean-up work completed.
3/13/2019	private citizen, Jeff	Daddy Ramen food truck, Cheryl Lane, Phoenix	food truck observed dumping into storm drain	3/14/2019 Oyung spoke to P. Sigalove and clarified the rules. Owner says he understands and will not be doing that any longer. We discussed proper disposal of different kinds of wastewater.	Letter sent confirming conversation and reiterating proper BMPs.
5/2/2019	phone call from citizen	729 West Dutton Rd.	caller reported obs. Fertilizer being dumped onto parking lot, entering stormdrain.	Oyung investigated. Did not find anything at that location or nearby facilities/parking lots in Dutton Industrial Park.	

Table 3. RVSS Hotline Tracking for FY19

Date Reported	Reported by:	Location of Incident	Type of Incident	Incident Response and Dates	Follow-Up
6/1/2019	Robert Corliss, Medford POTW	JACO Fair grounds	The Ice Cream Place discharged process water in the storm drain	6/1/2019	Robert educated owner at site. Sent NOV on 6/24/19 asking for submission of revised policies and procedures to prevent future discharge.

APPENDIX D: Section 3.4 Construction Site Runoff Control

Question 86. ACWA Construction Site Stormwater Guide

Question 87. Small Site Storm Drain Permit

Question 90. Checklist of Required Elements of ESCP Drawings

Question 99. Electronic inspection report form.

Question 104. Table 4. RVSS Erosion and Sediment Control Inspector Training in FY19.

Table 4. RVSS Erosion and Sediment Control Inspector Training in FY19

		Average Quiz scores			
First Time Certification Courses					
Class Date	**Attendee #**	**Pre-test**	**% pre**	**Post-test**	**% post**
11/7/2018	19	6.5	62	20.8	83
5/9/19	32	6.4	64	22.3	89.5
Renewal Certification Courses					
12/13/18	23	6.5	65	22	88.7
1/24/19	26	7.3	73.4	22	87.7
2/28/19	27	6.9	68.9	22	89.6

ACWA CONSTRUCTION SITE STORMWATER GUIDE

Illustrated Best Management Practices

oregon association of CLEAN WATER agencies

March, 2013

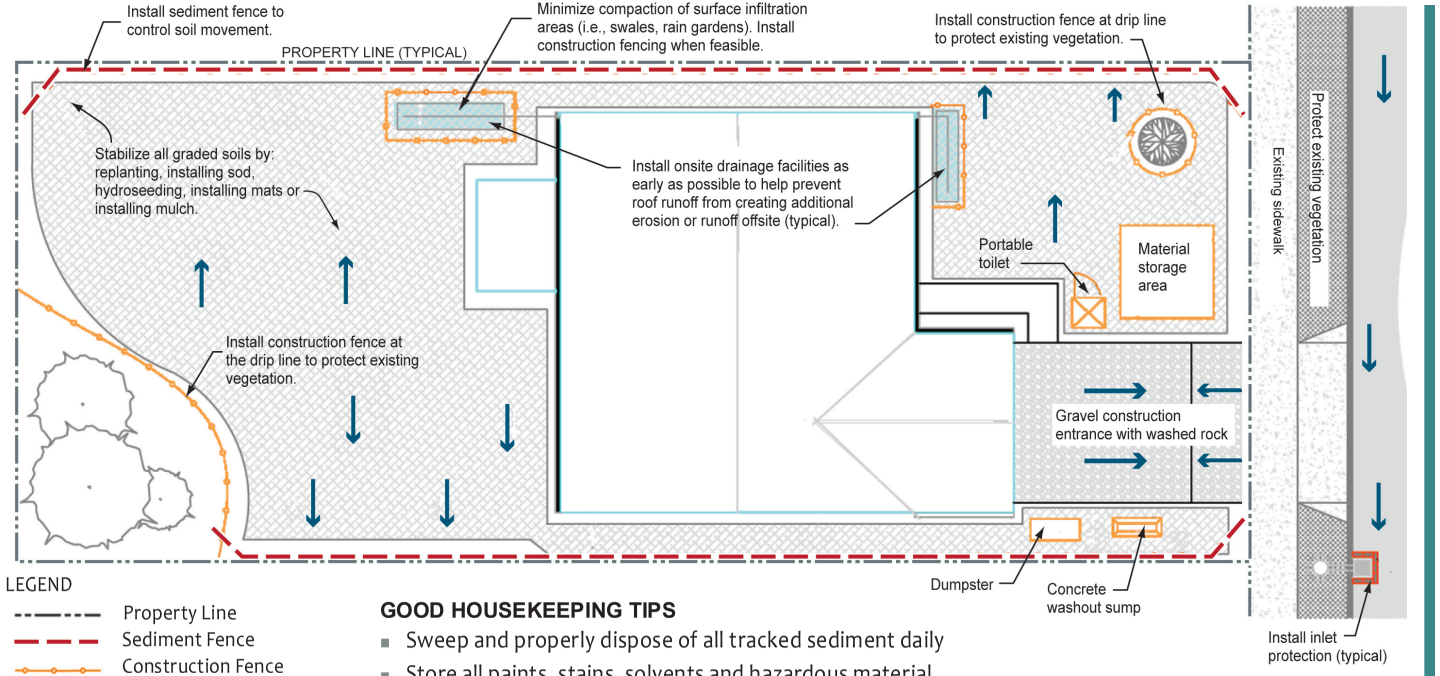
Table of Contents

Objectives

This guide highlights the most common best management practices (BMPs) to help inspectors and construction contractors address common problems related to erosion and construction site stormwater pollution. This guide assumes inspectors and contractors are familiar with design criteria for the BMPs used on their site. This guide covers ***runoff controls***, which are used to divert and control drainage at a site; ***erosion prevention practices***, which are used to prevent movement of soils; ***sediment controls***, which manage soils and debris that are moving; and ***pollution prevention practices***, which prevent pollutants from reaching the storm drain system or waterbodies.

Disclaimer

This guide is a field reference to help protect water quality and assist with local and Oregon Department of Environmental Quality (DEQ) regulatory compliance. Project proponents should still be familiar with and comply with local and DEQ stormwater requirements. Appendix materials have not been reviewed by the Association of Clean Water Agencies (ACWA) or DEQ.



LEGEND

- Property Line
- Sediment Fence
- Construction Fence
- Roof Drainage Facility
- Ground Slope Direction
- Existing Vegetation
- Stabilized Soil
- Existing Tree
- Existing Vegetation

Source: City of Bend, 2013

GOOD HOUSEKEEPING TIPS

- Sweep and properly dispose of all tracked sediment daily
- Store all paints, stains, solvents and hazardous material in a covered and bermed storage area
- Tarp all loads before leaving the site
- Dispose of all trash in a covered dumpster or trash can
- Clean up spills promptly using dry cleanup methods
- Remove temporary controls when no longer needed
- Do not dump or wash any material into the storm drain

Examples for a Typical Site

RUNOFF CONTROLS

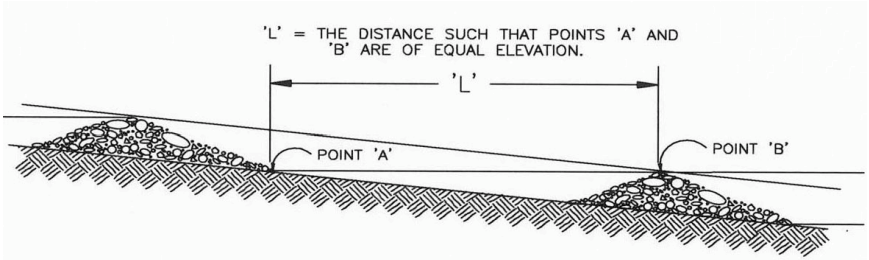
► Check Dams

A small dam designed to reduce gully erosion and allow some settling of suspended sediment in a swale or ditch. The dam may be constructed of washed rocks or other approved materials such as gravel bags, triangular silt dikes, biobags, or sandbags.

Installation Tips

- Extend dam across the swale or ditch to reduce the speed of flows.
- Install along a level contour.
- Check dams should be constructed to prevent flow around the dam.
- Ensure good surface contact to reduce undermining.
- The center, or spill way of the check dam should be lower (e.g., at least 6 inches for smaller check dams (6 feet across or less), and up to 2 feet lower than the edges for larger dams) than the outside edges so that the flow will not go around the ends of the dam.
- Tightly abut bags and stack gravel bags using a pyramid approach. Gravel bags should not be stacked any higher than per the approved plan or local design manual specifications.
- Overlap the upper rows of gravel bags across the joints in lower rows.
- The bottom (i.e., toe) of the uphill check dam should be level with the top of the downhill check dam (measured from the center). Notice how "point A" is level with "point B" in "Spacing Between Check Dams" figure.
- Extend the downstream portion of the check dam to also act as a splash block to prevent erosion when flows crest the dam.
- DEQ staff prescribe flow-through rock check dams. Water should flow through as well as over rock check dams (recommended rock size typically 3"-6" to avoid filling void spaces).

Spacing Between Check Dams



Source: DEQ, 2005

Inspection and Maintenance Tips

- Inspect and repair check dams before, during, and after rainfall events for damage such as undermining, breaching, or short-circuiting. Check the center elevation to ensure it is appropriately lower than the ends.
- Remove accumulated sediment prior to permanent seeding or soil stabilization. Incorporate removed sediment in the project or dispose of it properly.
- Remove sediment as needed to allow drainage, and as required.
- Remove check dam and sediment when check dams are no longer needed. Where vegetation is used to line ditches, remove check dams when vegetation has matured enough to protect the ditch or swale. Immediately following check dam removal, seed, mulch or mat the area where the check dams were.

Source: Clean Water Services

Source: Clean Water Services

Diversion of Run-On

Diversion structures are used to divert runoff away from sloping land or sensitive areas.

Installation Tips

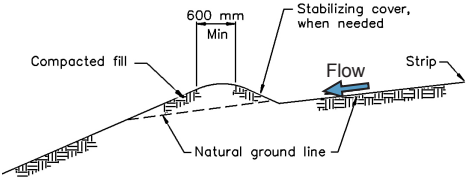
- Diversion dikes, swales, and pipe slope drains collect and convey smaller, generally sheet flows, to a safe stabilized outlet (e.g., sediment trap or basin).
- Make sure the diversion structure is properly sized to convey the design flows.
- Install diversion structures parallel to the contour at appropriate intervals across a disturbed slope.
- For slopes with erodible soils (e.g., steeper than 2:1 with more than 10 feet of vertical relief), construct benches or shorten distance between dikes or swales.
- May need erosion control mats to protect seed bed and channel from erosion.
- Use with check dams to slow stormwater, disperse flows and reduce erosion.
- The bottom width should be level across the swale.

Inspection and Maintenance Tips

- Inspect on a regular schedule as well as before, during, and after rain events.
- Check for erosion in channel, on embankments, or side slopes caused by concentrated flows that could result from improper construction. Inspect and repair as necessary.
- Check swale vegetation to ensure it is not overly impacted by high flow speeds.
- Remove debris and sediment, repair linings, replace lost riprap.
- Clean out clogged pipes (as part of the swale system) under roads.
- If the dike or swale regularly overflows, increase the capacity and/or number of dikes/swales.
- Minimize construction traffic over temporary dikes and swales.

Source: Clean Water Services

Typical Earth Dike



Source: DEQ, 2005 (Appendix D)

EROSION PREVENTION

► Preservation of Existing Vegetation

Vegetated buffers protect sensitive areas such as wetlands, streams and lakes. They also preserve greenways or significant trees and native plants by protecting soils' infiltration capacity, stream shade (which cools surface water), wildlife habitat and scenic views.

Installation Tips

- Use a pre-construction meeting to confirm which vegetation is to be preserved and how to preserve it.
- Protect vegetation from:
  - Injury from construction equipment both above and below ground level, including breakage, scarring, cutting roots or compaction of root zone.
  - Grade changes, which affect plants' ability to obtain air, water or minerals. Placing a layer of gravel and a drainage/aeration tile system over the roots before a major fill allows air and water to circulate and protects the roots.
  - Root exposure.
  - Damage caused by excavations for utility lines.
- Clearly establish ground disturbance limits outside the drip line (or the tips of the branches) of preserved trees, using orange construction safety fence or flagging if approved. This will help prevent disturbance and over-compaction of the soil around the roots.
- Terrace the area around the plant or leave the plants on an undisturbed mound to help increase the plants' survival chances.
- Preserve buffers adjacent to waterways where earth disturbance will occur (EPA has set a 50-foot buffer or equivalent sediment load reduction requirement).[1]

Inspection and Maintenance Tips

- Inspect fencing often to ensure it is clearly marked and remains properly located throughout the life of the project. Repair fencing and/or flagging as necessary.
- Contact an arborist before cutting roots. Do not allow tree roots to be left exposed to the air—keep moist and cover with soil as soon as possible. Smoothly cut off damaged or cut roots at an angle. Re-cover and/or seal exposed plant roots.
- Remove the fences and barriers last, after final cleanup and landscaping is completed.

Source: City of Bend

Source: Clean Water Services

[1] *77 Federal Register 12286*

► Mulches

Use mulches to prevent erosion, to promote germination and to protect seeds from direct heat and from being carried off by runoff. Additional measures may be required to improve effectiveness on slopes.

Installation Tips

SELECTION

- Mulch may be required for seeding areas during the dry season if:
  - Grass growth is expected to be slow,
  - Soils are highly erodible,
  - There is a water body close to the disturbed area, or
  - Significant precipitation is anticipated before the grass will provide effective cover.
- Compost should be fully cured to optimize plant growth. Hot composting techniques will prevent most weed seeds from growing.
- Straw mulch should not be moldy, caked, or decayed.
- Wood chips and grindings are not suitable for areas that require close mowing.
- Hydraulic mulches and tackifiers are interim measures to prevent erosion until permanent cover is established.
- Gravel or crushed rocks are suitable for short slopes and areas subject to foot or vehicle traffic. Larger pit run rock can be used on steep slopes that are likely to have sub-surface water (springs) being carried off as runoff.

PREPARATION

- Divert concentrated runoff away from mulched areas.
- Ensure mulch is properly prepared and of high quality.
- Rock mulches should be appropriately washed before application.

APPLICATION

- Ensure all exposed soils are adequately and evenly covered with mulch.
- Properly crimp, net, or tackify loose mulches like straw or compost to the ground.
- Ensure straw is deep enough to prevent erosion (e.g., 2 to 2.5 tons per acre, or 2 inches uniform coverage).
- Apply wood chips or grindings with mulch blower, excavation equipment or by hand.
- Apply wood or cellulose fiber with a hydromulcher at a rate dependent upon the soil type and slope. Use tackifier as recommended by manufacturer.
- Apply hydraulically applied mulches from multiple directions to ensure adequate coverage.

Inspection and Maintenance Tips

- Maintain specified mulch cover thickness.
- Monitor long-term performance through the establishment of vegetative cover.
- Areas that fail to establish enough cover to prevent erosion should be re-mulched as soon as such areas are identified. Re-apply and/or protect eroding areas with a net or blanket. If the problem is related to drainage, fix the drainage problem and re-mulch the eroded area.
- Hydraulically treated areas should be inspected and monitored after installation and periodically thereafter. If sheet or rill erosion is evident, promptly re-apply treatments and/or take additional measures.
- If hydraulic mulch or tackifiers are applied without seeding, the longevity of the products must match the length of time soil will remain bare or until re-vegetation occurs.

Source: Clean Water Services

Source: Clean Water Services

► Seeding and Planting (Temporary and Permanent)

Well-established vegetation is one of the most effective ways to reduce erosion.

Installation Tips

- To ensure success, take care in site preparation, seed selection, application rate, and site maintenance.
- Properly calculate the seeding rate based on seed purity and germination information.
- Plant more than one plant species so that at least one species will do well under site conditions.
- For optimum seeding conditions, preserve topsoil and turn stockpile material in low windrows (to avoid compaction and development of anaerobic conditions) until final grades are established, then spread soil over area to be seeded.

SITE PREPARATION

- Bring the seedbed area to final grade; remove all larger clods, rocks and debris and grade surface irregularities to less than 2 inches. The seedbed should be firm but not compact. The top layer of soil (e.g., 4 to 6 inches) should be loose and moist.
- If the seedbed has been idle long enough for the soil to become compact, the topsoil should be broken up and smoothed out.
- Tracking or furrowing should be done horizontally across the face of the slope, so ridges are along the slope contour.
- Divert concentrated flows away from seeded area.
- Spread topsoil over final grades. Or conduct soil test to determine pH and nutrient content and incorporate amendments into the soil as needed to adjust pH to 6.0 to 7.5.

SEEDING/SEED PURITY

- Seed must have soil contact for optimum germination. Incorporate broadcast seed into the soil by raking or chain dragging and then lightly tamp down to provide good seed-soil contact. Double the rate of seed application when mulch and seed are applied in a single application.
- Use seed specified in the project plan and measured by Pure Live Seed (PLS) weight.
- Use recommended erosion control seed mixes for your area.
- Apply seed before applying straw mulch or other ground cover applications.

TIMING OF SEED APPLICATION

- Temporary vegetative cover must be fully established by the date specified in the project plan or other ground cover measures must be implemented.
- Apply permanent seeding when no further disturbances are planned. On steep slopes (e.g., greater than 10 percent), apply hydroseed and mulch with a bonding agent (tackifier) in accordance with seed supplier recommendations.
- Supply permanent or temporary irrigation especially in abnormally hot or dry weather or on adverse sites. Control water application rates to provide adequate moisture without causing runoff.

FERTILIZER

- Test areas that are being seeded for final landscaping to determine type and quantity of fertilizer needed.
- Use slow-release fertilizers and do not over apply.
- Use non-phosphorus fertilizer on disturbed areas within 50 feet of water bodies and wetlands.
- Use stockpiled topsoil or compost to reduce the need for fertilizer.
- Do not apply sprays in high wind or just before precipitation events.
- Sweep up over sprayed product and use or properly dispose of it.

Inspection and Maintenance Tips

- Inspect newly seeded areas frequently to ensure plants are growing.
- If the seeded area is damaged due to runoff, additional BMPs may be needed. Re-seed and mulch damaged areas to prevent sheet and rill erosion.
- Spot seed to fill in bare spots where plants did not grow properly. If spot seeding is ineffective, use an alternate method, such as sod or matting. Contact the designer if problems continue.

Source: Clean Water Services

Source: Clean Water Services

Source: Clean Water Services

Erosion Blankets and Mats

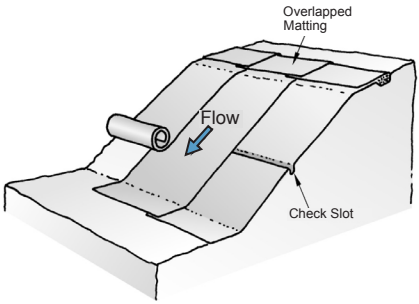
Erosion blankets and mats (mats) are used to cover the soil to prevent erosion and assist in establishment of vegetation.

Installation Tips

- Make sure slopes are appropriately stabilized promptly as grading progresses and following construction.
- Select mats based on selected design and site characteristics because mats come in various materials. Select mat material based on length of use required, slope, soil type, and shear stress on channel bottom.
- Grade the surface to remove all debris and undulations larger than 2 inches in any dimension. Make sure slopes are appropriately stabilized promptly following construction.
- Apply seed and fertilizer (if using) prior to matting.
- Install mats in complete contact with soil surface. Drape rather than stretch the mat across the terrain to prevent vegetation from pushing the mat up and reducing soil contact.
- Trench the mat at the top of the slope to prevent runoff from flowing under the mat.
- Provide adequate overlap between adjacent mats so erosion does not occur between them. Install the overlaps in the downslope or downstream direction to prevent runoff from lifting mats, similar to shingles on a roof.
- Follow manufacturer's specifications for staple pattern and size for the onsite soil type and slope. Make sure you use enough staples to prevent erosion from occurring under the mat (under-rilling), and long enough staples to prevent failure.

Inspection and Maintenance Tips

- Inspect following installation and before, during, and after storms.
- Ensure mats have good ground contact.
- Check for erosion and undermining. Repair damaged areas. Staple into the ground any areas not in close contact with the soil.
- If erosion occurs, repair and protect the eroded area. If washout or breakage occurs, repair the slope and then reinstall mat.



Source: Multi-jurisdictional Erosion Prevention and Sediment Control Planning and Design Manual, 2008

Source: Clean Water Services

SEDIMENT CONTROLS

► Entrance/Exit Tracking

Properly implemented construction entrances/exits help prevent the tracking of soil onto public or private roadways that could flow into stormwater conveyance systems or surface waters. They are usually stabilized rock pads placed at each construction site entry and exit point. Other plates, panels or structural systems may also be used.

Installation Tips

- Install prior to initiating any site work.
- Encourage only essential vehicles to come on and off site.
- Use only washed rock to minimize sediment runoff.
- Use appropriate size rock (e.g., 3 to 6 inches for larger site developments; or per local regulation for single-family residential).
- Whenever possible, construct the pad on a firm, level, and compacted subgrade. Avoid entrances with steep grades or located on curves of roadway.
- Do not install rock on paved surfaces. Use wooden curb ramps instead.
- Install geotextile under rock when subgrade is not stable or is "pumping" up into the pad.
- Include a tire wash facility if entrance is not effectively retaining sediment onsite.

Inspection and Maintenance Tips

- The construction entrance and tire wash requires daily, ongoing inspection.
- Immediately sweep up and remove rock or sediment carried from the site. Stabilize onsite sediment generation areas to prevent tracking onto pavement.
- **DO NOT FLUSH ROCK OR SEDIMENT FROM THE SITE INTO THE DRAINAGE SYSTEM!**
- Add or replace rock as needed to maintain the specified dimensions.
- If using a tire wash facility, inspect routinely and remove accumulated sediment.

Source: City of Bend

Source: Clean Water Services

► Sediment Fence

A sediment fence is a temporary sediment trap made of filtering geotextile fabric stretched between and attached to support posts; it is installed to treat overland/sheet flow.

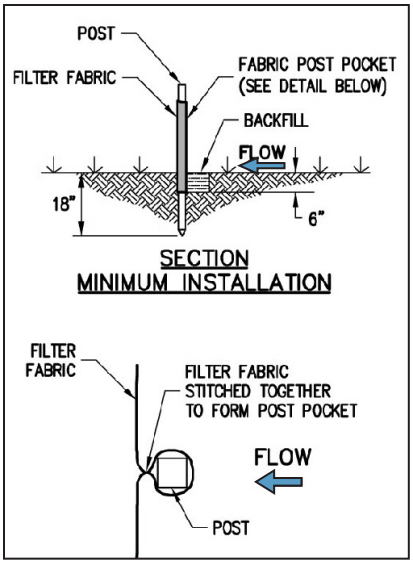
Installation Tips

- Use only for sheet and rill erosion; not for concentrated flow and never across waterways.
- All sediment fence filter fabric should have manufactured stitched loops with posts, sized as specified. Install stitched loops on the uphill side of the sloped area. Standard or heavy duty sediment fence fabric must meet specific ASTM requirements.
- Drive posts securely into the ground.
- Install parallel to ground contours according to the specified barrier spacing for the slope. In areas where cross contours cannot be avoided, use check dams or wings to slow flow and prevent erosion.
- Considering specific site characteristics, either install at toe of slope or slightly away (e.g., 3 feet) from toe of slope to maximize storage capacity.
- When sediment fence approaches its end point, turn fence uphill and extend one full panel (6 feet).
- Bury the lower "hem" of the fabric in a trench (e.g., minimum 6 inch trench) along the contour to prevent sheet flow from piping under the fence. Backfill trench and compact the soil on both sides of the fence.
- When joining two or more sediment fences, connect the two end stakes by wrapping them together at least one and one half turns and driving the joined stakes into the ground together.

Source: Clean Water Services

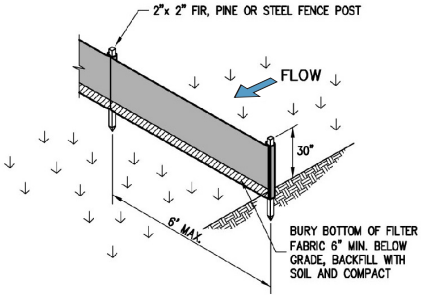
Inspection and Maintenance Tips

- Inspect frequently. Immediately repair damage (e.g., split, torn, slumping, weathered fabric; broken posts).
- Remove accumulated sediment once it has reached 1/3 the fence height.
- Inspect for channel formation parallel to the fence. Splice in lateral sediment fence "wings" to slow velocity, or place bio-bags at intervals appropriate to the slope.
- Replace deteriorated or clogged geotextile.
- Check for undercutting or piping under fence.
- Remove fences when upslope area has been stabilized and is no longer needed.



Detail Fabric Post Pocket

Source: Clean Water Services, 2012



Typical Prefabricated Sediment Fence Layout

Source: DEQ, 2005

► Inlet Protection

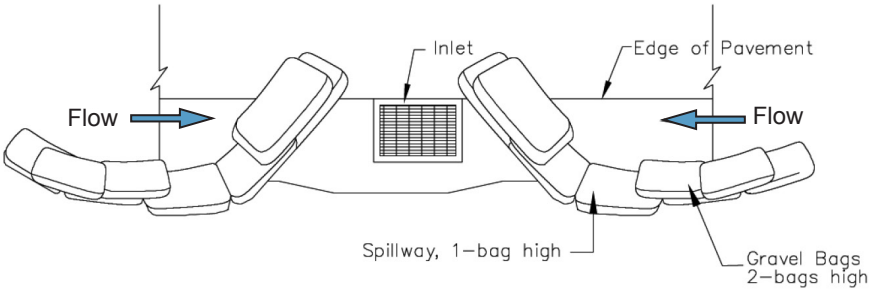
Inlet protection devices filter coarse sediments from runoff, preventing them from entering storm drainage systems.

Installation Tips

- Install inlet protection devices in areas with low flows and low sediment loads. Additional measures must be considered depending upon soil type.
- Place in areas where ponding will not have adverse impacts.
- Type and installation must allow for overflow in a severe storm event.
- Properly install and maintain the devices to prevent short-circuiting of flow.
- Make sure when using biobags that they are not constructed of such a dense material that they do not allow enough flow–through that would result in too much ponding and overtopping.
- DEQ recommends biobags not be used on streets or other paved areas due to their high maintenance and potential for damage or displacement. If biobags are used in high-traffic areas, it is recommended that additional measures be implemented to help prevent them from being run over (e.g., flagging several feet high).

Source: Clean Water Services

Typical Protection for Inlet with Opposing Flow Directions



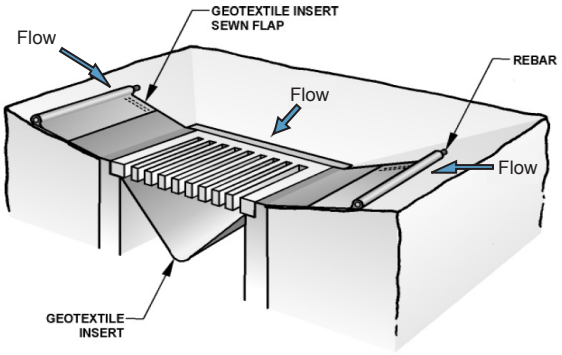
Source: DEQ, 2005

Inspection and Maintenance Tips

- Regularly check and maintain placement of inlet protection, particularly in high traffic areas.
- Remove accumulated sediment after every storm and during and after each significant storm.
- If inlet protection becomes clogged with sediment, sediment must be carefully removed and inlet protection cleaned or replaced.
- Use mechanical means (shovel, broom, sweeper/vactor) to remove sediment as needed to maintain intended functions.
- ***NEVER FLUSH SEDIMENTS INTO DRAINAGE SYSTEM!***
- Repair or replace materials as needed to ensure proper functioning. If rock becomes clogged with sediment, it must be carefully removed and cleaned or replaced.

Source: Clean Water Services

Inlet – Prefabricated Filter Insert



Source: Multi-jurisdictional Erosion Prevention and Sediment Control Planning and Design Manual, 2008

► Fiber Rolls or Wattles

Fiber rolls or wattles (wattles) intercept and capture sediment entrained in sheet flow. Use these light-weight and easy-to-install rolls in place of sediment fences on steep slopes or as an alternative to biobags for inlet protection.

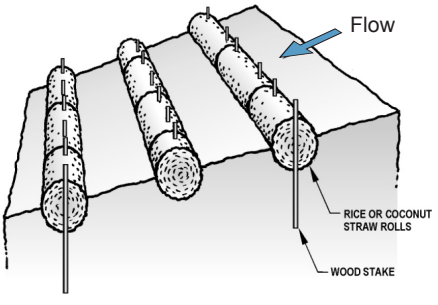
Installation Tips

- Place in shallow trenches along the contour of newly constructed or disturbed slopes and stake into the ground. Trench should be deep enough to ensure good contact on gentle slopes and to accommodate up to 1/3 the thickness of the wattle for steeper slopes, especially on sandy soils. Wattle must be tight against the soil in trench.
- Make sure no gaps exist between wattles. Overlap ends of adjoining wattles.
- Stakes must be securely driven into undisturbed material to specified depth. Drive additional stakes on the down slope side of the trenches in highly erodible soils or on very steep slopes.
- If live willow stakes are installed, use a crowbar or rebar to drive holes through wattles.

Inspection and Maintenance Tips

- Make sure wattles are in contact with the soil and stakes are holding.
- Clear sediment build-up frequently.
- Re-stake, re-seed, re-plant vegetation, and/or install matting as necessary to stabilize slope.
- May be allowed to degrade in place if biodegradable or photodegradable material is used.

Wattle Roll Installation



Source: Multi-jurisdictional Erosion Prevention and Sediment Control Planning and Design Manual, 2008

Source: Clean Water Services

POLLUTION PREVENTION

► Concrete Management

Concrete management prevents or reduces discharge of pollutants to stormwater from concrete waste.

Installation Tips

- Perform on-site washout in designated areas only.
- Train employees, delivery drivers, and subcontractors on how to use the system.
- Do not wash out concrete trucks into storm drains, open ditches, streets or streams. Do not allow excess concrete to be dumped on site, except in designated areas.
- Wash out wastes into a properly sized temporary pit or bermed area where the concrete can be set, later broken up and properly disposed.
- Locate washout area at least 50 feet from storm drains, open ditches or water bodies.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by suctioning water to a tank or draining the water to a bermed or level area. Collect and return sweepings to aggregate base stockpile, or dispose in the trash.
- Store dry and wet materials under cover, away from drainage areas.
- Avoid ordering and mixing excess amounts of concrete.
- If dewatering the concrete management facility, contact the local agency or DEQ to see if pretreatment is needed.

Inspection and Maintenance Tips

- Ensure that concrete truck drivers are adhering to project practices.
- Inspect routinely, when applicable activities are underway to ensure that concrete washout does not overflow and that freeboard is adequate to contain concrete and rain.
- Clean out designated washout areas when the washout is mostly full (e.g., 3/4 full).
- Properly clean out any designated on-site washout areas and remove all debris upon project completion.

Source: Clean Water Services

Source: Clean Water Services

► Stockpile and Materials Management

Stockpile management reduces or eliminates the discharge of pollutants to stormwater from stockpiles of soil, sand, rock sub-base material, concrete, mulch, compost, building materials, etc.

Materials management prevents or reduces discharge of pollutants to stormwater from material delivery and storage by minimizing the storage of hazardous materials on site, storing materials in a designated area, installing secondary containment, conducting regular inspections and training employees and subcontractors.

Installation Tips

STOCKPILE MANAGEMENT

- If feasible, locate stockpiles a minimum of 50 feet away from inlets, drainage courses, or water bodies.
- Keep stockpiles organized and surrounding areas clean.
- Protect stockpiles with a perimeter sediment barrier such as berms, sediment fences, or fiber rolls.
- Protect storm drain inlets, drainage courses, and receiving waters from stockpiles, using inlet protection and perimeter controls as appropriate.
- Implement dust control and dust suppression practices, such as temporary or vegetative cover, as appropriate to prevent wind and rain erosion of stockpiled material.
- Temporary stockpiles not removed or used by the end of one workday should be protected.

MATERIALS MANAGEMENT

- Designate areas of the construction site for material delivery and storage of soil, pesticides/herbicides, fertilizers, detergents, plaster or other products, fuel, oil, grease or other petroleum products and other chemicals such as acids, lime, glues, paints, solvents and curing compounds.
- Place storage areas near construction entrances, and ensure storage and transport is away from drainage paths or waterways. Place in an area that will be paved and surround materials with earthen berms.
- Keep an up-to-date inventory of materials delivered and stored on site. Order materials when they are needed and only in the quantity needed.
- Handle materials as infrequently as possible.
- Store materials, especially treated wood and galvanized metals, in a covered area.
- Place chemicals, drums and bagged materials in secondary containment.
- Minimize hazardous materials on site. Handle them as infrequently as possible.
- Storage of reactive, ignitable, or flammable liquids must comply with local fire codes. Contact the local Fire Marshal to review site materials, quantities, and proposed storage area.

Inspection and Maintenance Tips

STOCKPILE MANAGEMENT

- Inspect stockpiles regularly; repair and/or replace covers or perimeter controls as needed.

MATERIALS MANAGEMENT

- Keep chemicals in their original containers and the contents labeled.
- Train employees and subcontractors on spill prevention and spill response procedures.
- When dangerous materials or liquid chemicals are unloaded, employees trained in emergency spill cleanup procedures should be present.
- If significant residual materials remain on the ground after construction is complete, properly remove materials and contaminated soil.

Source: Clean Water Services

Source: Clean Water Services

Source: Clean Water Services

Source: Clean Water Services

Notes:

Notes:

Thanks for the hard work of the ACWA group that guided development of this field guide, under the able leadership of Wendy Edde, City of Bend. The group guiding this effort included:

- John Bushard, City of Troutdale
- Delynn Clark, City of Lake Oswego
- Billy Curtiss, City of Eugene
- Keri Handaly, City of Gresham
- Dawn Hottenroth, City of Portland
- Tony Gilbertson, Clean Water Services
- Scott Gillespie, City of Eugene
- Linda Hulme, City of Fairview
- Nitin Joshi, City of Salem
- Jim Krawczyk, City of Salem
- Jennifer Morgan, Rogue Valley Sewer Services
- John Nagy, Clackamas County Water Environment Services
- Roger Thom, City of Medford
- Deborah Topp, City of Salem

Resources

Additional resources for preventing erosion and reducing site sediment runoff include:

- DEQ – Erosion and Sediment Control Manual (2005)
  http://www.deq.state.or.us/wq/stormwater/docs/escmanual/manual.pdf
- DEQ - Inspector Guidance Booklet for Construction Site Erosion and Sediment Control (2005)
  http://www.deq.state.or.us/wq/stormwater/docs/escmanual/inspectorguide.pdf
- Environmental Protection Agency – Stormwater Information
  http://cfpub.epa.gov/npdes/stormwater/const.cfm
- EPA – Developing your Stormwater Pollution Prevention Plan for Construction Sites
  http://cfpub.epa.gov/npdes/stormwater/swppp.cfm
- Local stormwater design manuals – check with your local municipality or district

About ACWA

The Oregon Association of Clean Water Agencies is a private, not-for-profit professional organization of Oregon's wastewater treatment and stormwater management utilities, along with associated professionals. ACWA's mission is to protect and enhance Oregon's water quality. More about ACWA can be found at *www.oracwa.org*

oregon association of CLEAN WATER agencies

March, 2013

PART III: CHECKLIST OF REQUIRED ELEMENTS OF ESCP DRAWINGS

1. Information Required on ESCP Drawings

The following items must be depected on ESCP drawings, as applicable:	Yes	No	N/A*
a. Total property boundary including surface area of the development; (Sch. A.12.b.v.3.a)			
b. Areas of soil disturbance (including, but not limited to, showing cut and fill areas and pre- and post-development elevation contours); (Sch. A.12.b.v.3.b)			
c. Drainage patterns before and after finish grading; (Sch. A.12.b.v.3.c)			
d. Discharge points; (Sch. A.12.b.v.3.d)			
e. Areas used for the storage of soils or wastes; (Sch. A.12.b.v.3.e)			
f. Areas where vegetative practices are to be implemented; (Sch. A.12.b.v.3.f)			
g. All erosion and sediment control measures or structures; (Sch. A.12.b.v.3.g)			
h. Identify the type of seed mix (percentages of the various seeds of annuals, perennials and clover) and other plantings. (Sch. A.7.b.iii.3)			
i. Sediment fences, vegetative buffer strips, sediment traps, rock filters, compost berms/compost socks, fiber rolls/ loose non-compacted straw wattles, storm drain inlet protection, and temporary or permanent sedimentation basins (Sch. A.7.d.i)			
j. Diversion of uncontaminated flows around stockpiles, use of cover over stockpiles, and installation of sediment fences (or other barriers that will prevent the discharge of sediment or turbidity) around stockpiles. (Sch. A.7.e.ii.(3))			
k. Stabilized site entrances and access roads including, but not limited to construction entrances, roadways and equipment parking areas (for example, using geotextile fabric underlay). (Sch. A.8.c.i.(4))			
l. Perimeter sediment control, including storm drain inlet protection as well as all sediment basins, traps, and barriers. (Sch. A.8.c.i.(5))			
m. Concrete truck and other concrete equipment washout areas. (Sch. A.8.c.i.(6))			
n. Impervious structures after construction is completed (including buildings, roads, parking lots and outdoor storage areas); (Sch. A.12.b.v.3.h)			
o. Springs, wetlands and other surface waters on site or adjacent to the site; (Sch. A.12.b.v.3.i)			
p. Temporary and permanent stormwater conveyance systems; (Sch. A.12.b.v.3.j)			
q. Onsite water disposal locations (for example, for dewatering); (Sch. A.12.b.v.3.k)			
r. Storm drain catch basins depicting inlet protection, and a description of the type of catch basins used (for example, field inlet, curb inlet, grated drain and combination); (Sch. A.12.b.v.3.l)			
s. Septic drain fields; (Sch. A.12.b.v.3.m)			
t. Existing or proposed drywells or other UICs; (Sch. A.12.b.v.3.n)			
u. Drinking water wells on site or adjacent to the site (Sch. A.12.b.v.3.o)			
v. Planters; (Sch. A.12.b.v.3.p)			
w. Sediment and erosion controls including installation techniques; (Sch. A.12.b.v.3.q)			
x. Detention ponds, storm drain piping, inflow and outflow details (Sch. a.12.b.v.3.r)			

RVSS OVERSIGHT INSPECTION OF 1200-**C AND CN** PERMITTED SITES

Project Name_____ Permit #_____

Inspected By:_____ Insp. Date:_____

Inspector Name, Title & Contact Info: _____

General Contractor & Contact Info: _____

Current Weather: Temp:_____ ☐Clear ☐Cloudy ☐Light Drizzle ☐Raining ☐Storming ☐Other_____

BMP INSPECTION TYPE: ☐Initial Inspection ☐Regular Inspection ☐Re-Inspection

Storm Event: ☐pre ☐post ☐Other_____

- Inspect site after installation of ESC measures.
- Re-inspection of site if corrective action was previously required.
- Inspect site after any storm event greater than 0.5 inches in a 24 hour period, or prior to a predicted event of 0.5" or more.

Item No.	**Item Description** Check Yes, No, or NA if not Applicable. If any answer is No, describe needed maintenance and/or corrective actions in the space provided or on an attached sheet.	**Yes**	**No**	**N/A**
1	Is stormwater discharge going offsite now, or is there evidence that SW runoff has occurred? **If Yes, complete Stormwater (SW) discharge section on page 3.**			
Notes				
2	Is a copy of the approved Site map, ESC plans and any revisions, and all visual monitoring records (completed copies of this Inspection report) available on site?			
Notes				
2a	Were any changes made to the ESC Plans since the last Inspection? If Yes, was the action plan or a revised plan set submitted to RVSS for review and approval?			
Notes				
3	Is the project being Phased per the approved ESC Plan?			
Notes				
4	Are all perimeter sediment controls in place, properly installed and well maintained where required by the ESC Plan?			
Notes				
5	Are all erosion prevention measures in place, properly installed and well maintained where required by the ESC Plan?			
Notes				
6	Are all storm drain inlets, creeks, etc. properly protected and well maintained where required by the ESC Plan?			
Notes				

Project Name:_____ Permit #:_____ Insp. Date:_____

Item No.	**Item Description** Check Yes, No, or NA if not Applicable. If any answer is No, describe needed maintenance and/or corrective actions in the space provided or on an attached sheet.	Yes	No	N/A
7	Are construction site entrances and exits properly protected (*e.g.* using stabilized entrance, tire wash, street sweeping, etc.) to control off site tracking of sediment and construction related pollutants?			
Notes				
8	Is construction site track-out evident? If Yes, list the maintenance and/or corrective action required to clean-up and prevent future track-out.			
Notes				
9	Are all stockpiles covered, protected and/or located in an area where eroded material is unable to reach a storm drain or stream?			
Notes				
10	Are all material handling, equipment storage, maintenance areas and storage areas clean and free of spills, leaks, or other deleterious materials?			
Notes				
11	Are dust control and debris & waste control measures being appropriately implemented?			
Notes				
12	After initial site grading, have all stormwater facilities (ponds, swales, rain gardens, etc) been fenced off to prevent construction vehicles from entering and to prevent stockpiling of material and supplies in the area?			
Notes				
13	Are all natural buffer zones, and any trees to be protected on site, delineated and marked off with orange construction fencing (or equivalent) where required by the ESC Plan?			
Notes				
14	Are all other BMPs identified in the ESCP (such as concrete washout containment structures, settling basins, dewatering pumps, other dewatering activities) functioning properly?			
Notes				

Notes:

1. Please refer to the ACWA Construction Site SW guide, or the 1200-C/CN permit or DEQ's manual for help completing this form.
2. Significant amounts of sediment are described in Schedule A as: earth slides or mud flows leaving the construction site; concentrated flows that cause erosion not filtered prior to discharge; turbid flows not filtered prior to discharge; sediment deposits that drain to unprotected or poorly maintained storm drains or catch basin; sediment deposits on public or private streets outside of permitted constriction area; and sediment deposits on any adjacent property outside of the permitted construction area.

<u>Visual Monitoring Observations of the Offsite Stormwater (SW) Discharge or Evidence Thereof</u>

Identify and answer questions below for <u>each stormwater discharge location that has either, active offsite stormwater discharge, or evidence that stormwater discharge has occurred recently</u>. Attach additional sheets as needed.

Description of Discharge Location: ____

(a) For SW discharging offsite, describe any apparent color and the clarity of the discharge, and any apparent difference in comparison with the surface waters or if no active discharge, describe the observed evidence of previous offsite SW flows and maintenance or corrective actions taken:

____

____

(b) Is any oily sheen or floating material observed in the SW discharge? Yes / No If Yes, describe the floating material and/ or oily sheen and locate possible sources and maintenance or corrective action(s) taken:

____

____

Description of Discharge Location: ____

(a) For SW discharging offsite, describe any apparent color and the clarity of the discharge, and any apparent difference in comparison with the surface waters or if no active discharge, describe the observed evidence of previous offsite SW flows and maintenance or corrective actions taken:

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____

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____

____

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____

____

(b) Is any oily sheen or floating material observed in the SW discharge? Yes / No If Yes, describe the floating material and/ or oily sheen and locate possible sources and maintenance or corrective action(s) taken:

____

____

CITY OF PHOENIX- PUBLIC WORKS DEPARTMENT

STORM DRAIN PROTECTION PERMIT FOR SMALL SITES (<1ACRE)

Rogue Valley Sewer Services (RVSS) holds the Municipal Separate Storm Sewer System (MS4) Phase II permit from the Oregon Department of Environmental Quality (DEQ) for the City of Phoenix and is responsible for ensuring implementation, adherence and enforcement, under RVSS code Chapter 4.05, Stormwater Management. This storm drain protection permit is required for any ground disturbing activities of less than one acre within the Phase II boundary.

Projects must comply with the minimum requirements specified below and on the attached diagram to remain consistent with the Phase II requirements and Chapter 4.05 of the Stormwater Management ordinance. RVSS will be conducting inspections of projects including projects less than 1 acre, for compliance with the above ordinance. It is important to note that additional erosion and sediment controls may be necessary, to prevent pollutants from entering the stormwater system. Projects larger than 1 acre must obtain a 1200CN permit from RVSS.

The minimum stormwater protection requirements are as follows:

1. Appropriate Best Management Practices (BMP) shall be implemented to prevent debris, dirt, petroleum products, pesticides, fertilizers, cement washout, paint, or any hazardous materials from being washed into the storm sewer system. In the event such materials are place or accidentally deposited outside the property boundary they shall be immediately cleaned up and removed.

2. Prior to placing fill on private or public property a permit or written authorization must be obtained from Jackson County Development Services. No piles of dirt, rock, bark or any other materials shall be placed in the street or curb/gutter.

3. Parking must be on the street unless a county approved staging area is designated for parking. All parking areas must be protected to prevent track out.

4. All concrete equipment must be washed in a contained concrete washout. Tile cutters, pipe cutters, and concrete/grout pumps must have a tarp or other protective material placed under the equipment to collect cuttings, dust, or spills. Waste materials shall be properly disposed of and not washed into the storm sewer system.

5. Any access off paved areas shall have a gravel entrance/exit. The gravel must have a minimum 8-inch depth of 3-6 inch rock placed over filter fabric that extends 30 feet from the street, or to the structure.

6. Exposed soils shall be protected from excessive erosion by the use of erosion prevention BMPs (i.e. fabric, matting, hydro-seeding, etc.) between October 1st and May 31st. Areas with steep slopes may require special erosion protection.

7. All material stockpiles shall be bordered with sediment control BMPs and, when not in use, protected with erosion prevention BMPs between October 1st and May 31st.

8. Porta-potties must be located off the public right-of-way and at least 30 feet from any catch basin.

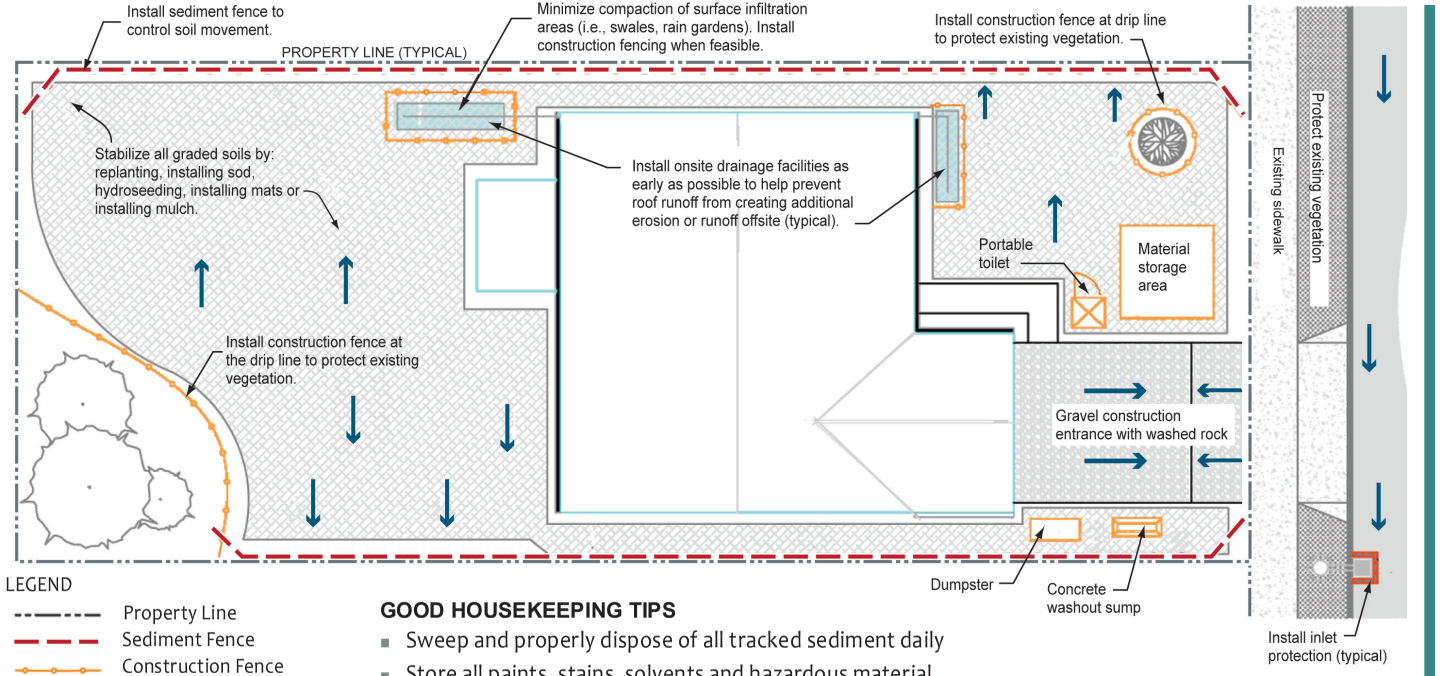
9. Best Management Practices (BMP) shall be cleaned and/or repaired as necessary to facilitate proper operation during construction. BMPS shall be removed when the site is stable and the potential for erosion is eliminated.

By signing you are claiming to be the responsible party for work on the subject site specified below and accept full responsibility for any violations of RVSS' Chapter 4.05 Stormwater Management ordinance. You understand and accept the conditions set forth in this permit and understand there are penalties for failure to comply.

Site Address or Legal Description (Taxlot number)_____

Signature of responsible party: _____ **Date:** _____

Print Name: _____ **Phone No.** _____



LEGEND

- Property Line
- Sediment Fence
- Construction Fence
- Roof Drainage Facility
- Ground Slope Direction
- Existing Vegetation
- Stabilized Soil
- Existing Tree
- Existing Vegetation

Source: City of Bend, 2013

GOOD HOUSEKEEPING TIPS

- Sweep and properly dispose of all tracked sediment daily
- Store all paints, stains, solvents and hazardous material in a covered and bermed storage area
- Tarp all loads before leaving the site
- Dispose of all trash in a covered dumpster or trash can
- Clean up spills promptly using dry cleanup methods
- Remove temporary controls when no longer needed
- Do not dump or wash any material into the storm drain

Examples for a Typical Site

APPENDIX E: Section 4.0 Monitoring

Table 5. RVSS Outfall Monitoring Data

Table 5. RVSS Outfall Monitoring Data FY19

Stream	Sample ID	LATITUDE (decimal degrees)	LONGITUDE (decimal degrees)	*LAT/LONG SOURCE*	Date Collected	Time Collected	Sample Type	Water Temp (C°)	Conductivity (uS)	pH	TDS (ppm)	E. coli MPN/100 mL	E. coli Geometric mean (MPN/100 ml)	Flow (mL/s)	Flow (cfs)
Mingus Cr.	Mingus ID64	42.37994	-122.908	WGS84	8/16/2018	9:27	Outfall	NC	NC	NC	NC	1046.2	952.1	18.5	6.46E-04
Mingus Cr.	Mingus ID64	42.37994	-122.908	WGS84	8/16/2018	9:27	Outfall	NC	NC	NC	NC	866.4			
Daisy Cr.	ID 13	42.36719	-122.917	WGS84	8/29/2018	10:00	Outfall	20.5	692	7.46	491	4.1	2.0	17.2	6.02E-04
Daisy Cr.	ID 13 Dup	42.36719	-122.917	WGS84	8/29/2018	10:00	Outfall	NC	NC	NC	NC	1			
Daisy Cr.	ID23	42.3667	-122.917	WGS84	8/29/2018	10:50	Outfall	21	145.1	7.97	103	2	1.4	0.7	2.49E-05
Daisy Cr.	ID23 Dup	42.3667	-122.917	WGS84	8/29/2018	10:50	Outfall	NC	NC	NC	NC	1			

NC = not collected