ROGUE VALLEY
SEWER SERVICES
CLEAN WATER - HEALTHY COMMUNITIES

ANNUAL NPDES PHASE II REPORT FOR FISCAL YEAR 2022

FOR THE COMMUNITIES OF:

CITY OF PHOENIX
O•R•E•G•O•N

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
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Annual Report

MS4 Phase II General Permit

National Pollutant Discharge Elimination System
MS4 Stormwater Discharge Permit

State of Oregon
Department of
Environmental
Quality

Monitoring Year: FY22
Permit Registrant: Rogue Valley Sewer Services
Date Prepared/Submitted: November 1, 2022

DEQ File No.: 116270

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

10/20/22
Date

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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.

General Information

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 W Vilas Rd		
City: Central Point	State: OR	Zip: 97502
13. Point of Contact:		
Title: Jennie Morgan	Email: jmorgan@rvss.us	Phone: 541-727-6876
14. Mailing Address (*if different*): PO Box 1130		
City: Central Point	State: OR	Zip: 97502

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

MS4 Stormwater Discharge Information

Identify the names of all known 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 the attached Table 1 in Appendix A.		Yes ☐ No ☐	Yes ☐ No ☐	
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 ☐	

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 measures? *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.
The summary must identify the other co-registrants/co-implementers or other entities
RVSS and Jackson County entered into a new Intergovernmental Agreement (IGA) in November 2021 that governs how the MS4 permit requirements will be implemented, see attachments.

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.

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:
The required revised SWMP was submitted to DEQ in November 2021.

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:
The MS4 Phase 2 permit implementation schedule has deadlines extending into 2023.

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

RVSS has developed MSAccess and GIS databases to track 1200-C/CN permitted projects and projects requiring compliance with the post-construction stormwater requirements. Dates of plan review and approval are tracked as well as installation and maintenance inspection dates. Inspection dates and locations are recorded in the field using Collector and evaluations are recorded in the field using Survey123. Collector and Survey123 are ESRI products that feed directly into our GIS databases. An MSAccess database was also created to track visits to stormwater outfalls including date of visit and outfall conditions based on the Center for Watershed Protection's 2004 field reconnaissance survey. The databases are queried periodically to determine how many inspections have occurred and work plans are then set to achieve the target number of annual inspections.

24. Have 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:

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.b*

    Yes ☐ No ☒

    If "Yes", complete Water Quality Standards section (p. 21) of this template.

Stormwater Management Program Control Measures

Public Education and Outreach

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

RVSS has a 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 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. RVSS partners frequently with the Rogue Valley Council of Governments (RVCOG) on public participation, education, and outreach, a copy of their annual report is attached in Appendix B. Some activities that had been on hiatus since COVID's start in 2020 were restarted in FY21.

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 Registrant, Sept. 1, 2023 for New Registrants and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner)*

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

During this reporting year: Twelve events were held and over 522 people were contacted via live or virtual events and activities, see table under Question 34.

30. During the permit term:

If necessary, provide an explanation:

From the start of the permit term through the current reporting period, 53 events were completed with approximately 2,472 people directly contacted via live or virtual events and activities.

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 for recycling programs
- ☐ BMPs for power washing, carpet cleaning and auto repair and maintenance
- ☒ Low impact development/green infrastructure
- ☐ 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:

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

Rogue Valley Sewer Services Public Education and Outreach EVENTS & ACTIVITIES FY 2021				
Event	**Audience**	**Location**	**Notes**	**People contacted**
Tour of Phx Civic Ctr w/OR NPS, Pollinator group	plant/pollinator interest group	Phoenix		10
Salmon Watch instructor training	EE, agency, NGO staff	BC Park	Discussed stormwater educational content	25
SOLV clean up	community volunteers	Coleman Cr.		12
SOLV clean up	community volunteers, students	Blue Heron Park		20
Salmon Watch field trip	Phx Elementary 5th grade	Blue Heron Park		55
Sal Watch field trip in class presentation	Phx Elementary 4th grade	PES		45
Sal Watch field trip	Logos/Lincoln Elem.	Touvelle		55
Sal Watch field trip in class presentation	4th grade, 3 classes	Oak Grove Elem	Discussed stormwater as well as Salmon Watch content	69
SOU Earth day extravaganza	students, kids, and general public	Ashland	storm water model and green infrastructure activity	131
SOLV bear creek clean up	Volunteers	Lynn Newbry park	Trash and invasive plant removal, general park maintenance	28
SOLV bear creek clean up	Volunteers	Blue Heron Park	Trash and invasive plant removal, general park maintenance	31
Natural resource day camp JSWCD	middle school kids	McGregor Park	water quality activity, bio swale water filters	41
		Total Direct Contacts		**522**

Audience - General Public:

- The monthly RVSS bill is mailed to approximately 25,000 customers and includes a graphic with a message. In FY22, there were two different messages related to protecting stormwater that were included on the bill, see the attachments in Appendix B.

Specific Audience: Homeowners:

- A tour of the stormwater green infrastructure facilities at the City of Phoenix City Hall was put on by RVSS staff for the Oregon Native Plant Society and Pollinator Group. The tour discussed how green infrastructure functions and the co-benefits it can provide for pollinators.
- The Clean Rivers Coalition is a statewide consortium of MS4 permittees, Soil and Water Conservation Districts, Watershed Councils and non-profit organizations working together to fund and implement statewide messaging on clean water topics. RVSS has contributed to this organization financially and had staff on the steering committee. The primary education products of this year are a "What's Your Lawn Style" campaign to help property owners manage lawns with minimal impact to downstream water bodies. An annual report is included in Appendix B.

Specific Audience: Dog/pet owners:

- RVSS created permanent signage that reminders dog owners to dispose of waste properly. Signs were made and distributed to Talent and Phoenix staff for installation.

Specific Audience: Property owners/ Construction Site Operators:

- A lot of rebuilding is still occurring following the Almeda Fire. In FY22, RVSS removed BMPs that our staff had installed in the right-of-way post-fire to protect the stormwater system. Upon removal, RVSS staff communicated with construction contractors to remind them they are responsible for BMP installation and maintenance surrounding their construction site.

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: RVSS offers a Designated Erosion and Sediment Control Inspector course twice each year as well as renewal courses. In FY21, 37 new Erosion & Sediment Control (ESC) Inspectors were certified and 29 ESC inspectors were recertified. During the permit term 57 individuals were certified for the first time and 41 individuals renewed their certification.

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*

RVSS has contributed to the Rogue Basin Salmon Watch program for five years providing coordination and administration assistance. Prior to COVID, the Salmon Watch program was evaluated each year using pre and post tests administered to attendees, as well as written evaluations from the teachers. The test scores and written evaluations help to inform us on how the program should be modified to meet goals that include educating youth on what stormwater is and how it's quality is impacted by urbanization.

The previous year had experienced a lack of live field trips and moved to a mix of online and live learning in the spring. During the fall of 2021, the first livestreamed Salmon Watch field trips were conducted again. Almost 300 students attended our virtual field trips over five sessions and were able to learn about macroinvertebrates and riparian ecology.

Of the students who participated in the livestreamed field trips, ninety-four students took a short quiz before and after the event. Overall there was a 50% increase in test scores following the field trips, which indicates an understanding and retention of the concepts taught during the lesson.

Pre and post testing is also used to evaluate the success of each Erosion Prevention and Sediment Control Designated Inspector course. In FY22, individuals being certified for the first time had an average pre-test score of 64.5% and an average post-test score of 89%, individuals recertifying had an average pre-test score of 61% and an average post-test score of 86%.

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:
    Material and teaching methods are evaluated and improved every year.

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 2004 to work collaboratively on Stormwater Management Plan development and implementation. The SWAT is open to the public and anyone who participates is able to comment on the topics and proposals discussed. Voting is limited to MS4 permit holders that have adopted the Rogue Valley Stormwater Design Manual, currently there are seven voting member jurisdictions. RVSS has been a leading member of the SWAT, which meets quarterly.

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 FY21, RVSS worked with co-implementers, partners, and sought public comment on the proposed revisions to the regional Design Manual, which is publically available on the RVSS website.

In FY21, RVSS worked with our co-implementers and SWAT members to jointly develop Standard Operating Procedures (SOPs) and Best Management Practices (BMPs) for Municipal Operations in Pollution Prevention.

RVSS has a public involvement and participation program that provides opportunities for the public to participate in the development of the SWMP control measures. RVSS complies with public notice requirements in its implementation of its public involvement participation process.
RVSS maintains a publically accessible website with information on its SWMP implementation. The SWMP Document, Annual Reports and additional educational materials are available for viewing on RVSS' website. The RVSS website provides information on:

- Reporting an illicit discharge complaint
- Draft documents, final documents, and other SWMP policy documents for review and viewing
- Links to policies and guidance documents related to construction and post-construction stormwater management including education, training, and permitting.
- RVSS' contact information for stormwater issues

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 Registrant, Sept. 1, 2023 for New Registrants and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner)*

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

Yes ☒ No ☐

43. Was the publicly accessible website updated during this reporting year? *Schedule 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:

- In September 2021 and April 2022, RVSS hosted two sites for the "Bear Creek Stewardship Day" in Talent and Phoenix. "Bear Creek Stewardship Day" is a collaboration with numerous entities in the region and uses the SOLVE platform to organize and implement a watershed-wide stewardship event that can include stream clean-up, riparian restoration, or stormwater quality facility improvement work at multiple sites.

Illicit Discharge Detection and Elimination

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

RVSS continues to implement this MCM as we have since the initial Phase 2 permit was issued with dry weather sampling of stormwater outfalls, following the protocols outlined in the Center for Watershed Protection's 2004 manual. We are in the process of updating our GIS stormwater maps through on the ground GPS data collection. In FY21, RVSS updated its escalating enforcement policy for non-compliance and finalized Pollution Prevention SOPs and BMPs for our co-implementers. RVSS is also involved in the Middle Rogue Pesticide Stewardship Partnership having helped to establish the sampling locations and protocols beginning in 2014. In FY22 RVSS continued to coordinate with the partners to determine appropriate sampling locations and to evaluate the data.

Additionally in FY22, RVSS continued collaboration with DEQ, Rogue Valley Council of Governments and the Rogue River Watershed Council to sample stormwater outfalls within and directly outside the Almeda Fire burn zone. The goal is to determine impacts on stormwater runoff from the burned material and rebuilding efforts.

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 Registrant, Sept. 1, 2023 for New Registrants and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner)*

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

Yes ☐ No ☒

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

Our MS4 maps GIS maps have been updated for two of the three co-implementers that RVSS serves and we are in the process of updating the third. The maps were created over 10 years ago using as-built plans, we are now in the process of field surveying stormwater features to update our GIS maps. Additionally, we have established processes for updating the stormwater mapping as development occurs.

53. Is the MS4 map(s) included as attachment? Yes ☐ No ☒
Or are the digital shapefiles available for electronic submittal? Yes ☒ No ☐
(Implementation date: Feb. 28, 2022 for Existing Registrant, Sept. 1, 2023 for New Registrants and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner)
If necessary, provide an explanation: RVSS has a digital map available on its website that includes stormwater mapping:
https://rvss.maps.arcgis.com/apps/webappviewer/index.html?id=4b2c53347bf9400c8397e3b94053a710

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

Yes ☒ No ☐

If necessary, provide an explanation:

Yes, however we update the inventory every year as water levels in irrigation canals fluctuate or vegetation is cleared revealing previously unknown outfalls. We also update with development changes as new ones are built or existing ones removed.

55. Indicate if the following features are included on your MS4 map:
- ☒ Location of all known outfalls, including the requirements in *Schedule A.3.c.ii.B*
- ☒ Stormwater collection and conveyance system, including the requirements in *Schedule A.3.c.ii.C*
- ☒ Stormwater structural controls, including 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:
We have no known chronic discharges.

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 does not list any specific prohibitions, rather it prohibits "…any pollutants or waters containing any pollutants, other than stormwater," Ordinance 22-01 Section 4.10.100.C.1).

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, Sept. 1, 2023 for New Registrants and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner)

If necessary, provide an explanation: Previously provided with FY21 annual report.

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: 6 *(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: Zero

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

    Number: 4 *(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: No illicit discharges were discovered in FY22.

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 used to eliminate illicit discharge during this reporting year. *Schedule A.3.c.v.D*

    Number of times: None

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: Zero

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

    In working days:

    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 who 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: We conducted dry season screening at 73 of 169, or 43% of outfalls this year.

72. Known outfalls screened during the permit term:

    If necessary, provide an explanation: 192 outfalls have been screened since March 2019, many of these were repeat visits to outfalls damaged during the Almeda fire.

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: The Almeda fire burned through RVSS' MS4 September 8, 2020, during the dry season monitoring period. Following the fire, RVSS prioritized visiting all the outfalls in the burn zone to assess fire damage to the structures and to determine whether any illicit discharge was happening as a result of fire damage. Rebuilding began in earnest at the end of FY21, to verify that no cross connections occurred during rebuilding, 73 outfalls in the burn zone were revisited in FY22. Some of these outfalls have been visited three times during the permit period.

74. Priority location outfalls screened during the permit term: 47 outfalls were prioritized in FY21 and 73 in FY22, no outfalls were prioritized previous to FY21.

    If necessary, provide an explanation:

75. Indicate which of the following dry-weather field screening activities have been performed in the last year: *Schedule A.3.c.vi*
    - ☒ General observation
    - ☒ Field Screening and Analysis
    - ☐ Pollutant Parameter Action Levels
    - ☒ 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-G*

All flowing outfalls are sampled and analyzed for E. coli, for any samples that exceed the 406 MPN/100ml a follow-up investigation is conducted to determine the source of the flow. There is consistent high ground water in the Rogue Valley and most flow from outfalls is groundwater or irrigation runoff.

77. Have pollutant parameter action levels been established and are they included as an attachment? *Schedule A.3.c.vi.F*

    Yes ☒ No ☐

    (For Existing Registrant must be submitted with the third Annual Report. New Registrants must submit by September 1, 2023 and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner))

    If necessary, provide an explanation: Pollutant parameter action levels were submitted with the FY21 report, they were not in place for the FY22 sampling.

78. Are all persons responsible for investigating and eliminating illicit discharges and illicit connections into the MS4 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 trained within 30 days of their assignment to this program*? Schedule A.3.c.vii*

    Yes ☒ No ☐

    If necessary, provide an explanation:

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. RVSS became a 1200-C Agent in 2006 and in 2010 began implementing the 1200-CN permit, which requires us to do in-house reviews of erosion prevention and sediment control plans. We have been offering a local Designated Inspector Erosion and Sediment Control course for at least a decade in order to educate local contractors, engineers and public works employees on proper erosion prevention and sediment control measures. In FY22, RVSS certified 37 new ESC inspectors and recertified 55. RVSS has in-house inspectors that provide oversight inspections of 1200-C and CN permitted projects.

Since the Almeda fire in September 2020 burned 8% of RVSS' MS4, the vast majority of RVSS' time with regard to construction site runoff control has been spent on the clean-up and rebuilding. Directly after the fire, the RVSS Stormwater Manager was in close communication with planning staff at the Cities of Talent and Phoenix and Jackson County, as well as DEQ, to help coordinate and expedite the rebuilding process. Rebuilding after the fire presented multiple challenges to the construction site runoff control program and aspects of the program that worked sufficiently pre-fire were insufficient due to the high volume of activity for demolition, debris removal, redesign and rebuilding of structures and infrastructure, permitting, construction, and overall communication. The planning staff were inundated with work but with increased effort into coordination and communication, the permitting and tracking process of demolition and construction was confirmed and strengthened, even in the face of high staff turnover at the City of Talent. In agreement with the DEQ 1200-C permit Coordinator, RVSS is not requiring 1200-C/CN permitting during the demolition phase of burned lots, but is requiring the property owners to obtain 1200-C/CN coverage as they move into rebuilding. All small lot (< one acre disturbance) builders must obtain free Small Site Stormwater permits, the permits are universal, not site specific, but require developers to adhere to ESC standards and requirements. RVSS uses the permits to track who is building where and what responsible parties to contact as needed.

At the end of FY22, RVSS staff removed all of the BMPs that we had installed in the right-of-way immediately post-fire as they were beyond their life expectancy. We then communicated with contractors building in the area to remind them that they are responsible for installing and maintaining BMPs adjacent to their construction site, per their Small lot permit.

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, Sept. 1, 2023 for New Registrants and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner)*

RVSS implemented its Medium Storm Drain Protection Permit July 1st, 2022, see the attached document.

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

Yes ☒ No ☐ NA ☐

If necessary, provide an explanation:

Title 4 of RVSS' code, which is on Stormwater management was rewritten and the ordinance adopted in April 2022, see attachment. As of July 1, 2022, Section 4.05.010 now requires obtainment of 1200-C, CN, Medium site Storm Drain Protection Permits and Small Site Storm Drain Protection permits based on the disturbance

area. All of the permits require erosion controls, sediment controls and materials management controls to be installed and maintained for the duration of the project.

83. 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 ft² ☐, acres ☒ in FY22

If necessary, provide an explanation:

In FY22, RVSS continued requiring this for all projects disturbing one acre or more. Beginning in FY23, Section 4.05.010 of RVSS' Title 4 requires projects that will disturb 7,000sf or more within city limits to obtain the appropriate permit for erosion prevention and sediment control. Projects that will disturb 10,890sf that are outside city limits, but inside RVSS' MS4, must also obtain the appropriate permit for erosion prevention and sediment control. Note that White City, which includes industrial and residential areas, is not an incorporated city and therefore the 10,890sf threshold will apply to White City.

84. 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 projects are referred to DEQ or the appropriate DEQ agent, to obtain a NPDES Construction Stormwater General Permit. *Schedule A.3.d.iii*

RVSS is an Agent of DEQ for the 1200-C permit and administers the 1200-CN permit. Projects are referred to RVSS by its co-implementing planning departments during the plan review phase. Building permits are not to be issued by the co-implementers until the required erosion prevention and sediment control permits are obtained from RVSS.

85. Provide 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.d.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. The ACWA SW Site Guide was provided as an attachment to our FY19 report. Additionally, RVSS is collaborating with local MS4 permittees to develop a two page brochure that succinctly describes BMPs for small construction sites. The aim is to provide them to contractors working on small sites who often have no training or experience with installation or maintenance of erosion control or pollution prevention BMPs.

86. Provide the Erosion and Sediment Control Plan template as an attachment. *Schedule A.3.d.iv.A*

Attached: Yes ☐ No ☒

If necessary, provide an explanation:

The Medium Site Storm Drain Protection Permit is attached for question 81 and provides a list of required plan elements and a required standard notes set.

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

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

If necessary, provide an explanation:

Yes, in FY22 for all projects disturbing one acre or more.

88. ESCPs [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 ☐

89. Provide the ESCP review template or checklist as an attachment. *Schedule A.3.d.v*

    Attached: Yes ☐ No ☒

90. Indicate the minimum land disturbance where you require the ESCP to be reviewed, if different than one acre:

    ft^2 ☐, acres ☐

    If necessary, provide an explanation:

    RVSS uses the DEQ provided list of required elements as a review checklist, this was provided with the FY20 report.

91. 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: 168 inspections of 1200-C and 1200-CN permitted sites were completed this fiscal year, see Appendix D for a table of active 1200-C/CN projects and inspections conducted.

    Indicate the number of inspections completed to comply with this requirement during the permit term: 426 inspections of 1200-C and 1200-CN permitted sites have been completed during the permit term.

    If necessary, provide an explanation:

92. 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 ☐

93. Indicate number of projects that were inspected based on this inspection trigger:

    If necessary, provide an explanation:

    Very few complaints are received by RVSS regarding construction site issues. In FY22, only four complaints were called into RVSS regarding construction sites. However, during the first four months of FY22, RVSS conducted regular drive-by's of construction sites with Small Lot permits in the Almeda Fire re-building area. The drive-by's generated 15 Brown Tags, which are documentation of an issue that requires attention. RVSS discontinued the drive-by's in November. Another 18 notices were issued in the remainder of FY22, primarily when conducting drive-by's to determine if construction at Small Lot permitted sites was complete.

94. Indicate the total number of construction projects that were inspected this monitoring year: 35, 1200-C/CN permitted projects were inspected in FY22 and many hundred Small Site permitted projects were inspected, see question 98 for further explanation on Small Site permits. 135 Small Site permits were issued in FY22.

95. Indicate the total number of construction projects that were inspected during the permit term: 76, 1200-C/CN permitted sites have been inspected during the permit term. Over 500 Small site permits have been issued during the permit term, primarily within in the burn zone, many of which were inspected at least once.

96. Indicate which of the following are documented during an inspection: *Schedule A.3.d.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:

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

    Attached: Yes ☐ No ☒ Provided with the FY20 annual report.

98. For Existing Large Communities: Indicate the number of new construction projects inspected that disturb less one acre during this monitoring year. Is this number at least 25% of the qualifying new construction sites? *Schedule A.3.d.vi.C*

    If necessary, provide an explanation:

    RVSS issues Small Site Stormwater Permits for projects disturbing less than one acre. RVSS does not have a formal mechanism for tracking inspections of Small Site permitted projects. The majority of the Small Site permits were issued for projects within the Almeda fire burn zone. From Oct 2020 through Nov. 2021 RVSS had an inspector dedicated to spending one day a week working in this area conducting erosion and sediment control inspections, we estimate that hundreds of inspections were conducted. As noted in question 93, RVSS discontinued regular inspection of Small Site permitted projects in Nov. 21, these sites are now only inspected if a complaint is called in.

99. 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. Sept. 1, 2023 for New Registrants and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner)

    If necessary, provide an explanation:

    Provided with the fiscal year 21 report.

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

    Yes ☒ No ☐

    Indicate number of times during this reporting year: RVSS' escalating enforcement procedure was used for a contractor with on-going issues over a period of a year. RVSS issues Brown Tags to document issues that need to be addressed, but don't require a penalty. Eight Brown Tags were issued for repeat issues at a series of townhomes a single contractor was rebuilding over a period of eight months, the primary issues were lack of BMPs for storm drain protection, lack of maintenance of BMPs, excessive track out in the street, and mud flowing into the stormwater catch basins. In addition to issuing Brown Tags detailing the problems and how to address them, RVSS provided numerous on-site educational meetings with the contractor and letters to the contractor's headquarters explaining the need and mechanisms for compliance with permit requirements. With the eighth Brown Tag a civil penalty was issued. Unfortunately, though the penalty was paid, the issue was not corrected in the field and additional issues were documented. A second penalty, for the same amount was issued a month later. The second penalty

was not paid and four more Brown Tags were issued for additional issues. At two months past due, RVSS issued an additional, higher penalty for non-payment of the fine, and for the continued non-compliance. The contractor fought the penalties and the third fine was dropped. Following payment of the second fine, four months past due, the contractor continued to disregard the requirements for erosion prevention and sediment control. Two months later RVSS' inspector decided to use a Stop Work Order to get the attention of the contractor rather than go through the civil penalty process. The Stop Work Order did get the attention of the contractor, temporarily.

In total, in FY22, 33 Brown Tags, one notice of violation without monetary penalty, five notices of violation with monetary penalty and one Stop Work Order were issued, see tables in Appendix D.

Indicate number of times during the permit term: In total, 98 Brown Tags, one notice of violation without monetary penalty, six notices of violation with monetary penalty and one Stop Work Order were issued.
If necessary, provide an explanation:

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

Yes ☒ No ☐

If necessary, provide an explanation:

102. 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 ☐

Post-Construction Site Runoff for New Development and Redevelopment

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

RVSS has had a Stormwater Design Manual in place since 2006 that stipulates design guidelines for stormwater treatment and detention. Initially there was a large focus on manufactured devices for stormwater treatment, however in 2012 RVSS shifted toward emphasizing the use of Low Impact Development techniques where practicable. The Design Manual is reviewed, revised, and updated regularly. The Design Manual is adopted by the City of Medford and Ashland as well, who both have their own MS4 permits.

Since March 2019, RVSS has led a Post-Construction Working Group through a process to draft new design guidelines to meet the retention requirements of the new MS4 permit, including design guidelines for Low Impact Development and Green Infrastructure BMPs. Draft Design Manual text was completed in FY22 and went out for public comment in early FY23. Additionally, RVSS reviews and approves stormwater management plans and conducts installation and maintenance inspections of private and public stormwater management facilities.

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

Yes ☐ No ☐ *((Implementation date: Feb. 28, 2023 for Existing Registrant, Sept. 1, 2023 for New Registrants and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner)*

The revised Design Manual went out for public comment in early FY23 and received comments are being reviewed. The Post-Construction Working Group is on track to have the revised Design Manual implemented by Feb. 28th, 2023.

105. 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

If necessary, provide an explanation:

In the draft revised Rogue Valley Stormwater Design Manual (not yet implemented), the threshold will change to 5,000sf for sites within city limits and 10,890sf for sites located inside RVSS' MS4 but outside city limits. Note that the area referred to as White City, which includes residential and industrial areas, is not actually an incorporated city and therefore will follow the 10,890sf threshold.

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

☒ The use of structural 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:

107. 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 ☐

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

NA, requirement not in force yet.

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

NA, requirement not in force yet.

110. 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:

In the revised Design Manual the treatment storm will change from the current one inch 24 hours to 0.84 inches in 24 hours, which is the 95th percentile storm for the Rogue Valley. The retention storm will be 0.46 inches in 24 hours, which is the 80th percentile storm for the Rogue Valley.

111. 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 ☐

In the draft revised manual, if projects are unable to meet the retention requirement, they must treat all runoff generated by the Treatment storm (0.84 inches in 24 hours) from new and redeveloped impervious surfaces.

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

Yes ☒ No ☐

If necessary, provide an explanation: All treatment BMPs allowed by the Rogue Valley Stormwater Design Manual are designed to remove at minimum 80% TSS.

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

Yes ☒ No ☐

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

Attached ☐

Location: The current Rogue Valley Stormwater Design Manual is available on our website. The draft proposed revised Design Manual is located here.

If necessary, provide an explanation:

115. Have alternatives for projects complying with the retention requirement been approved? *Schedule A.3.e.iv.D*

Yes ☐ No ☐

From the proposed revised Design Manual:

2.2.2 Retention Exemptions

Many conditions, including geology and site location, may limit the ability of a Retention Facility to properly function at a site. Described in **Section 2.4.1** are technical criteria that this Design Manual acknowledges inhibit Retention, if any of these exist on the site, the site is considered infeasible for retention-based stormwater facilities. Technical justification must be provided in the form of a site-specific hydrologic or design analysis conducted or endorsed by an Oregon registered Professional Engineer (PE) or Oregon Certified Engineering Geologist (CEG) demonstrating that infeasibility factors exist on the site. The analysis must receive concurrence from the approving jurisdiction. If Retention is deemed infeasible for a site, Option 1.b (**Section 2.4**) treatment of the 95th percentile storm is still required.

116. If yes, are the written technical justifications evaluated? *Schedule A.3.e.iv.D*

Yes ☐ No ☐ Proposed, see answer to 115 above.

117. 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*

The following language is from the proposed revised Design Manual.

2.4.1 Retention Requirement Technical Infeasibility Criteria

The factors discussed below make a site infeasible for Retention Facilities, if a site meets any of these infeasibility criteria, Option 1b must be followed.

Separation Distance from Seasonal High Groundwater and Bedrock

Depth to seasonal high groundwater and bedrock for design and determination of technical infeasibility for Retention shall utilize the best available information. Results of geotechnical investigations, well boring logs, observations during infiltration testing, and/or other site-specific studies are preferred. However, if such information is unavailable, use of the Natural Resources Conservation Service (NRCS) soil data, available via the web soil survey, is acceptable. The stormwater Calculation Report, prepared by an Oregon registered PE or CEG, shall include a discussion of the methodology and data sources used to determine depth to groundwater

and/or bedrock. Separation distance shall be measured from stormwater facility subgrade as represented in **Figure 2.2**.

1) A separation distance of less than three feet exempts the following stormwater facilities from Retention:
   a) Facilities that are not UICs and do contain soil growth media,
   b) Pervious paving receiving rainfall only.
2) A separation distance of less than five feet exempts the following facilities from Retention:
   a) Stormwater facilities that do not have soil growth media;
   b) Or pervious paving receiving run-on.

These facilities may be classified as UIC's by DEQ, refer to DEQ's website for the current UIC definition.

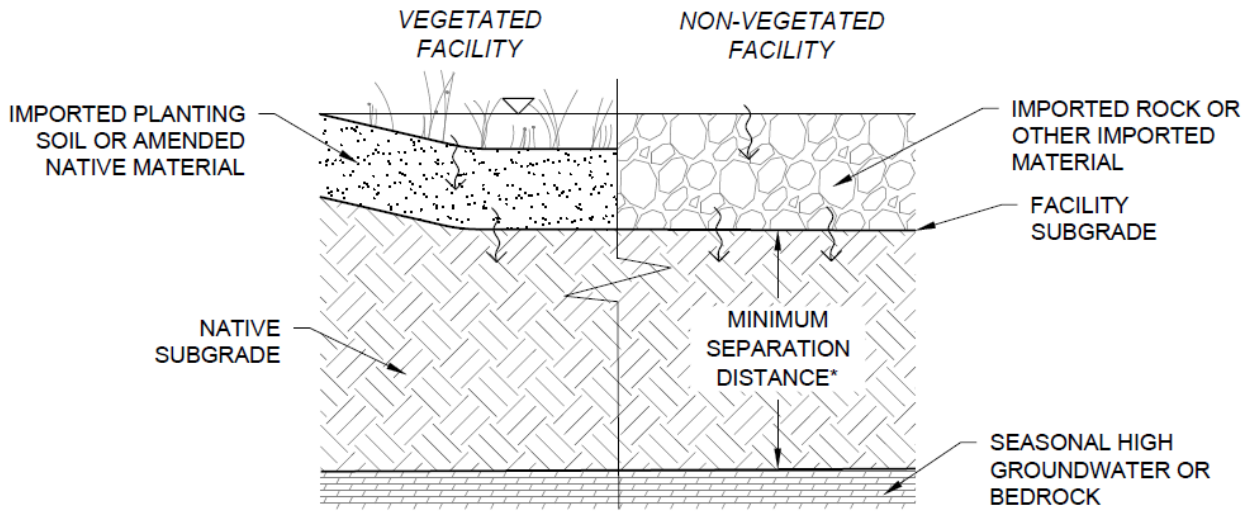


Figure 2.2 The required separation distance from seasonal high groundwater or bedrock should be measured as illustrated.

Steep Slopes

Slopes of 15% or more on average across the project site will exempt the site from the Retention requirements. Or, if an Oregon registered PE or CEG recommends the avoidance of infiltration on-site due to instability, then the site will be exempt from Retention requirements.

Distance to Drinking Water Wells

Sites will be exempt from Retention requirements if there is less than 500 feet of separation from a UIC to a drinking water well, or less than 50 feet of separation between a SW facility and a drinking water well, with the exception of lined facilities. At the time of publication of this Design Manual, the separation distance required by DEQ between UICs and drinking water wells was 500 feet; however, designers should verify with DEQ that this is still the standard.

Land Use Planning

Jurisdictional planning requirements that make infiltration stormwater facilities infeasible are considered to make Retention infeasible. If intending to use this infeasibility criteria, the designer shall seek prior approval from the local jurisdiction.

Transportation

The following public and private transportation related projects are considered infeasible for Retention:

- Any project that would require the purchase of right-of-way for a Retention Facility.
- Repair of road base within the existing impervious footprint.

Transportation related projects that are exclusively limited to maintenance and improvement of existing roadways are considered infeasible for both Retention and Treatment requirements; these activities include:

- Widening less than a single lane for less than 1,000 linear feet,
- Shoulder additions that do not include installation of curb and/or gutter,
- Surface maintenance work within the existing impervious footprint,
- Correcting substandard intersections, for reasons of function, capacity, or safety,
- Improving existing drainage systems,
- Emergency roadwork that occurs outside the normal Capital Improvement Process.

Bike and Pedestrian Improvement Projects in the following situations are exempt from both Retention and Treatment requirements:

- Exclusive bike and pedestrian projects that do not include installation of curb and/or gutter,
- The bike and pedestrian portions of a larger project, that do not include installation of curb and/or gutter.

Utility Trenches

Utility trenches are exempt from Retention and Treatment requirements.

Infiltration Rate

Sites with a Measured Infiltration Rate of 1.5 inches per hour (Design Infiltration Rate 0.5 inches per hour) or less are exempt from Retention requirements. Infiltration measurement shall follow the protocol outlined in **Appendix A**, or a protocol recommended by an Oregon registered PE or CEG.

Contaminated Soils

If DEQ has deemed that the project site has any contaminated soils, the project site will be infeasible for Retention.

Other Requirements

If other requirements are applied to the site, such as SLOPES (Standard Local Operating Procedures for Endangered Species), that may impact the ability to incorporate Retention, discuss these with the local jurisdiction prior to design.

If necessary, provide an explanation:

118. Before the allowance of alternative compliance, were mitigation options established? *Schedule A.3.e.iv.D*

Yes ☐ No ☒

If necessary, provide an explanation: RVSS does not plan to establish mitigation options, rather if projects are deemed infeasible for retention (section 2.4.1), the Design Manual will direct project applicants to treat all runoff from the 95th percentile storm (section 2.2.2). If this is not possible, project applicants may propose alternatives to RVSS.

119. 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.D*

☐ Off-Site Mitigation
☐ Off-Site Groundwater Replenishment Projects

If necessary, provide an explanation:
NA, see answer to question 118.

120. 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:
RVSS has been reviewing and approving structural stormwater control plans since issuance of the first MS4 permit in 2007.

121. Indicate the minimum land disturbance or creation of new impervious area where plans are required to be reviewed: ft² ☒, acres ☐ of land disturbance ☐ creation of new impervious area ☐
Currently, all projects that will develop or redevelop 2,500sf or more are referred to RVSS by its co-permittees during the plan review phase and must be approved by RVSS prior to building permit issuance. Beginning Feb. 28th, 2023 the threshold for requiring compliance with the Rogue Valley Stormwater Design Manual will change to 5,000sf of development or redevelopment in cities and 10,890sf in areas inside RVSS' MS4 but outside city limits.

122. Are all sites that use alternative compliance to meet the retention requirement reviewed?
Yes ☐ No ☐ NA, requirement not in force yet.
If necessary, provide an explanation:

123. 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:
RVSS requires an Operation and Maintenance manual be submitted for every project going through the stormwater management review process. The manual includes standard inspection guidelines, templates for recording inspections, contact information and a Declaration of Covenants, recorded on the deed of the property. RVSS conducts installation inspections of these facilities to ensure they are installed per the approved plans. Once installation is accepted by RVSS, the facilities are entered into our geodatabase, all privately owned and operated facilities in our database are inspected at least once every three years to ensure their long-term operation and maintenance. See the attached table of inspection records in Appendix E.

124. 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:

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

Yes ☒ No ☐

If necessary, provide an explanation:

126. 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 appropriately trained to conduct such activities? *Schedule A.3.e.vii*

Yes ☒ No ☐

If necessary, provide an explanation:

127. 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:

Pollution Prevention and Good Housekeeping for Municipal Operations

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

In FY22 RVSS adopted a Standard Operating Procedure document for Best Management Practices in Operation and Maintenance for compliance with the requirements of section A.3.f.iv. We then adapted the template for the Talent and Phoenix Public Works Departments. Jackson County elected to develop their own Standard Operating Procedures. We are continuing to work with our co-permittees on improving mechanisms for tracking these activities.

129. 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, Sept. 1, 2023 for New Registrants and February 28, 2024 for Albany, Corvallis, Millersburg, Springfield and Turner))*

130. 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*

Yes ☒ No ☐ N/A ☐

If necessary, provide an explanation:

Standard Operating Procedures have been developed for use by RVSS and its co-implementers for all of the elements listed under question 137. SOPs for RVSS, Phoenix and Talent were submitted with the FY21 annual report. Jackson County SOPs are attached in Appendix F.

131. Indicate the percentage of catch basins inspected/cleaned: *Schedule A.3.f.iii*
Percentage inspected this reporting year: ; Percentage cleaned:

- Jackson County: The county roads, airport, Expo and facilities are managed separately and reporting for each area is included in the table below.
- RVSS: Is responsible for maintaining stormwater pipes, culverts and catch basins in the White City Industrial area. RVSS' SOP is to inspect one fifth of the area and clean as needed each year.

FY 22 Catch Basin Inspection and Cleaning

	CB/AD total	# Inspected	% Inspected	# Cleaned	% Cleaned	est. material removed (cy)
Jackson County Roads	1478	562	38.02	562.00	38.02	21
Jackson County Airport	98	98	100.00			2000 lbs
Jackson County Expo		2		2.00		
Jackson County Facilities	73	73	100	73	100	
Phoenix	196	50	25.51	20	10.20	1
RVSS WC Industrial	330	23	6.97	20	6.06	5
Talent	729	6	0.82	6	0.82	8

132. If known, estimate of material removed: units

See table for question 131.

133. Percentage inspected during the permit term: ; Percentage cleaned:

RVSS will work on having its co-implementers better track this data going forward. The table below includes est. removal amounts from 2019 forward, but cleaning and inspection from FY22.

Permit Term Catch Basin Inspection and Cleaning

	CB/AD total	# Inspected	% Inspected	# Cleaned	% Cleaned	est. material removed (cy)
Jackson County Roads & Parks	1478	562		562.00		53
Jackson County Airport	98	98				
Jackson County Expo		2		2.00		
Jackson County Facilities	73					
Phoenix	196	50		20		4
RVSS WC Industrial	330	23		20		10
Talent	729	6		6		54

134. If known, estimate of material removed: units

See table in question 133.

If necessary, provide an explanation:

RVSS has responsibility for inspection and maintenance of catch basins in White City Industrial. A resurvey of the City of Phoenix stormwater infrastructure is planned, number reported above are based on current data in our GIS database, which we know to be out of date.

135. Indicate if a catch basin inspection prioritization system and/or an alternate inspection frequency has been established. *Schedule A.3.f.iii*

Yes ☒ No ☐

If necessary, provide an explanation:

Jackson County: The County will inspect 30% of the catch basins within White City residential annually and maintain those requiring it within the year. The Airport inspects and sweeps all catch basins regularly.

Phoenix: Phoenix will inspect 30 percent of the SW system every year. Catch basins, pipes and inlets that are determined to need cleaning and/or maintenance will be cleaned and maintained within one month.

RVSS: RVSS maintains the stormwater system in White City Industrial and maintains a list of hotspots. All hotspots and culverts are inspected annually, if catch basin sumps are 50% or more full, flushing is scheduled. The White City Industrial area is divided into five stormwater basins, one basin is flushed and TV'ed each year.

Talent: Talent will inspect 10 percent of the SW system every year. Catch basins, pipes and inlets that are determined to need cleaning and/or maintenance will be cleaned and maintained within 6 months.

136. During the permit term were existing procedures for inspection and maintenance schedules reviewed/updated to ensure pollution prevention and good housekeeping practices were 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 materials, used oil storage, and fuel
- ☐ Firefighting 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:

SOPs for RVSS, Phoenix and Talent were submitted with the FY21 report, Jackson County SOPs are included in Appendix F.

Firefighting training is conducted by the Fire Districts, which are distinct special districts, not under the jurisdiction of RVSS or its co-permittees.

137. 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:

The Jackson County airport has a 1200-Z permit.

138. 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:

RVSS contracts pesticide application through Jackson County.

Phoenix only used one gallon of pesticide this year, applied with a backpack sprayer. No pesticides were applied during or before a rain event. Phoenix is in the process of developing an Integrated Pest Management Plan that will include SOPs for pesticide use.

Talent: The City of Talent adopted a revised Integrated Pest Management policy in 2018 that aimed to phase out the use of synthetic pesticides within three years.

Jackson County follows an Integrated Vegetation Management plan that aims to use the most environmentally effective and economically practicable product for the targeted weed, the policy was provided in FY21.

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

Yes ☒ No ☐

If necessary, provide an explanation:

Jackson County: White City Residential side streets are swept once every two to three months. The main roads in White City Residential; Antelope, Ave. G, Atlantic and Ave A are swept ten times per year. Outside White City Residential, Antelope Rd., and curb and gutter portions of Table Rock Rd and East and West Vilas are swept ten times per year. Streets without curb and gutter and less than 22 feet wide are considered to be self-cleaning and are not swept.

The county also has an Adopt-a-Road Program, through which organizations pledge to clean roadside areas at least twice a year, and the County's Community Justice Crews clean-up litter along county roadways. Additionally, the County's parks program invests considerable resources into clearing homeless camps from county parks and riparian areas. This year

Adopt a Road program: 77 miles cleaned twice per year, 127 bags of material removed
Parks volunteer clean-ups: 1977.5 hours, 20,725 pounds of refuse

Phoenix: The city has a leaf collection program that last year removed more than 60 yards of leaves, keeping them out of the streets and from clogging stormwater drains. City street sweeping is conducted regularly; the city is divided into three zones and each zone is swept once a week.

RVSS: Staffs Bear Creek clean up events for the cities of Talent and Phoenix each year.

Talent: The City of Talent is divided into two zones with each zone being swept every other week, 300 yards of material were removed through street sweeping this year.

140. Are practices in place to ensure that collected material or pollutants removed in the course of maintenance are 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:

The City of Phoenix, City of Talent, and RVSS' SOPs developed for MPP3 cover BMPs for material disposal. Jackson County adopted a Facility Maintenance plan in 2022 that covers material and waste storage.

141. 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 operations appropriately trained to conduct such activities? *Schedule A.3.f.ix*

Yes ☐ No ☒

If necessary, provide an explanation:

Jackson County: County Roads staff received one hour training on the County's newly adopted SOPs.

Phoenix: All staff will be required to read the *Standard Operating Procedure and BMP manual for Pollution Prevention and Good Housekeeping* and new hires will shadow current employees to learn how to implement the BMPs.

RVSS: Upon hire, new staff will be provided a copy of the *Standard Operating Procedure and BMP manual for Pollution Prevention and Good Housekeeping.* Training will be conducted within a year. A checklist will be used to track when the manual is provided.

Talent: One new staff hire has not been trained.

142. 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:

See response to question 141.

Monitoring

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

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

Yes ☒ No ☐

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

Yes ☒ No ☐

If necessary, provide an explanation:
See attached Appendix G.

Wood Village Monitoring Requirements

145. 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:

146. Indicate 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:

Water Quality Standards

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

Yes ☐ No ☒

If necessary, provide an explanation:

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

If necessary, provide an explanation:

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

Self-reported: Yes ☐ No ☐

If necessary, provide an explanation:

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

Yes ☐ No ☐

If necessary, provide an explanation:

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

Yes ☐ No ☐

If necessary, provide an explanation:

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

☐ The results of the investigation, including the date the exceedance was discovered
☐ A brief description of the conditions that triggered the exceedance 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:

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

Yes ☐ No ☐

If necessary, provide an explanation:

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

Appendix Table of Contents

APPENDIX A: General Information

Question 16a. Table 1. MS4 Receiving Water Body 303d and TMDL Information

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

Stream	RVSS alpha stream code	Total Outfalls	Last sampled (calendar year)	303d listed Y/N	303d Impairment	TMDL Y/N	TMDL parameter
Anderson	AN	1	2015	Y	Temp	Y	E. coli
Agate Slough	AS	8	2018	Y	Harmful algal bloom	Y	E. coli
Bear Cr Feeder Canal	BA			N		N	
Bear Creek	BE	80	2019	Y	DO, Iron, excess algal growth, flow modification, habitat modification, temperature spawning and year round, pH, E. coli	Y	excess algal growth, DO spawning and year round, pH, E. coli
Butler	BU			Y	Temp. year round	Y	DO spawning, E. coli, Fecal Coliform
Coker Butte Canal	CB			N		N	
Coker Butte Lateral	CL			N		N	
Coleman	CO	17	2015	N	Temp. year round	Y	E. coli, Fecal coliform, Temp year round, DO spawning and year round,
Crooked	CR	7	2018	N		Y	Fecal coliform
Daisy	DA	0	2018	N		Y	E. coli
Dean	DE			N		N	
Denman	DM			N		N	
Dutton Pond	DP			N		N	
Emigrant Creek	EG			Y	Temp year round and spawning	Y	DO spawning
Elk	EL	13		N		N	
East Main Canal	EM		2016	N		N	
Gore	GO	5	2018	N		N	
Griffin	GR	0	2013	Y	DO, pH	Y	DO spawning, fecal coliform
Hopkins Canal	HC			N		N	
Horn (W Fork Jackson) LLID 1229318423752	HO	0	2018	Y	DO	Y	E. coli

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

Stream	RVSS alpha stream code	Total Outfalls	Last sampled (calendar year)	303d listed Y/N	303d Impairment	TMDL Y/N	TMDL parameter
Jackson	JA	0	2013	Y	Biological criteria, Temperature year round and spawning, harmful algal blooms	Y	DO spawning, Fecal coliform, E. coli
Little Butte	LB	5	2022	Y	DO year round and spawning, Temp year round and spawning, P, sedimentation,	Y	E. coli
Lower East Canal	LE			N		N	
Lone Pine	LP			N		Y	E. coli
Meyer	ME			Y	Temp. year round	Y	DO spawning, E. coli, Fecal Coliform
Mingus	MI	0	2018	N		N	
Neil Creek	NE			N		Y	Do, E. Coli, Temp.
N. fork of Whetstone: LLID 1228851424204	NW	1	2018	Y	Harmful algal bloom	Y	E. coli
Payne	PA	8	2015	N		Y	E. coli, Temp year round, DO spawning and year round,
Phoenix Canal (West Main canal)	PC	21	2022	N		N	
Rogue River	RR	8		Y	DO, mercury	Y	Fecal coliform, Temp.
Swanson	SW	0	2018	N		N	
Talent Canal	TC			N		N	
Upton Lateral	UL	0		N		N	
Upton Slough	US	0		N		N	
Wagner	WA	29	2016	Y	Temperature year round and spawning	Y	DO spawning, E. coli, pH
Whetstone	WH	4		N		N	Harmful algal bloom
Willow	WI	0				N	

APPENDIX B: Public Education and Outreach Documentation

Question 34. Back of RVSS bill graphics
Clean River Coalition Annual Report


When washing your car –
Remember that storm drains lead to streams.
Don't let wash water run down the street.
If possible, wash in an area that drains to your yard or use a commercial car wash.
Help keep our streams clean!


When washing vehicles
Keep Streams Clean!
DON'T LET DIRTY WATER GO INTO STREETS OR GUTTERS
USE A NOZZLE TO KEEP DIRTY WATER FROM RUNNING INTO THE STREET
OR
WASH WHERE WATER WILL SOAK INTO SOIL
OR
TAKE TO A COMMERCIAL CARWASH


Rake up fall leaves
and remove debris
from stormdrains
to reduce local
flooding.


Remove leaves
& debris from
stormdrains
to reduce local
flooding.

Save your pipes!

DON'T FLUSH WIPES

ONLY RAIN DOWN THE DRAIN!

To report something other than rain in the stormwater runoff, Please call 541-779-4144

Clean Rivers Coalition

Annual Report - July 1, 2022 - June 30, 2023

Message from the Steering Committee:

Dear Partners and Collaborators,

The Clean Rivers Coalition Steering Committee is pleased to share this annual report for coalition activities from the previous fiscal year. We appreciate the time and thoughtfulness of each of our partner organizations, particularly to the municipal jurisdictions who help fund this work, and the EPA Columbia River Restoration Grant Program. We look forward to more fun, interesting, and engaging conversations, to move this collaborative effort forward!

- *CRC Steering Committee*

Contents

1. Clean Rivers Coalition Forum

On March 30, 2022, the Clean Rivers Coalition hosted our 7th Forum as a kick off celebration of the new Follow the Water campaign. We are grateful for the participation of the **75 folks** who were able to join us at this milestone event.

After years of work to create the Clean River Coalition, develop our mission and vision, and create the organizational structure to guide this work, the power of the power of the coalition was realized to pull together funding to create the campaign brand and strategy - and launch the visible campaign on the web and social media.

Forum attendees
10 Oregon cities
5 southwest WA cities
7 SWCDs
11 Counties & Regional Gov
7 Watershed Councils
2 Federal agencies
3 State agencies
6 Water related NGOs

At this virtual forum in March, participants shared their ideas on virtual white boards for social media content, and website resources for the new website. The input from the forum whiteboards was collated into spreadsheets, which serve as the guide for our new social media management consultant to develop content and to develop content themes.

2. Follow the Water Website

The Steering Committee worked with a Portland area web designer to develop the Follow the Water website (www.followthewater.info). The website hosts a variety of user engagement tools including a blog[1], web resources, and features stories of various kinds. The webpage features

[1] If you are interested in contributing a blog, please contact Roy.Iwai@multco.us

the Follow the Water brand which we developed the previous year with a media marketing firm. The logo, graphics, and color palette, as well as the “manifesto” blend together in a cohesive style layered with emotion and values. Follow the Water is about connecting people to their waterways, connecting people’s behavior their waterways, and promoting clean water behaviors, through “hope and curiosity.”

Expenditure: $5,000 (CRC funds)

3. EPA Grant 2020 projects completed in 2021-2020

Follow the Water (3-part Video series)

In January 2022, the Steering Committee completed a new video project in partnership with members of the **Columbia River Inter-Tribal Fish Commission** and the filmmakers at Metro East Community Media. The film, Follow the Water, is a story of our responsibility to reduce toxics in the Columbia Rivers that focuses on our shared values: our connection to our rivers. The film is unique in how it features stories from diverse cultural perspectives, centering on Native American cultural values. The three themes of the film - “connection,” “disconnection” and “reconnection” to our water - are timeless and resonate with the cultural climate of the day.

The representation of the distinct cultures is intentional, as is the storytelling predominantly told by diverse women. Where many river stories have focused primarily on salmon, this story is told through the wapato, the water potato, and Indigenous first foods. We are reminded that our connections to our rivers resonate in our being, and that water has inherent value and spiritual meaning. The message of the film is however we decide to connect to our rivers, by recreating, walking, photographing, or running along it, we can strengthen our connection and share it with others.

The films are housed on a new Follow the Water YouTube channel, as well as the Follow the Water website. Also, check out our Stakeholder Toolkit at: https://cleanriverscoalition.com/resources/

Expenditure: $25,000 (EPA funds)

What's Your Lawn Style (commercials and lawn care videos)

In Fiscal year 21-22, the CRC focused on implementing two projects as funded in the EPA Columbia River Toxic Reduction grant - the Follow the Water film series and a Pesticide Reduction project. The What's Your Lawn Style project was focused on delivering integrated pest management techniques for lawn care to reduce nonpoint source runoff of pesticides and quick release fertilizers by single family residents.

Previous research conducted by CRC in 2019 for audience segmentation[2] for pesticide use behavior revealed that the key audience for message delivery (and primary users of pesticides) are white males 34 to 54, earning more than $50K annually and using products, but found to be most open to other techniques. In other words, slightly younger and older white males also use pesticides but are not as open to behavior change.

CRC also conducted a survey of statewide stakeholders in 2019 to gather opinions about lawn techniques and what to focus on regarding success v. harm. CRC held a pesticide reduction and lawn care forum to engage stakeholders statewide in the concept development for the campaign. The CRC then formed a lawn care video committee, hired Metro East Community media via a competitive RFP and began developing short commercials to advertise the lawn care videos, as well as develop the OSU extension IPM approved script for techniques.

This project created four 30 second commercials that featured an "expert gardener[3]" male and female character who "pop up" to give unsuspecting advice to residents and featured the following scenarios:

1. A male lawn enthusiast spending lots of time trying to perfect his lawn speaking with a neighbor and child on the way to float in the river about what practices the neighbor employed with good results
2. A young couple relaxing on the lawn and the female complimenting the male on how nice the lawn looks and male explaining, "it looks good and its safe"
3. A female who manages the family lawn using weed and feed looking happy until she sees her partner bringing the baby and dog to relax on the lawn and has an epiphany
4. A female head of household influencer realizing that her partner is using dangerous chemicals on the lawn and wants a better way

These commercials, in long, short, and 6-second promo formats, were featured on YouTube as non-skippable ads, and included this riff on American Gothic. The commercials were only created in English because households with English as a second language were not found to be significant users of lawn & garden commercial products.

[2] CRC research, reports, branding strategy, etc. is available for stakeholders on its resources page: https://cleanriverscoalition.com/resources/

[3] To maximize flexibility in overall use of these commercials, the term Master Gardener was not used because it is trademarked to OSU exclusively.

The lawn care series was broken into three “ideals” to meet people where they are at: low effort (those who do not expend much effort to perfect their lawn), medium effort and high effort (those who want a golf course style beautiful lawn). CRC partners for this effort included Metro Regional government and OSU Extension (Metro region). These videos were narrated in both English and Spanish. Once the lawn care videos were complete, OSU extension created a webpage in English and Spanish[4] to house the content. For simplicity of advertising, a vanity url was created www.whatsyourlawnstyle.org and the call to action was “What’s Your Lawn Style?” (WYLS).

The choice to co-brand WYLS with OSU ext. was deliberate because of the established brand and respect for OSU as a science institution. By placing
the materials here achieves a much higher rank in Google search and increases the likelihood of someone finding and visiting the page. Coming in FY 22-23, OSU extension will be launching the Solve Pest Problems IPM website for Oregon which will also feature the lawn care videos.

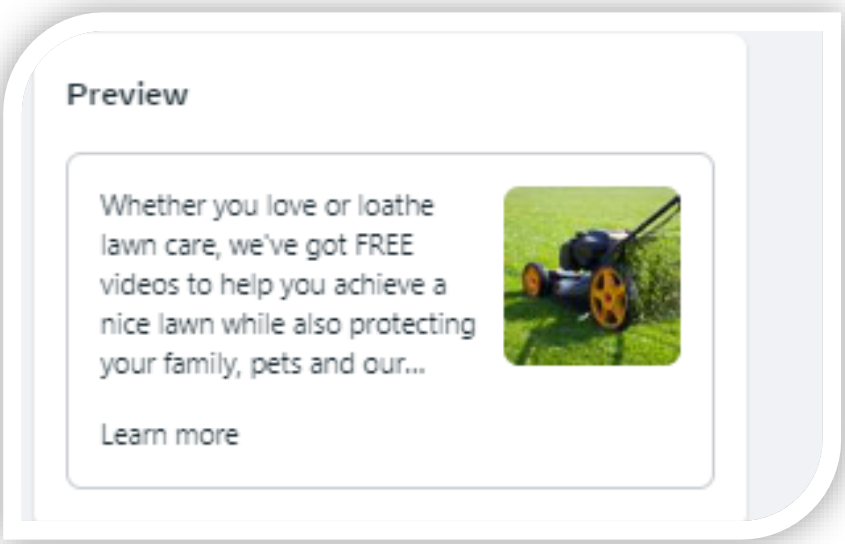
Simultaneously, CRC created its social media channels and website for its branded Follow the Water campaign. A “sister” channel was created for the lawn care campaign called What’s Your Lawn Style? Additionally, the Follow the Water website houses the WYLS videos for those who begin following FTW social media channels to check out if they visit the site.

In summary, there are three homes on the internet currently for the videos that people can find in a variety of ways. **Lastly, Oregon and southwest WA stakeholders are encouraged to promote WYLS on their own social media channels and add links to their websites and embed the YouTube videos, as applicable to their pages and goals.** Check out our Stakeholder Toolkit at: https://cleanriverscoalition.com/resources/

Expenditure: Video and Commercials production $30,000 (EPA grant and Metro funding)

The FY 21-22 ad buys for WYLS did not launch until June due to production setbacks because of Covid-19, so only $2,900 was spent[5]. (See corresponding CRC newsletter for updated statistics on campaign performance for the first quarter of FY 22-23).

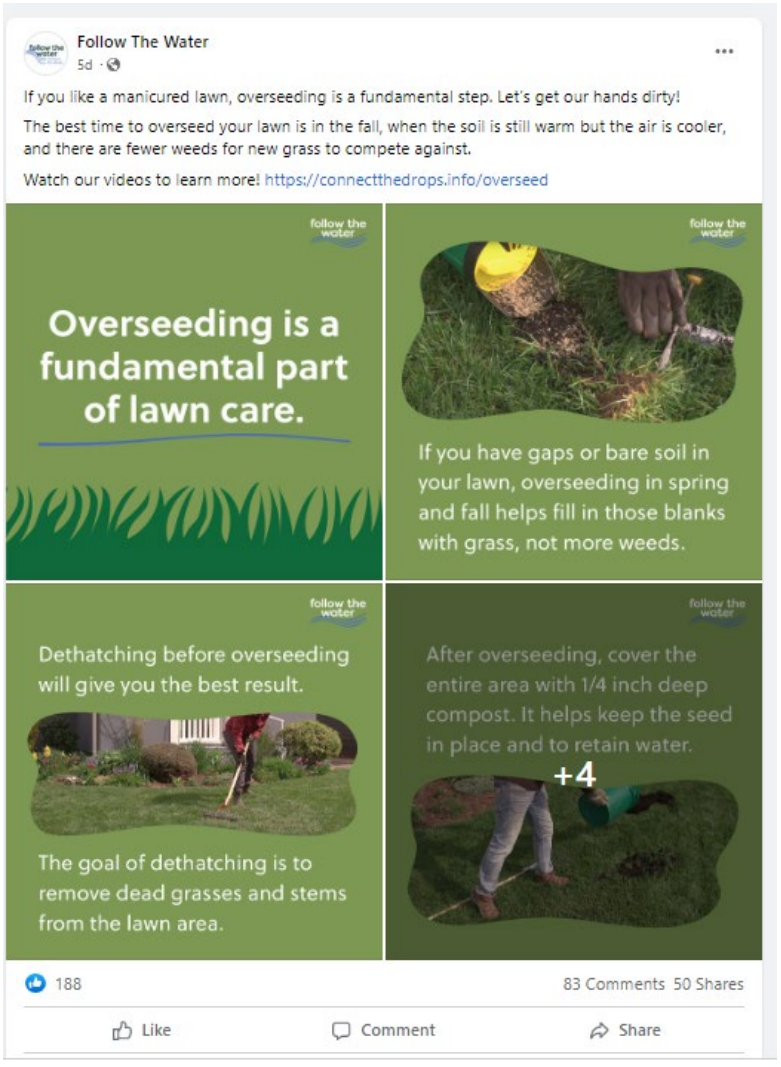
[4] We have not yet marketed the Spanish language videos but will in the future.
[5] The campaign will continue and ultimately spend $100,000.



Additionally, the Portland-Metro area group of agencies called the Regional Coalition for Clean Rivers and Streams, also began boosting the lawn campaign as of June 2022 in a $400 ad which resulted in 442 clicks from the 11,000 residents reached. (Image on left)

The image on the right is a lawn tutorial post on the Follow the Water Facebook account which was shared 50 times and received 83 comments!

Boosted (paid) social media posts: Total reach (~102K)



Fiscal Year 21-22 Lawn Care Impact Estimate[6]:
Visits to OSU Lawn Care webpage: 516 (avg time spent 2 minutes)
Total Lawn Care video views: English Low (207) Medium (87) and High (82)
Google Ads for lawn care commercials: Impressions (4,462) with 322 clicks
YouTube ads for lawn care commercials: Impressions (314,947) with 843 clicks
Boosted (paid) social media posts: Total reach (~102K)
Metro Area boosted post: Reach (11,000) with 442 clicks
Total link clicks: (580)
Total engagement[7]: (610)
Total Estimated FY 21-22 Engagement[8]: 3,109 people[9] with $3,300.
Total Impressions/Reach: 432,409 persons

Social Media Content and Digital Advertising

The Follow the Water campaign is built on digital and social media. We created the website, and social media channels including YouTube, Facebook and Instagram are our primary social media channels, as well as Twitter. Each outlet has its own unique strength to attract the engagement of our audience, and we build on each of these strengths.

In March 2022, we hired Parachute Strategies to manage this work in all our digital channels with a $180,000 contract. Funds from the first EPA grant (2019-2020) cover $60,000 cover the purchase of digital ads, social media software, and staff time. The Clean Rivers Coalition funds, supported by our municipal government funding partners provided $45,000, as match. The remainder of the contract funds will be paid through our second EPA grant (2021-2024), as well as continued funding from our partners[10]. This work continues at a vigorous pace, to firmly establish the brand and community reach in our populous areas.

Digital analytics are used to measure the effectiveness of our campaign. The number of impressions, reach, average cost-per-click, clickthrough rate, views and engagement are important measures from which we adapt our strategies.

[6] Statistics reflect June 2022 only, for FY 21-22 MS4 Annual reporting
[7] Engagement = total clicks, likes, comments, shares
[8] Engagement represents the deepest level of impact (watching, absorbing) v. Impressions/Reach = has seen the ad or post of the video, but has not necessarily absorbed the content.
[9] Does not include promotion post statistics from stakeholder independent work (cities, watershed councils, etc.)
[10] Agency support for this work is integral to the success in order to reach people, impact them, engage them, develop a water protection culture, and catalyze behavior change with simple actionable tips that everyone can do.

4. Our new EPA grant 2022

In November 2021, the EPA Columbia River Grant Program announced a second round of grant funding. The CRC steering committee developed the second phase of campaign implementation, based on the successes and challenges of the first grant from EPA. We were notified that our project was recommended for funding in June 2022. Total project funding of $463,216, is split between $347,412 from EPA, and $115,804 cost share. The cost share is made up almost entirely of in-kind support from City of Gresham grant administration and time from our partners.

The new grant proposal includes:

- *Pesticide Reduction using Community Based Social Marketing*. As COVID-19 limited the direct outreach to the public by jurisdictional and watershed partners, we held back from implementing the pesticide reduction program using the Community Based Social Marketing techniques. In the project, we will hire a consultant to help lead a pilot study of CBSM techniques for pesticide reduction in Lane, Clackamas, and Marion Counties.

- *Latinx Landscape Professional Outreach.* In partnership with Northwest Center of the Alternatives to Pesticides (NCAP), Metro, Eco-Biz, and OSU Extension, the CRC will provide education around pesticide exposure to the Spanish-speaking landscape community of professionals, as well as promote reduced pesticide use services to their clients.

- *Social Media and Digital Advertising*. Building on the existing social media and digital marketing campaign strategy, the CRC will continue to develop digital content and ads to achieve high saturation, impact, and engagement.

5. Summary

The Clean Rivers Coalition has participation from over 60 organizations, including federal and state agencies, local governments, watershed councils, Soil & Water Conservation Districts, and many water-related non-profits. Collaboration is key and we also appreciate financial contributions[11].

FY 22_23 will continue to focus on lawn care and creating the culture of water protection. Stay up to date by signing up for our e-news updates to stay informed and tell others!

[11] Your contribution is important to sustain our impact over time. Contact Roy.Iwai@multco.us

APPENDIX C: Illicit Discharge Detection and Elimination

Question 71. Priority Outfall Sample Locations

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Coleman Creek	CO05	9/20/2021		Damaged but functional	FALSE	TRUE	FALSE	FALSE	FALSE		
Coleman Creek	CO12	9/20/2021	from former Royal Oak Mobile Park	damaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Coleman Creek	CO13	9/20/2021	drains apts. Cheryl Ln.	undamaged @3' pipe exposed by creek erosion	FALSE	TRUE	FALSE	FALSE	FALSE		
Coleman Creek	CO14	9/20/2021		melted, evidence of recent rain, 220-228 Cheryl Ln	FALSE	FALSE	FALSE	FALSE	FALSE		
Coleman Creek	CO16	9/20/2021		new facility installation, Coleman Cr. Estates	FALSE	TRUE	FALSE	FALSE	FALSE		

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Coleman Creek	CO17	9/20/2021		Damaged but may flow: AD clogged 212 Cheryl Ln	FALSE	TRUE	FALSE	FALSE	FALSE		
Wagner Creek	NPWA02?	9/9/2021		loc close to pipe underside of bridge	FALSE	TRUE	FALSE	FALSE	FALSE		pipe desc. Here is from under bridge
Wagner Creek	WA03	9/9/2021		undamaged.	FALSE	TRUE	FALSE	FALSE	FALSE		
Wagner Creek	WA04	9/9/2021		undamaged.	FALSE	TRUE	FALSE	FALSE	FALSE		
Wagner Creek	WA05	9/9/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Wagner Creek	WA06	9/9/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Wagner Creek	WA07	9/9/2021	maybe old irrig. Intake?	on upstream side of old irrigation dam.	FALSE	TRUE	FALSE	FALSE	FALSE		

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Wagner Creek	WA08	9/9/2021		undamaged, upstream side of Hw99 near SOS plumbing	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	Turb: 2.37 E.coli: 18.7, 35.5 mpn TP: 0.0988
Wagner Creek	WA09	9/9/2021	drains Rockfellow/ Creekside	Damaged, not repaired	FALSE	TRUE	FALSE	FALSE	FALSE		pooled water, no flow
Wagner Creek	WA10	9/9/2021	drains device on Gangnes	Damaged: water flowing through joint in pipe	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	turb: 1.31 E. coli: 178.9 201.4 mpn TP: 0.0924
Bear Creek	BE42	9/2/2021	no prior record or photo of 6" pipe	6" HDPE next to 18" pipe. Don't know where 6" goes	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE44	9/2/2021			FALSE	TRUE	FALSE	FALSE	FALSE		

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Bear Creek	BE62	9/2/2021		drains to slope above Bear Cr. floodplain	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	Bexx	9/2/2021		Was BE43 removed from OF layer to swNode layer	TRUE	TRUE	FALSE	FALSE	FALSE		no sample collected, determined to be culvert
Bear Creek	BE35	8/26/2021			TRUE	TRUE	FALSE	FALSE	TRUE	Flow	DO: 102.5%, 9.21 mg/l sp cond: 547, pH: 8.28
Bear Creek	BE37	8/26/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE38	8/26/2021		pooled water seems like a culvert	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE39	8/26/2021		very overgrown w/vegetation	FALSE	TRUE	FALSE	FALSE	FALSE		

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Bear Creek	BE61	8/26/2021	from DI04?	determined to possibly be a culvert, not OF	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	TP: 0.0854 pH: 8.33/8.32 Turb: 2.43/1.90
Bear Creek	BE80	8/26/2021	from former Talent Health Club/Hwy 99, comm. Bldg.	Damaged by fire	FALSE	TRUE	FALSE	FALSE	FALSE		New ID in 2021
Bear Creek	BE25	8/19/2021		undamaged. Drains east of BC on W. Vly View?	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE26	8/19/2021	runoff from W. Valley View	undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE27	8/19/2021	drains Brammo lot and/or W. Valley View		FALSE	TRUE	FALSE	FALSE	FALSE		

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Bear Creek	BE28	8/19/2021		damaged: NEEDS replacement	FALSE	FALSE	FALSE	FALSE	FALSE		
Bear Creek	BE28	8/19/2021	from Newbry Park, I-5	DAMAGED, needs replacement. Flow path evident.	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE29	8/19/2021	runoff from Newbry Pk, I-5	undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE30	8/19/2021		Undamaged. OF from center of Mtn. View Estates	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	Turb: .66FNU E. coli: 365.4, 285.1 mpn TP:0.0952
Bear Creek	BE31	8/19/2021		totally clogged w/sediment	FALSE	TRUE	FALSE	FALSE	FALSE		

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Bear Creek	BE32	8/19/2021		undamaged. Found @ SE corner of Mt. View Estates	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	Turb: 0.30 FNU E. coli: <1, 38.8 mpn NO TP sample
Bear Creek	BE33	8/19/2021	drains storage unit pavement/roof	Undamaged. OF is opening in wall.	FALSE	FALSE	TRUE	FALSE	FALSE		sediment & trash exiting OF from burned site
Bear Creek	BE78	8/19/2021		Undamaged. Full of sediment.	FALSE	TRUE	FALSE	FALSE	FALSE		NEW # in 2021
Bear Creek	BE79	8/19/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		NEW # in 2021.
Bear Creek	TID	8/19/2021		TID OF to BC	FALSE	FALSE	TRUE	FALSE	FALSE		potential due to ag. Source. TID turned off, 0 flo
Bear Creek	BE18	8/5/2021		UNDAMAGED	TRUE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE19	8/5/2021		Undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Bear Creek	BE23	8/5/2021		undamaged, at City of Talent PW gate	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	TP: 0.171 E. coli: 152.9, 24.6 MPN
Bear Creek	BE60	8/5/2021		DAMAGED	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	Turb: 1.48 TP: 0.0893 E.coli: 2.0, less than 1 mpn
Bear Creek	BE76	8/5/2021		undamaged, soil from slope above almost bury OF	FALSE	TRUE	FALSE	FALSE	FALSE		New ID# 2021, stagnant pool @ opening of pipe
Bear Creek	BE77	8/5/2021		drains Medford canal urban/residential off Rose St	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	New ID#. Turb:13.99 E.coli:71.2 105.0 TP: 0.133
Bear Creek	BE15	7/29/2021		repaired	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE16	7/29/2021		spring fed drains Oak St. undamaged	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	Sp. Cond: 662 E. coli: 204.6, 224.7 TP: 0.294

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Bear Creek	BE16	7/29/2021		UNDAMAGED	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	Cond: 662 E.coli: 204.6 224.7 mpn
Bear Creek	BE17	7/29/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE54	7/29/2021		furthest north OF	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE55	7/29/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE56	7/29/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE57	7/29/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE58	7/29/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE59	7/29/2021		REPLACED w/new pipe after fire	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE67	7/29/2021	Flowing backwards, reverse grade	DAMAGED, melted, needs replacement.	TRUE	TRUE	FALSE	FALSE	FALSE		no sample taken because of reverse grade

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Bear Creek	BE68	7/29/2021		partially melted/DAMAGED	FALSE	TRUE	FALSE	FALSE	TRUE	Flow	New in 2021Turb:0 E.Coli:38.7, 33.6 mpn TP:0.276
Bear Creek	BE69	7/29/2021	stagnant water @ opening of OF	drains from @4th St./Civic Ctr.?	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE70	7/29/2021	south of Suncrest	undamaged, btwn bike path & I-5 off rd. shoulder	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE20	7/22/2021		Suncrest Rd. OF undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE21	7/22/2021		FO from culdesac driveway @ end of Willow Springs	FALSE	TRUE	FALSE	FALSE	FALSE		wet stagnant pool

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Bear Creek	BE22	7/22/2021		OF from Quail Ct. at Oak Valley	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE24	7/22/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE63	7/22/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE64	7/22/2021		ag land	TRUE	FALSE	TRUE	FALSE	TRUE		ag. Source=potential, DO:99% 8.5 mg/l
Bear Creek	BE65	7/22/2021		undamaged	TRUE	FALSE	TRUE	FALSE	FALSE		standing stagnant water. Potential due to ag land
Bear Creek	BE66	7/22/2021		pipe smashed but functioning	TRUE	TRUE	FALSE	FALSE	FALSE		

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Wagner Creek	WA01	7/22/2021		drains W. Valley View, northside. Undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Wagner Creek	WA02	7/22/2021		drains W. Valley View, south side. Undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE10	7/15/2021		undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE11	7/15/2021		grass tall, no photo, undamaged	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE12	7/15/2021	former site Medford Estates	undamaged E. coli: 96.0, 66.3	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	pH: 7.01 Sp. Cond.: 377.5 Turb: 3.85 DO: 67.3%
Bear Creek	BE13	7/15/2021		damaged, melted	FALSE	TRUE	FALSE	FALSE	FALSE		

FY22 Dry season OF screening

Sub-watershed	Outfall ID	Today's Date	Know Industries	Background data notes	Outfall: Flow Present	Characterization: No Indication of illicit discharges	Characterization: Some Likelihood of Ill Disc	Characterization: Almost certain Ill Disc exsits	Data Collection:Sample for Lab	Data Collection:If yes collected from	Any non-Illicit Discharge Concerns
Bear Creek	BE14	7/15/2021		damaged: partly melted flow seems spring fed	TRUE	TRUE	FALSE	FALSE	TRUE	Flow	DO: 68.7% sp. Cond.: 330 pH: 6.79 Turb: 0.36
Bear Creek	BE34	7/15/2021	east of east of Coleman Cr Estates	next to greenway path on north side of N. Phx Rd.	FALSE	TRUE	FALSE	FALSE	FALSE		
Bear Creek	BE41	7/15/2021		undamaged, dog poop disposed of into drainway	FALSE	TRUE	FALSE	FALSE	FALSE		

APPENDIX D: Construction Site Runoff Control

Question 81. Storm Drain Protection Permit Medium

Question 82. Ordinance Amending Title 4 of RVSS Code

Question 91. A. 1200-C_CN Inspection Reporting Record

Question 94. 1200-C_CN Permitted Projects Active in FY22

Question 100a. Brown Tag or Stop Work Order Issuance Record

Question 100b. Notice of Non-Compliance Issuance

ROGUE VALLEY
SEWER SERVICES
CLEAN WATER - HEALTHY COMMUNITIES

STORM DRAIN PROTECTION PERMIT (SDPP) - MEDIUM APPLICATION

APPLICABILITY:

a) This permit applies to the full duration of the project from initiation to final stabilization.
b) Construction activities that disturb between 7,000 square feet and 0.99 acres, located in an incorporated City in RVSS' MS4, are required to obtain a SDPP for Medium Sites from RVSS prior to ground disturbance.
c) Construction activities that disturb between 10,890 square feet and 0.99 acres, and are located in RVSS' MS4, but outside an incorporated city, are required to obtain a SDPP for Medium Sites from RVSS prior to ground disturbance.
d) This permit does not apply to projects that will disturb one acre or more, they must be covered by a 1200-CN or 1200-C permit obtained through RVSS.

APPLICANT: The individual or entity listed as the Applicant must have operational control over the construction plans and specifications including the ability to make or approve modifications to those plans or specifications. Or, the Applicant must have day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

SUBMITTAL REQUIREMENTS:

- Plans must include the required drawing elements and note set provided below. An example small lot plan is provided at the end of this packet.
- Send plans to Jennie Morgan, Stormwater Program Manager via email, jmorgan@rvss.us. You will be invoiced for the review and inspection fee following approval of the plans.

ROGUE VALLEY
SEWER SERVICES
CLEAN WATER - HEALTHY COMMUNITIES

Applicant Information			**Project Information**	
Company:			Project Name:	
Contact:			Project Address:	
Address:			Tax lot:	
City	State	Zip	Lot size (sf):	
Phone:			Disturbed area (sf):	
Email:			Site less than 50ft from Water of the State*? Yes ☐ No ☐	
Contractor Information			Stormwater (SW) runoff drains to (check all that apply): SW Treatment ☐ SW Conveyance ☐ Ditch ☐ Creek ☐	
Company:				
Contact:				
Address:			Estimated Start Date:	
City	State	Zip	Estimated Completion Date:	
Phone:			Contact for SDPP Items:	
Email:			Phone:	Email:
Construction Category:	Partition ☐ Subdivision ☐ Single family ☐ Multi-family ☐ Commercial ☐ Industrial ☐			

**Water or Waters of the State as defined by ORS 468B.005(10)*-lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

Signature of Responsible Party:

By signing you are agreeing to be the responsible party of the Applicant for work on the site identified above and accept full responsibility for any violations of RVSS' Title 4 Stormwater Management ordinance. You understand and accept the conditions set forth in this permit and understand there are monetary penalties for failure to comply.

Print Name _____ Date _____

Signature _____

ROGUE VALLEY
SEWER SERVICES
CLEAN WATER - HEALTHY COMMUNITIES

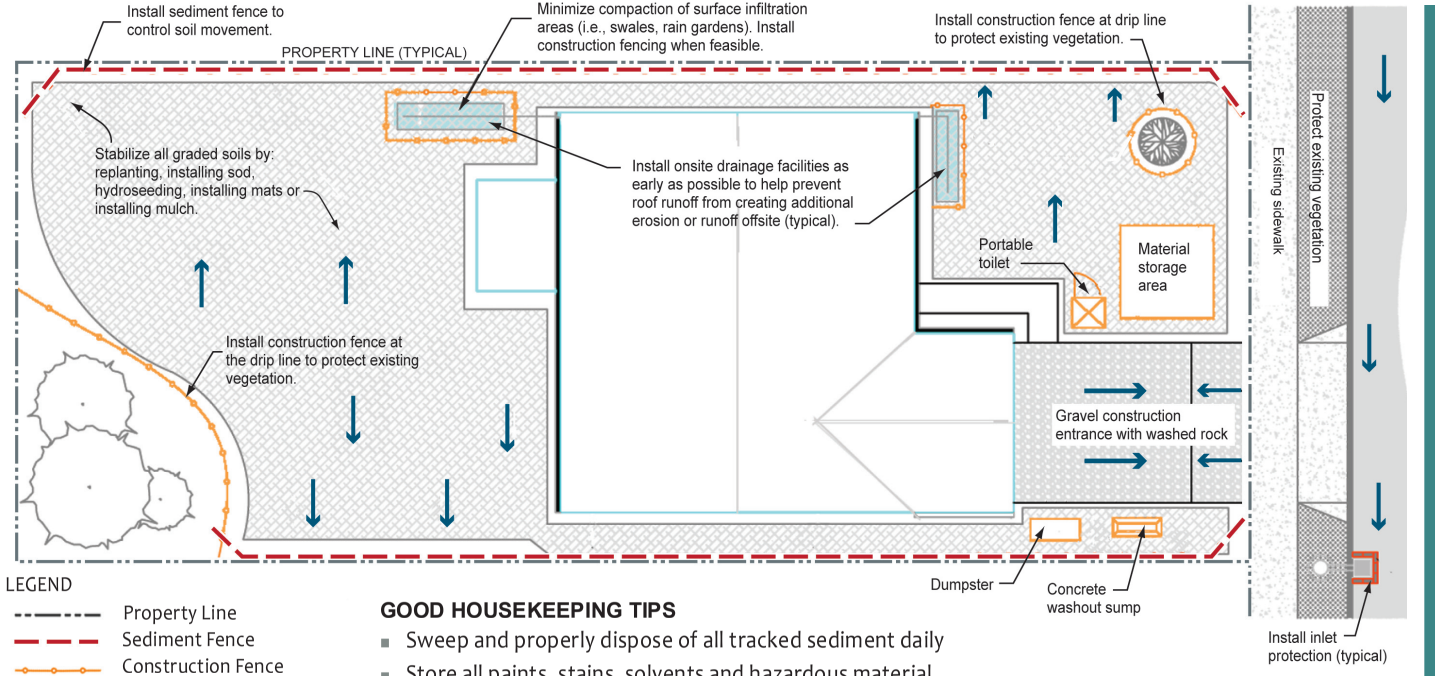
STORM DRAIN PROTECTION PLAN (SDPP)

	On Plans?	
Required Drawing Elements	**Y**	**NA**
1. Site address	☐	☐
2. Best Management Practices (BMP) installation schedule	☐	☐
3. Project boundary	☐	☐
4. Drainage patterns before and after finish grading	☐	☐
5. Areas to be protected from construction activity: eg., drinking water wells, septic drain fields, contaminated soils, steep slopes, waterways, wetlands, riparian buffers, post-construction stormwater management facilities following excavation to final grade	☐	☐
6. Area of soil disturbance (includes staging, stockpiling, clearing, grading, excavating)	☐	☐
7. Location of existing and proposed impervious surfaces	☐	☐
8. Erosion prevention measures including preservation of existing vegetation and temporary stabilization measures for any area not worked for 14 or more days	☐	☐
9. Sediment controls including: construction entrance, inlet protection, perimeter controls	☐	☐
10. Any required runoff controls for uncontaminated flows through the project site	☐	☐
11. Material storage location	☐	☐
12. Concrete washout location	☐	☐
13. De-watering disposal location	☐	☐
14. Location of any portable toilet	☐	☐
15. Points of stormwater discharge from the project site	☐	☐
16. Standard details for all (BMPs) shown on the plans	☐	☐
17. Final stabilization measures for all pervious areas	☐	☐

STORM DRAIN PROTECTION PLAN (SDPP) REQUIRED NOTES:

1. THE PURPOSE OF THE SDPP IS TO PREVENT THE DISCHARGE OF CONTAMINATED WATER FROM A CONSTRUCTION SITE. PROHIBITED DISCHARGES INCLUDE THE FOLLOWING:
   - A. VISUALLY TURBID DISCHARGE OR DISCHARGE OF SEDIMENT.
   - B. DISCHARGE THAT CAUSES OR CONTRIBUTES TO AN EXCEEDANCE OF ANY APPLICABLE WATER QUALITY STANDARD.
   - C. CONCRETE WASTEWATER FROM WASHING TOOLS AND VEHICLES.
   - D. WASTEWATER FROM THE WASHING AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS.
   - E. FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE.
   - F. SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING, OR EXTERNAL BUILDING WASHDOWN.
   - G. WHEEL/TIRE WASH WASTEWATER.
   - H. HYDRO-DEMOLITION WATER AND SAW-CUTTING SLURRY.
   - I. TOXICS OR HAZARDOUS SUBSTANCES.
2. THE SDPP IS THE MINIMUM EFFORT NECESSARY TO PREVENT PROHIBITED DISCHARGES AND MUST BE UPDATED AS SITE CONDITIONS CHANGE, OR AS NEEDED. CHANGES TO THE PROJECT SIZE, LOCATION OR TYPE OF BMPS MUST BE PRE-APPROVED BY RVSS.

3. ALL PARTS OF THE APPROVED SDPP MUST BE IMPLEMENTED, INSTALLED AND MAINTAINED, FOLLOWING THE BMP IMPLEMENTATION SCHEDULE UNTIL FINAL STABILIZATION.
4. THE SDPP MUST BE KEPT ON SITE AND MADE AVAILABLE FOR REVIEW BY THE PERMITTING ENTITY, DEQ, OR LOCAL MUNICIPALITY, UPON REQUEST.
5. A PRE-CONSTRUCTION INSPECTION WITH RVSS' INSPECTOR MUST BE HELD PRIOR TO ANY GROUND DISTURBING ACTIVITY. CALL 541-779-4144 AND ASK TO SCHEDULE AN EROSION PREVENTION AND SEDIMENT CONTROL PRE-CONSTRUCTION INSPECTION.
6. IMPLEMENT EROSION PREVENTION MEASURES FOLLOWING THE BMP SCHEDULE. PROVIDE TEMPORARY STABILIZATION FOR ANY PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE.
7. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; EG. VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS.
8. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE.
9. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL.
10. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALLOW EXCAVATION ACTIVITIESINSPECT BMPS WEEKLY AND PRIOR TO ANY PREDICTED RAIN EVENT. INSPECTION FORMS ARE AVAILABLE FOR DOWNLOAD FROM RVSS' WEBSITE.
11. CONDUCT NEEDED BMP MAINTENANCE ASAP AND PRIOR TO ANY PREDICTED RAIN EVENT. REMOVE SEDIMENT WHEN IT REACHES ONE THIRD THE HEIGHT OF THE BMP CAPACITY.
12. DO NOT WASH SEDIMENT OR OTHER POLLUTANTS INTO STORM SEWERS OR DRAINAGE WAYS. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS AND POLLUTANTS. TEMPORARY EPSC MEASURES MUST REMAIN IN PLACE AND BE MAINTAINED UNTIL PERMANENT STABILIZATION IS ACHIEVED.
13. FINAL STABILIZATION MUST BE ACHIEVED ON ALL PORTIONS OF THE SITE. THIS MAY INCLUDE PERMANENT IMPERVIOUS SURFACES, BARK MULCH, GRAVEL MULCH, OR VEGETATION. FOR VEGETATION, ESTABLISH UNIFORM (I.E., EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) PERENNIAL VEGETATION THAT PROVIDES 70 PERCENT OR MORE COVER ON ALL EXPOSED AREAS**.**
14. A FINAL EPSC INSPECTION WITH RVSS' INSPECTOR MUST BE PASSED PRIOR TO REMOVAL OF TEMPORARY EPSC MEASURES.
15. FOLLOWING PASSAGE OF THE FINAL EPSC INSPECTION, REMOVE AND PROPERLY DISPOSE OF ALL RETAINED SEDIMENT AND TEMPORARY EPSC MEASURES.



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

ROGUE VALLEY SEWER SERVICES
JACKSON COUNTY, OREGON

ORDINANCE NO. 22-01
AN ORDINANCE TO AMEND TITLE 4 OF THE ROGUE VALLEY SEWER SERVICES CODE

WHEREAS, Rogue Valley Sewer Services first codified its major resolutions and ordinances in 2005, and

WHEREAS, the code has been amended by ordinance from time to time, and

WHEREAS, Title 4 of the Code addresses stormwater quality management, and

WHEREAS, the National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Phase 2 permit was reissued in March 2021 and requires updates to ordinances pertaining to stormwater management,

NOW BE IT ORDAINED that Title 4 of the Rogue Valley Sewer Services Code are hereby repealed and replaced in their entirety by new Title 4, attached and made a part of this ordinance.

BE IT FURTHER ORDAINED, that the Ordinances and Resolutions set forth in the code are an attempt to incorporate all prior ordinances in a more organized manner.

To the extent that any prior ordinances or resolutions which are now in effect, and have in whole or in part, been inadvertently excluded from the code, said ordinances or resolutions or portions of such not included shall remain valid and enforceable and shall not be repealed by implication.

AND, BE IT FURTHER ORDAINED that future changes to the Rogue Valley Sewer Services Code may be made by ordinance of the Board.

ADOPTED BY THE Board of Directors of Rogue Valley Sewer Services at its Regular Meeting held March 16th, 2022.

ROGUE VALLEY SEWER SERVICES

Kay Harrison

Kay Harrison, Chair
Board of Directors

COUNTERSIGNED:

Carl Tappert, Manager

First Reading: February 16th, 2022
Second Reading and Public Hearing: March 16th, 2022
Effective Date: April 20th, 2022

1200-C and CN Inspections Conducted in FY22

Project Name	Permit Number	Inspection Date	F°	Weather Condition	BMP Inspection Type	storm event	Storm Event	SW discharge?	brown tag issued
Exit 24 Storage Phase 2	SQW20-06CN	10/22/2021 17:36	53	Cloudy	Regular Inspection	Yes	Pre	No	No
Exit 24 Storage Phase 2	SQW20-06CN	12/10/2021 22:33	46	Clear	Regular Inspection	Yes	Pre	No	No
Exit 24 Storage Phase 2	SQW20-06CN	1/4/2022 19:37	48	Raining	Regular Inspection	Yes	during	No	No
VA Building 220 Replacement	SWQ19-14-CN	9/17/2021 18:13	64	Cloudy	Regular Inspection	Yes	Pre	No	No
VA Building 220 Replacement	SWQ19-14-CN	10/21/2021 18:23	<Nul	Light Drizzle	Regular Inspection	Yes	Pre	No	No
VA Building 220 Replacement	SWQ19-14-CN	11/1/2021 19:40	60	Light Drizzle	Regular Inspection	Yes	Post	No	No
VA Building 220 Replacement	SWQ19-14-CN	12/14/2021 21:53	38	Cloudy	Regular Inspection	Yes	Pre	No	No
VA Building 220 Replacement	SWQ19-14-CN	1/5/2022 17:04	44	Raining	Regular Inspection	Yes	during	No	No
VA Building 220 Replacement	SWQ19-14-CN	4/5/2022 19:54	50	Cloudy	Regular Inspection	Yes	Post	No	No
VA Building 220 Replacement	SWQ19-14-CN	4/13/2022 18:31	39	Raining	Regular Inspection	Yes	during	No	No
VA Building 220 Replacement	SWQ19-14-CN	5/26/2022 17:58	75	Clear	Regular Inspection	No	<Null>	No	No
Magnolia Investments	SWQ19-16-CN	9/15/2021 21:46	82	Clear	Regular Inspection	No	<Null>	No	No
Magnolia Investments	SWQ19-16-CN	10/21/2021 19:41	71	Cloudy	Regular Inspection	Yes	Pre	No	No
Magnolia Investments	SWQ19-16-CN	12/10/2021 22:02	46	Clear	Regular Inspection	Yes	Pre	No	No
Magnolia Investments	SWQ19-16-CN	1/4/2022 18:48	48	Raining	Regular Inspection	Yes	during	No	No
Magnolia Investments	SWQ19-16-CN	4/13/2022 18:35	39	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Jacqueline Estates	SWQ19-19-CN	9/17/2021 18:00	64	Clear	Regular Inspection	Yes	Pre	No	No
Jacqueline Estates	SWQ19-19-CN	10/22/2021 18:30	<Nul	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Jacqueline Estates	SWQ19-19-CN	11/1/2021 19:45	60	Light Drizzle	Regular Inspection	Yes	Post	No	No
Jacqueline Estates	SWQ19-19-CN	12/14/2021 20:31	37	Cloudy	Regular Inspection	Yes	Post	No	No
Jacqueline Estates	SWQ19-19-CN	1/5/2022 16:49	44	Raining	Regular Inspection	Yes	during	No	No
Jacqueline Estates	SWQ19-19-CN	3/18/2022 16:02	37	Clear	Regular Inspection	No	<Null>	No	No
Jacqueline Estates	SWQ19-19-CN	4/5/2022 19:30	50	Cloudy	Regular Inspection	Yes	Post	No	No
Phoenix High School	SWQ19-20-C	9/15/2021 22:03	84	Clear	Regular Inspection	No	<Null>	No	No
Phoenix High School	SWQ19-20-C	10/21/2021 21:35	71	Cloudy	Regular Inspection	Yes	Pre	No	No
Phoenix High School	SWQ19-20-C	11/1/2021 21:21	<Nul	Cloudy	Regular Inspection	Yes	Post	No	Yes
Phoenix High School	SWQ19-20-C	12/10/2021 16:08	48	Cloudy	Regular Inspection	Yes	Pre	No	No
Phoenix High School	SWQ19-20-C	5/11/2022 19:38	57	Clear	Regular Inspection	No	<Null>	No	No
Exit 24 Storage Phase 2	SWQ20-06-CN	9/15/2021 20:16	80	Clear	Regular Inspection	No	<Null>	No	No
Exit 24 phase 2 Storage	SWQ20-06-CN	11/1/2021 20:10	<Nul	Cloudy	Regular Inspection	Yes	Post	No	Yes

1200-C and CN Inspections Conducted in FY22

Project Name	Permit Number	Inspection Date	F°	Weather Condition	BMP Inspection Type	storm event	Storm Event	SW discharge?	brown tag issued
Exit 24 Storage Phase 2	SWQ20-06-CN	2/28/2022 15:19	48	Cloudy	Regular Inspection	No	<Null>	No	No
VA Replacement Buildings 225	SWQ20-12-CN	9/17/2021 18:14	<Nul	Clear	Regular Inspection	Yes	Pre	No	No
VA Replacement Buildings 225	SWQ20-12-CN	10/21/2021 18:20	<Nul	Light Drizzle	Regular Inspection	Yes	Pre	No	No
VA Replacement Buildings 225	SWQ20-12-CN	11/1/2021 19:37	60	Light Drizzle	Regular Inspection	Yes	Post	No	No
VA Replacement Buildings 225	SWQ20-12-CN	12/14/2021 22:34	37	Cloudy	Regular Inspection	Yes	Post	No	No
VA Replacement Buildings 225	SWQ20-12-CN	4/5/2022 20:09	50	Cloudy	Regular Inspection	Yes	Post	No	No
VA Replacement Buildings 225	SWQ20-12-CN	4/13/2022 18:43	39	Raining	Regular Inspection	Yes	during	No	No
VA Replacement Buildings 225	SWQ20-12-CN	5/31/2022 18:47	66	Clear	Regular Inspection	No	<Null>	No	No
Cascade Fire	SWQ20-21-CN	9/17/2021 18:04	64	Clear	Regular Inspection	Yes	Pre	No	No
Cascade Fire	SWQ20-21-CN	10/21/2021 18:16	<Nul	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Cascade Fire	SWQ20-21-CN	11/1/2021 19:34	60	Light Drizzle	Regular Inspection	Yes	Post	No	No
Wash-N-Go	SWQ21-01-CN	7/13/2021 17:09	75	Clear	Regular Inspection	No	<Null>	No	No
Wash-N-Go	SWQ21-01-CN	9/17/2021 18:01	64	Clear	Regular Inspection	Yes	Pre	No	No
White Mountain Plaza Access Roa	SWQ21-02	7/13/2021 17:07	75	Clear	Regular Inspection	No	<Null>	No	No
Freedom Square II	SWQ21-06-CN	9/7/2021 16:19	62	Cloudy	Initial Inspect	No	<Null>	No	No
Freedom Square II	SWQ21-06-CN	9/17/2021 17:48	64	Clear	Regular Inspection	Yes	Pre	No	No
Freedom Square II	SWQ21-06-CN	10/21/2021 18:27	<Nul	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Freedom Square II	SWQ21-06-CN	11/1/2021 19:43	60	Light Drizzle	Regular Inspection	Yes	Post	No	No
Freedom Square II	SWQ21-06-CN	12/14/2021 20:26	37	Cloudy	Regular Inspection	Yes	Post	No	No
Freedom Square II	SWQ21-06-CN	1/5/2022 16:56	44	Raining	Regular Inspection	Yes	during	No	No
Freedom Square II	SWQ21-06-CN	4/5/2022 19:36	50	Cloudy	Regular Inspection	Yes	Post	No	No
Freedom Square II	SWQ21-06-CN	4/13/2022 17:48	37	Raining	Regular Inspection	Yes	during	No	No
Freedom Square II	SWQ21-06-CN	6/20/2022 18:17	62	Clear	Regular Inspection	Yes	Post	<Null>	No
VA Retrofit	SWQ21-08-C	9/17/2021 18:14	64	Clear	Regular Inspection	Yes	Pre	<Null>	No
VA Retrofit	SWQ21-08-C	10/21/2021 18:19	<Nul	Light Drizzle	Regular Inspection	Yes	Pre	No	No
VA Retrofit	SWQ21-08-C	11/1/2021 19:35	60	Light Drizzle	Regular Inspection	Yes	Post	No	No
VA Retrofit	SWQ21-08-C	4/5/2022 20:04	50	Cloudy	Regular Inspection	Yes	Post	No	No
VA Retrofit	SWQ21-08-C	4/13/2022 18:39	39	Raining	Regular Inspection	Yes	during	No	No
VA Retrofit	SWQ21-08-C	5/31/2022 18:57	66	Clear	Regular Inspection	No	<Null>	No	No
River Rock Ranch	SWQ21-09-CN	9/17/2021 17:45	64	Clear	Regular Inspection	Yes	Pre	No	No

1200-C and CN Inspections Conducted in FY22

Project Name	Permit Number	Inspection Date	F°	Weather Condition	BMP Inspection Type	storm event	Storm Event	SW discharge?	brown tag issued
River Rock Ranch	SWQ21-09-CN	10/21/2021 18:33	<Nul	Light Drizzle	Regular Inspection	Yes	Pre	No	No
River Rock Ranch	SWQ21-09-CN	11/1/2021 19:42	60	Light Drizzle	Regular Inspection	Yes	Post	No	No
River Rock Ranch	SWQ21-09-CN	12/14/2021 20:02	37	Cloudy	Regular Inspection	Yes	Post	No	No
River Rock Ranch	SWQ21-09-CN	1/5/2022 16:59	44	Raining	Regular Inspection	Yes	during	No	No
River Rock Ranch	SWQ21-09-CN	4/5/2022 19:44	50	Cloudy	Regular Inspection	Yes	Post	No	No
River Rock Ranch	SWQ21-09-CN	4/13/2022 17:38	37	Raining	Regular Inspection	Yes	during	No	No
River Rock Ranch	SWQ21-09-CN	6/20/2022 21:20	71	Clear	Regular Inspection	Yes	Post	No	No
Medford Estates	SWQ-21-12-C	9/15/2021 22:18	84	Clear	Regular Inspection	No	<Null>	No	No
Medford Estates	SWQ-21-12-C	10/21/2021 22:05	71	Cloudy	Regular Inspection	Yes	Pre	No	No
Medford Estates	SWQ-21-12-C	11/1/2021 23:00	<Nul	Cloudy	Regular Inspection	Yes	Post	No	No
Medford Estates	SWQ-21-12-C	12/13/2021 16:23	48	Cloudy	Regular Inspection	Yes	Pre	No	No
Medford Estates	SWQ-21-12-C	1/5/2022 16:11	48	Cloudy	Regular Inspection	Yes	Post	No	No
Medford Estates	SWQ-21-12-C	4/13/2022 19:56	39	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Timber Products Gravel Parking	SWQ21-15-CN	8/30/2021 16:27	63	Clear	Initial Inspect	No	<Null>	No	No
Timber Products Gravel Parking	SWQ21-15-CN	9/17/2021 18:03	64	Clear	Regular Inspection	Yes	Pre	No	No
Timber Products Gravel Parking	SWQ21-15-CN	10/21/2021 18:14	<Nul	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Timber Products Gravel Parking	SWQ21-15-CN	11/1/2021 19:31	60	Light Drizzle	Regular Inspection	Yes	Post	No	No
Timber Products Gravel Parking	SWQ21-15-CN	12/14/2021 21:32	37	Cloudy	Regular Inspection	Yes	Post	No	No
Oak Ridge Estates	SWq21-17	7/27/2021 22:30	69	Cloudy	Initial Inspect	No	<Null>	No	No
Oak Ridge Estates	SWq21-17	9/15/2021 21:55	84	Clear	Regular Inspection	No	<Null>	No	No
Oak Ridge Estates	SWq21-17	10/21/2021 21:06	71	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Oak Ridge Estates	SWq21-17	11/1/2021 21:03	<Nul	Cloudy	Regular Inspection	Yes	Post	No	No
Oak Ridge Estates	SWq21-17	12/10/2021 22:28	46	Clear	Regular Inspection	Yes	Pre	No	No
Oak Ridge Estates	SWq21-17	1/4/2022 19:43	48	Raining	Regular Inspection	Yes	during	No	No
Oak Ridge Estates	SWQ21-17	4/13/2022 19:14	39	Light Drizzle	Regular Inspection	Yes	Pre	No	No
TURA Gateway	SWQ21-21-CN	9/15/2021 20:55	82	Clear	Regular Inspection	No	<Null>	No	No
TURA Gateway	SWQ21-21-CN	10/21/2021 20:23	71	Cloudy	Regular Inspection	Yes	Pre	No	No
TURA Gateway	SWQ21-21-CN	11/1/2021 19:54	55	Cloudy	Regular Inspection	Yes	Post	No	No
TURA Gateway	SWQ21-21-CN	1/4/2022 19:22	48	Raining	Regular Inspection	Yes	during	No	No
Grange Co-op	SWQ21-24C	12/14/2021 21:18	37	Cloudy	Regular Inspection	Yes	Pre	No	No

1200-C and CN Inspections Conducted in FY22

Project Name	Permit Number	Inspection Date	F°	Weather Condition	BMP Inspection Type	storm event	Storm Event	SW discharge?	brown tag issued
Grange Co-op	SWQ21-24C	1/5/2022 15:31	43	Raining	Regular Inspection	Yes	during	No	No
Grange Co-op	SWQ21-24C	4/5/2022 19:22	50	Cloudy	Regular Inspection	Yes	Post	No	No
Grange Co-op	SWQ21-24C	4/13/2022 19:15	39	Raining	Regular Inspection	Yes	during	No	No
Grange Co-op	SWQ21-24C	6/20/2022 18:08	62	Clear	Regular Inspection	Yes	Post	No	No
D & S Harley	SWQ21-25-CN	9/15/2021 22:08	84	Clear	Regular Inspection	No	<Null>	No	No
D & S Harley	SWQ21-25-CN	10/21/2021 21:53	71	Cloudy	Regular Inspection	Yes	Pre	No	No
D and S Harley	SWQ21-25-CN	11/1/2021 22:04	<Nul	Cloudy	Regular Inspection	Yes	Post	No	No
D & S Harley	SWQ21-25-CN	12/10/2021 16:13	48	Cloudy	Regular Inspection	Yes	Pre	No	No
D & S Harley	SWQ21-25-CN	1/5/2022 15:53	<Nul	Cloudy	Regular Inspection	Yes	Post	No	No
D	SWQ21-25-CN	4/13/2022 19:24	39	Raining	Regular Inspection	Yes	Pre	No	No
D & S Harley Davidson	SWQ21-25-CN	5/26/2022 18:19	77	Cloudy	Regular Inspection	No	<Null>	No	No
Totem MHP	SWQ21-26-CN	10/21/2021 19:30	71	Cloudy	Regular Inspection	Yes	Pre	No	No
Totem MHP	SWQ21-26-CN	11/1/2021 19:08	55	Cloudy	Regular Inspection	Yes	Post	No	No
RVMV	SWQ21-27-CN	10/21/2021 21:56	71	Cloudy	Regular Inspection	Yes	Pre	No	No
RVMV	SWQ21-27-CN	11/1/2021 21:02	55	Cloudy	Regular Inspection	Yes	Post	No	No
Coleman Creek Estates	SWQ21-28-C	7/8/2021 19:11	80	Clear	Initial Inspect	No	<Null>	No	No
Coleman Creek Estates	SWQ21-28-C	9/15/2021 22:01	84	Clear	Regular Inspection	No	<Null>	No	No
Coleman Creek Estates	SWQ21-28-C	11/1/2021 20:30	55	Cloudy	Regular Inspection	Yes	Post	No	No
Coleman Creek Estates	SWQ21-28-C	4/6/2022 14:50	33	Clear	Regular Inspection	No	<Null>	No	No
Mountain View Estates	SWQ22-01-C	8/19/2021 23:11	87	Clear	Initial Inspect	No	<Null>	No	No
Mountain View Estates	SWQ22-01-C	9/15/2021 21:43	82	Clear	Regular Inspection	No	<Null>	No	No
Mountain View Estates	SWQ22-01-C	10/21/2021 20:38	71	Cloudy	Regular Inspection	Yes	Pre	No	No
Mountain View Estates	SWQ22-01-C	11/1/2021 20:14	55	Cloudy	Regular Inspection	Yes	Post	No	No
Mountain View Estates	SWQ22-01-C	12/10/2021 22:13	46	Clear	Regular Inspection	Yes	Pre	No	No
Mountain View Estates	SWQ22-01-C	1/4/2022 19:15	48	Raining	Regular Inspection	Yes	during	No	No
Mountain View Estates	SWQ22-01-C	4/13/2022 18:44	39	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Arbor Gate	SWQ22-03-C	5/24/2022 18:56	68	Clear	Initial Inspect	No	<Null>	No	No
Arbor Gate	SWQ22-03-C	6/20/2022 17:57	62	Clear	Regular Inspection	Yes	Post	No	No
5245 Crater Lake HWY	SWQ22-05-CN	12/7/2021 19:01	42	Cloudy	Initial Inspect	No	<Null>	No	No
5245 Crater Lake HWY	SWQ22-05-CN	12/14/2021 22:48	37	Cloudy	Regular Inspection	Yes	Post	No	No

1200-C and CN Inspections Conducted in FY22

Project Name	Permit Number	Inspection Date	F°	Weather Condition	BMP Inspection Type	storm event	Storm Event	SW discharge?	brown tag issued
5245 Crater Lake HWY	SWQ22-05-CN	4/5/2022 20:23	53	Cloudy	Regular Inspection	Yes	Post	No	No
5245 Crater Lake HWY	SWQ22-05-CN	4/13/2022 18:57	39	Raining	Regular Inspection	Yes	during	No	No
Bear Creek Mobile	SWQ22-07-CN	8/19/2021 22:35	87	Clear	Initial Inspect	No	<Null>	No	No
Bear Creek Mobile	SWQ22-07-CN	9/15/2021 20:34	80	Clear	Regular Inspection	No	<Null>	No	No
Bear Creek Mobile	SWQ22-07-CN	10/21/2021 18:50	71	Clear	Regular Inspection	Yes	Pre	No	No
Bear Creek Mobile	SWQ22-07-CN	11/1/2021 18:34	55	Cloudy	Regular Inspection	Yes	Post	Yes	No
Bear Creek Mobile	SWQ22-07-CN	12/10/2021 21:42	46	Clear	Regular Inspection	Yes	Pre	No	No
Bear Creek Mobile	SWQ22-07-CN	1/4/2022 18:39	48	Raining	Regular Inspection	Yes	during	No	No
Bear Creek Mobile	SWQ22-07-CN	4/13/2022 18:09	39	Raining	Regular Inspection	Yes	Pre	No	No
VA Building 208	SWQ22-08-CN	9/17/2021 18:16	64	Clear	Initial Inspect	Yes	Pre	No	No
VA Building 208	SWQ22-08-CN	10/21/2021 18:25	<Nul	Light Drizzle	Regular Inspection	Yes	Pre	No	No
VA Building 208	SWQ22-08-CN	11/1/2021 19:38	60	Light Drizzle	Regular Inspection	Yes	Post	No	No
VA Building 208	SWQ22-08-CN	12/14/2021 22:11	38	Cloudy	Regular Inspection	Yes	Pre	No	No
VA Building 208	SWQ22-08-CN	1/5/2022 17:06	44	Raining	Regular Inspection	Yes	during	No	No
VA Building 208	SWQ22-08-CN	4/5/2022 19:58	50	Cloudy	Regular Inspection	Yes	Post	No	No
VA Building 208	SWQ22-08-CN	4/13/2022 18:34	39	Raining	Regular Inspection	Yes	during	No	No
Talent Mobile Estates	SWQ22-12-C	10/21/2021 19:20	71	Clear	Regular Inspection	Yes	Pre	No	No
Talent Mobile Estates	SWQ22-12-C	11/1/2021 19:19	55	Cloudy	Regular Inspection	Yes	Post	Yes	Yes
Talent Mobile Estates	SWQ22-12-C	12/10/2021 21:52	46	Clear	Regular Inspection	Yes	Pre	No	Yes
Talent Mobile Estates	SWQ22-12-C	12/16/2021 20:04	<Nul	Cloudy	Regular Inspection	No	<Null>	Yes	Yes
Talent Mobile Estates	SWQ22-12-C	1/4/2022 18:43	48	Raining	Regular Inspection	Yes	during	No	No
Talent Mobile Estates	SWQ22-12-C	4/13/2022 18:23	39	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Talent Mobile Estates	SWQ22-12-C	4/29/2022 14:27	41	Cloudy	Regular Inspection	No	<Null>	No	No
Paradise Ridge	SWQ22-15-CN	10/12/2021 18:46	44	Clear	Initial Inspect	No	<Null>	No	No
Paradise Ridge	SWQ22-15-CN	10/21/2021 22:00	71	Cloudy	Regular Inspection	Yes	Pre	No	No
Paradise Ridge	SWQ22-15-CN	11/1/2021 22:10	<Nul	Cloudy	Regular Inspection	Yes	Post	No	No
Paradise Ridge	SWQ22-15-CN	12/13/2021 16:17	48	Cloudy	Regular Inspection	Yes	Pre	No	No
Paradise Ridge	SWQ22-15-CN	1/5/2022 16:07	48	Cloudy	Regular Inspection	Yes	Post	No	No
Paradise Ridge	SWQ22-15-CN	4/13/2022 19:45	39	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Greenway Village	SWQ22-16-CN	10/4/2021 17:29	55	Cloudy	Initial Inspect	No	<Null>	No	No

1200-C and CN Inspections Conducted in FY22

Project Name	Permit Number	Inspection Date	F°	Weather Condition	BMP Inspection Type	storm event	Storm Event	SW discharge?	brown tag issued
Greenway Village	SWQ22-16-CN	10/21/2021 20:55	71	Cloudy	Regular Inspection	Yes	Pre	No	No
Greenway Village	SWQ22-16-CN	11/1/2021 20:53	55	Cloudy	Regular Inspection	Yes	Post	No	No
Greenway Village	SWQ22-16-CN	12/10/2021 22:24	46	Clear	Regular Inspection	Yes	Pre	No	No
Greenway Village	SWQ22-16-CN	1/4/2022 19:28	48	Raining	Regular Inspection	Yes	during	No	No
Greenway Village	SWQ22-16-CN	4/13/2022 18:59	39	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Franz Bakery	SWQ22-18-CN	12/6/2021 23:08	44	Cloudy	Initial Inspect	No	<Null>	No	No
Franz Bakery	SWQ22-18-CN	12/14/2021 21:22	37	Cloudy	Regular Inspection	Yes	Post	No	No
Franz Bakery	SWQ22-18-CN	1/5/2022 17:38	44	Raining	Regular Inspection	Yes	during	No	No
Franz Bakery	SWQ22-18-CN	4/5/2022 19:12	50	Cloudy	Regular Inspection	Yes	Post	No	No
Franz Bakery	SWQ22-18-CN	4/13/2022 18:51	39	Raining	Regular Inspection	Yes	during	No	No
Franz Bakery	SWQ22-18-CN	6/20/2022 21:08	71	Cloudy	Regular Inspection	Yes	Post	No	No
Bel air MHP	SWQ22-21-CN	1/19/2022 21:54	57	Clear	Initial Inspect	No	<Null>	No	No
Bel air MHP	SWQ22-21-CN	4/13/2022 19:50	39	Light Drizzle	Regular Inspection	Yes	Pre	No	No
Garrisons Showroom	SWQ22-25-CN	3/30/2022 20:53	59	Clear	Initial Inspect	No	<Null>	No	No
Garrisons Showroom	SWQ22-25-CN	4/13/2022 17:43	39	Raining	Regular Inspection	Yes	Pre	No	No
ULLY 1 Grading Permit	SWQ22-30-CN	5/9/2022 20:15	42	Raining	Initial Inspect	No	<Null>	No	No
Pacific Village	SWQ22-30-CN	5/17/2022 18:33	60	Clear	Initial Inspect	No	<Null>	No	No
Boylan MH Park	SWQ22-31-CN	6/22/2022 18:26	75	Clear	Initial Inspect	No	<Null>	No	No

Active 1200-C and CN Projects in FY22

1200C Permit No	Date Assigned	Notice of Termination Date	Project Name	Location
SWQ22-28-CN	16-Jul-13		Evergreen Federal Bank	Jackson County
SWQ18-22-CN	22-Jun-18		Phoenix Industrial Studios	
SWQ19-19-CN	10-Apr-19	18-Mar-22	Jacqueline Estates Ph 2	White City
SWQ19-16-CN	22-Apr-19		Magnolia 40 Unit Apartments	Talent
SWQ19-20-C	19-Jun-19	31-May-22	Phoenix High School Addition and Renovation	Phoenix
SWQ20-06-CN	27-Sep-19	28-Feb-22	Storage at Exit 24, Phase 2	Phoenix
SWQ19-23-CN	08-Nov-19		Archangel Gabriel Orthodox Temple	Jackson County
SWQ19-14-CN	20-Nov-19	26-May-22	VA Bldg. 220 replacement	White City
SWQ20-12-CN	28-Feb-20	07-Jun-22	VA Replace Bldg. 225 and 226	Jackson County
SWQ20-21-CN	24-Jun-20	25-Apr-22	Cascade Fire Equipment	White City
SWQ21-01-CN	16-Sep-20	25-Aug-21	Wash-N-Go	White City
SWQ21-02-CN	22-Oct-20	25-Aug-21	White Mt. Plaza Access Rd	White City
SWQ21-09-C	17-Feb-21		River Rock Ranch	White City
SWQ21-08-C	22-Feb-21		VA Campus-wide Retrofit	White City
SWQ21-12-C	04-Mar-21		Medford Estates Reconstruction	Jackson County
SWQ21-06-CN	31-Mar-21		HAJC Freedom Square 2	White City

Active 1200-C and CN Projects in FY22

1200C Permit No	Date Assigned	Notice of Termination Date	Project Name	Location
SWQ21-18-CN	07-Apr-21		Wilson Equipment Phase 2	Jackson County
SWQ21-17-C	15-Apr-21		Oak Ridge Estates	Phoenix
SWQ21-26-CN	19-May-21	29-Dec-21	Totem MHP	Talent
SWQ21-25-CN	09-Jun-21	09-Jun-22	D_S Harley Davidson	Jackson County
SWQ21-21-CN	09-Jun-21	28-Feb-22	TURA Gateway	Talent
SWQ21-27-CN	09-Jun-21		Rogue Valley Mobile Home Park	Jackson County
SWQ21-28-C	07-Jul-21	13-Apr-22	Coleman Creek Estates Rebuild	Jackson County
SWQ22-07-CN	18-Aug-21		Bear Creek Mobile Home Park	Jackson County
SWQ22-01-C	18-Aug-21		Mt. View Estates rebuild	
SWQ22-08-CN	26-Aug-21		VA BLDG 208 replacement	WC
SWQ22-15-CN	21-Sep-21		Paradise Ridge	Jackson County
SWQ22-14-C	21-Sep-21		Carefree Mobile Village	
SWQ22-16-CN	29-Sep-21		Greenway Village MHP	Phoenix
SWQ22-12-C	14-Oct-21	10-May-22	Talent Mobile Estates	Talent

Active 1200-C and CN Projects in FY22

1200C Permit No	Date Assigned	Notice of Termination Date	Project Name	Location
SWQ21-24-C	19-Oct-21		Grange Co-Op White City	WC
SWQ22-05-CN	25-Oct-21		Pace Warehouse	Jackson County
SWQ22-18-CN	01-Dec-21		Franz Bakery Distribution Center	White City
SWQ22-21-CN	02-Dec-21		Belair Mobile Home Park	Jackson County
SWQ22-03-C	14-Mar-22		Arbor Gate Estates	White City
SWQ22-25-CN	16-Mar-22		Garrison's Showroom	Phoenix
SWQ22-26-CN	25-Apr-22		City of Ashland WWTP OF	Ashland
SWQ22-30-CN	06-May-22		ULLY 1 Grading Permit	Phoenix
SWQ22-29-C	16-May-22		Pacific Village Mobile Home Community	Jackson County
SWQ22-31-CN	25-May-22		Boylan Mobile Home Park	Jackson County
SWQ22-27-CN	03-Jun-22		N Jackson Commercial Project	White City

Projects for which a Brown Tag or Stop Work Order was Issued: FY 2022

Permit No.	Date	Address	Violation(s)	RVSS Inspector	1200CN Inspector or Resident Name	Brown Tag (BT) or Stop Work Order?	Was Violation Corrected? (Date)
Small lot	7/13/2021	1017 Brandon Phx	concrete in gutter, gravel in gutter.	FO	Keith Young, Young Bros. youngbrotherconstruction@gmail.com 541-944-0885	BT	inspected 7/16/21, OK
Small lot	7/13/2021	500 Barnum, Phx	gravel in driveway, street	FO	Travis Taylor TRT Construction 541-301-0187 trtconstruction@gmail.com	BT	Travis sent me photos on 7/14, looked OK. inspected 7/16/21, OK.
Small lot	7/16/2021	1001 Arana, phx	concrete in gutter to curb inlet	FO	contractor: Eddie Conrad for Claudio Alvarez	BT	1st notice by text 7/16, 2nd notice by email 7/21. Cleaned at 7/22/21 inspection.
Small lot	7/28/2021	1013 Arana	dirt in gutter, on sidewalk	FO	Brandon Sousa, homeowner	BT	1st notice by email 7/28/21. Brandon send photos of cleaned site 1500 7/28/21. Inspected 8/3/21. Good.
Small lot	8/3/2021	1034 N. Rose St. Phoenix	loose trash, concrete in gutter, debris on pavement/gutter, busted filter media at curb inlet needs replacing	FO	Karic Roberge for Buntin Construction	BT	gutter is to be cleaned, loose trash contained or removed, and the curb inlet filter replaced by 5 pm 8/5. BT emailed to Terry because Karic texted he is on vacation. Inspected on 8/10/21: Clean
Small lot	9/7/2021	1016 Arana	debris on driveway, sidewalk, gutter	FO	contractor: Eddie Conrad for Claudio Alvarez	BT	sent w/notice of Civil Penalty. Inspected 9/21. OK, clean
Small lot	9/9/2021	Village Ct. Talent	need wattles and silt fence on slope above creek. Need to move portapotty away from drain.	FO	Mike Smith, Mahar Homes	BT	Inspected 9/13/21 Wattles & silt fence installed. NO action on toilet.
Small lot	9/9/2021	225 Gangnes, Talent	need wattles and silt fence on slope above creek.	FO	Suncrest, Charlie Hamilton	BT	Inspected 9/13/21 Wattles & silt fence installed.
Small lot	9/9/2021	307 Gangnes, Talent	need wattles/silt fence maintained. Trash to be removed, concrete to be removed.	FO	Verity Const.	BT	Inspected 9/13/21 NO action on any items. Notice of Violation posted 10/19/21 and emailed. Taylor phoned 10/20 and said they are finished at that job. He was intending to remove silt fence, FO directed him to maintain it, leave it, and FO
Small lot	9/14/2021	339/343 Everett, Talent	curb inlet needs protection, soil on sidewalk	FO	contractor: Eddie Conrad for Claudio Alvarez	BT	BT sent via email 9/16/21. Reinspected 10/7: no change. Letter with additional penalty send Oct. 20 2021. NEEDS FOLLOW UP. Dan Hammond inspected? Invoice not paid as of 11/17/21. Due 11/18.
Small lot	9/14/2021	317 Davidson Way, Talent	concrete into gutter and to area drain	FO	Camron Erickson, Erickson Construction	BT	BT handed to Camron Erickson on 9/14/21. He felt "harassed". Inspected on 9/21/21: sandbags instead of biobags used. Inspected 10/7: still sandbags. FO texted Camron and he said he would get them switched out.
Small lot	9/20/2021	210, 212, 214, 216 Cheryl Ln.	silt fence needs maintenance, wattles need to be installed (none present) due to being within 50' of the stream and bare soil on bank. Silt fence not installed correctly to 6" bury line.	FO	Malot Construction	BT	BT emailed to malotconstruction@gmail.com on 9/20/21. No change 10/7. Emailed BT again. Visited 10/19, silt fence reinstalled but still not buried to bury line. No wattles.
Small lot	10/19/2021	238 Oak Crest, Medford	curb inlet needs filter replaced, gutter cleaned	FO	Verity Const.	BT	BT emailed to verityconstructionllc@gmail.com on 10/20/21. Reinspected, gutter cleaned. No inlet protection.
Small lot	10/19/2021	525 Barnum, Phoenix	pavement needs cleaning, filter media at curb inlet needs replacement	FO	Bob Fellows Const.	BT	BT emailed to bobthebuilder82@live.com on 10/20/21. Email back from Bob, same day. He says he took care of it.
Small lot	11/1/2021	Talent Mobile Estates, Arnos Rd.	gutters need cleaning, curb inlet filter media needs replacing	FO	David Powell	BT	BT emailed to dpowell5560@gmail.com 11/2/21 to clean up by 11/4/21 5 pm. Inspected, clean, OK
Small lot	11/1/2021	236 Northridge Terrace	trackout	JM	roguevalleyhomeimprovement@gmail.com Valley Home Improvement, Nick Young	BT	inspected, looks ok. FO spoke to Mike Turturici, Valley Home Improvement owner and told him it was clean, & he was OK.

Projects for which a Brown Tag or Stop Work Order was Issued: FY 2022

Permit No.	Date	Address	Violation(s)	RVSS Inspector	1200CN Inspector or Resident Name	Brown Tag (BT) or Stop Work Order?	Was Violation Corrected? (Date)
Small lot	1/4/2022	381W09DA Taxlots 3900 / 4000	no BMPs installed, no SWM plan, developer had been informed at pre-app of all requirements	DH/TL	Estavan Arroyo	BT	
Small lot	12/16/2021	343 and 339 Everett way	BMPs not maintained, mud in curb, no construction entrance	JM	Eddie Conrad	civil penalty	
Small lot	12/16/2021	349 Geraldine Way	BMPs not maintained, mud in curb, no construction entrance	JM	Eddie Conrad	civil penalty	**Totals**
Small lot	12/16/2021	321, 323, 325, 327 Everett Way	BMPs not maintained, mud in curb, no construction entrance	JM	Eddie Conrad	civil penalty	
Small lot	12/16/2021	312, 308, Everett Way	BMPs not maintained, mud in curb, no construction entrance	JM	Tom Malot		
Small lot	12/16/2021	304 Everett	BMPs not maintained, mud in curb, no construction entrance	JM	Eddie Conrad	civil penalty	
Small lot	1/26/2022	302 Rapp Rd	concrete washout in curb, gutter and storm drain	DH/TL	Verity Const.	civil penalty	came out same day to chip dried concrete
Small lot	1/26/2022	320 &328 Everett	concrete washout in curb, gutter and storm drain	DH	Eddie Conrad		
Small lot	3/3/2022	189-193 Northridge terrace	Degraded biobags leading to curb inlet contamination. Porta potty placed too close to curb inlet.	AG	Jason Adams	BT	Bio bag was removed and the porta potty was relocated. 3/14/2022
Small lot	3/3/2022	203 Northridge terrace	Bio bag on curb inlet was saturated and past its useable date, needed replacement.	AG	Ryan Clark	BT	Owner took action the same day. 3/3/2022
Small lot	3/31/2022	236 Samuel Lane Loop Rd	Bio bag needs to be placed in front, covering the curb inlet following street sweeping.	AG	Jared at Cota Homes LLC	BT	Bio bag was replaced following the street sweeping 4/04/2022
small lot	3/31/2022	258 Samuel Lane Loop Rd	Bio bag is past its usable life and needs to be replaced and gutter inspected for debris.	AG	Kevin Nering	BT	Bio bags were replaced following the street sweeping event 4/04/2022
Small lot	3/31/2022	224 Samuel Lane Loop Rd	Bio bag needs to be placed in front, covering the curb inlet following street sweeping.	AG	Fred Skaff	BT	Bio bags were replaced following the street sweeping event 4/04/2022
Small lot	5/19/2022	241 Samuel Lane Loop Rd	Bio bag on curb inlet is degraded and past its usable life. Replace bio bags ASAP.	AG	Lanse Leonardo, Leonardo Homes	BT	Bio bag was removed, no further construction 5/02/2022
Small lot	5/19/2022	221 Samuel Lane Loop Rd	Bio bag on curb inlet is degraded and past its usable life. Replace bio bags ASAP.	AG	Kyle Taylor	BT	Bio bag was removed, no further construction 5/02/2022
Small lot	4/21/2022	Magnolia 410 Azaleact	trackout, and	DH	Gill/Ray	BT	contractor cleaned up the trackout while I was on site
Small lot	4/22/2022	331 & 339 Everett Way	inlet protection not maintained, porta potty not 30ft from curb inlet, material in street not cleaned up	DH	Eddy Conrad w/ Claudio Alvarez construction	SW	yes, crew cleaned up site prior to resumming work for the day
Small lot	5/19/2022	220 Oak Crest Way	concrete washout in curb, gutter and storm drain	DH	Elegant Custome Homes	BT	

Projects for which a Notice of Non-Compliance was Issued: FY 2022

Permit No.	Date	Contractor or Resident Name	Violation(s)	RVSS Inspector	Notice of Non-Compliance	Was Issue Corrected?	Fine paid?
Everatt Way and Arana	8/2/2021	Alvarez Construction	BMPs not maintained, silt in street and gutter	FO	yes, no civil penalty	no	NA
1016 Arana	9/17/2021	Alvarez Construction	bio-bags not maintained, material in gutter and street	FO	YES with $500 civil penalty	no	yes, 9-27-21
339/343 Everett	10/18/2021	Alvarez Construction	bio-bags not maintained, material in gutter and street	FO	YES with $500 civil penalty	no	yes, 2-15-22
Everett Way and Arana	1/19/2022	Alvarez Construction	BMPs not maintained, silt in street and gutter	FO/JM	yes, $750 civil penalty	yes	RVSS cancelled fine.
302 Rapp Rd	2/3/2022	Verity Construction	concrete washout in SW conveyance and CB	DH	YES w/ $1,000 civil penalty	yes	YES, 2-18-22
331, 339 Everett Way	4/20/2022	Alvarez Construction	unprotected silt piles, packed mud on road and in gutter	DH	Stop Worder and $1,000 civil penalty issued	yes	yes, 4-26-22

APPENDIX E: Post- Construction Site Runoff for New Development and Redevelopment

Question 123. Record of RVSS Oversight Inspections of Privately Maintained Stormwater Facilities

Record of RVSS Inspection of RVSS Maintained Stormwater Facilities

Record of RVSS Maintenance of RVSS Maintained Stormwater Facilities

Private Stormwater Facility Oversight Maintenance Inspections by RVSS FY22

SWQ #	RVSProjectName	Notification Ltr Sent	Date Inspected	Maint Reqd	Maint Issues Deadline	Maint Issues Completed	Location
SWQ20-20	137 Trout way	10-May-22	17-May-22	FALSE			
SWQ18-22-CN	Phoenix Industrial Studios	10-May-22	19-May-22	FALSE			Phoenix
SWQ19-15	200 Eastern St	10-May-22	23-May-22	FALSE			White City
SWQ18-24	Melinda Vezzani Building	16-May-22	25-May-22	FALSE			White City
SWQ19-09-CN	RCC Health Professions Center	10-May-22	31-May-22	FALSE			White City
115694	Talent Civic Center	11-May-22	01-Jun-22	FALSE	01-Nov-22		Talent
SWQ17-018	Saddlebrook Meadows Phase 2	16-May-22	01-Jun-22	FALSE			White City
SWQ18-11	JRW Transport	16-May-22	01-Jun-22	FALSE			White City
SWQ18-11	JRW Transport	16-May-22	01-Jun-22	FALSE			White City
SWQ20-20	137 Trout Way	10-May-22	01-Jun-22	FALSE			White City
SWQ18-16	FD 3 Classroom Building	16-May-22	02-Jun-22	FALSE			White City
SWQ20-02	Table Rock Elementary	10-May-22	03-Jun-22	FALSE			White City
SWQ18-27-CN	Coast Aluminum	16-May-22	06-Jun-22	FALSE			Jackson County
SWQ20-04	138 Trout Way	10-May-22	07-Jun-22	FALSE			Jackson County
SWQ19-11-CN	Gage It construction	16-May-22	08-Jun-22	FALSE			White City
SWQ17-013-CN	NIC Industries Phase I	16-May-22	13-Jun-22	FALSE			White City
SWQ19-21	Ocean Grown	10-May-22	14-Jun-22	FALSE			White City
SWQ18-02-CN	South Main Place	16-May-22	15-Jun-22	FALSE			Phoenix
SWQ20-01	McDonalds WC	12-May-22	16-Jun-22	FALSE			White City
SWQ19-18	Starbucks WC	10-May-22	16-Jun-22	FALSE			White City
SWQ18-08	Sweet Water Sanitation	17-May-22	20-Jun-22	FALSE			White City
SWQ19-17-CN	Scala	10-May-22	20-Jun-22	FALSE			White City
SWQ19-17-CN	Scala	10-May-22	20-Jun-22	FALSE			White City
SWQ20-08-C	Phoenix HS Track and Stadium Renovation	10-May-22	21-Jun-22	FALSE			Phoenix
SWQ19-20-C	Phoenix High School Addition and Renovation	11-May-22	21-Jun-22	FALSE			Phoenix
SWQ19-20-C	Phoenix High School Addition and Renovation	11-May-22	21-Jun-22	FALSE			Phoenix

Private Stormwater Facility Oversight Maintenance Inspections by RVSS FY22

SWQ #	RVSProjectName	Notification Ltr Sent	Date Inspected	Maint Reqd	Maint Issues Deadline	Maint Issues Completed	Location
SWQ19-20-C	Phoenix High School Addition and Renovation	11-May-22	21-Jun-22	FALSE			Phoenix
SWQ19-20-C	Phoenix High School Addition and Renovation	11-May-22	21-Jun-22	FALSE			Phoenix
SWQ19-20-C	Phoenix High School Addition and Renovation	11-May-22	21-Jun-22	FALSE			Phoenix
SWQ19-04	New metal building	16-May-22	22-Jun-22	TRUE	30-Jun-22	30-Jun-22	Jackson County
SWQ20-22	WC Dollar General	10-May-22	22-Jun-22	FALSE			White City
SWQ20-22	WC Dollar General	10-May-22	22-Jun-22	TRUE	15-Sep-22		White City
SWQ20-22	WC Dollar General	10-May-22	22-Jun-22	TRUE	15-Sep-22		White City
SWQ17-018	Saddlebrook Meadows Phase 2	16-May-22	23-Jun-22	TRUE			White City
SWQ16-006-CN	Exit 24 Storage	16-May-22	23-Jun-22	FALSE			Phoenix
SWQ20-05	Talent Asante	16-May-22	23-Jun-22	FALSE			Talent
SWQ20-05	Talent Asante	16-May-22	23-Jun-22	FALSE			Talent
116281	Auburn Estates, Phase 1	09-May-22	29-Jun-22	FALSE			White City

RVSS Maintained Manufactured SW Facilities in the ROW FY22

Project Name	Inspection Date	Annual Cleaning	Priority	Remove Trash?	Remove Sediment?	Other Issue	Notes
WHITE MOUNTAIN	8/16/2021 16:53	Yes	3	Yes	<Null>	Yes	Top Vac Trash
Antelope Industrial Park	8/16/2021 16:44	Yes	3	Yes	<Null>	Yes	Top Vac Trash
WEST CHANNEL B	8/16/2021 16:33	Yes	3	Yes	Yes	<Null>	<Null>
FREEDOM SQUARE	8/16/2021 16:04	Yes	3	Yes	<Null>	Yes	Top Vac Trash
Woodland Village	8/16/2021 16:00	Yes	3	Yes	<Null>	Yes	Top Vac Trash
SHARON WAY	8/16/2021 15:44	Yes	3	Yes	<Null>	Yes	Top Vac Trash
MIRACLE MEADOW SUBDIVISION	8/16/2021 15:29	Yes	3	Yes	<Null>	Yes	Remove Trash from East side of structure
NICHOLAS VIEW SUBDIVISION	8/16/2021 15:13	Yes	<Null>	Yes	No	No	<Null>
SADDLEBROOK MEADOWS	8/16/2021 15:03	Yes	3	Yes	<Null>	Yes	Top Vac Trash
FIELDSTONE ESTATES	8/16/2021 14:53	Yes	3	Yes	<Null>	Yes	Top Vac Trash
BIRCHWOOD ESTATES	8/16/2021 14:51	Yes	3	Yes	<Null>	Yes	Top Vac Debris
Bear Ck. Bridge, W Valley View Rd	9/10/2021 19:13	No	<Null>	No	No	No	<Null>
Bear Ck. Bridge, W Valley View Rd	9/10/2021 19:06	No	<Null>	No	No	No	<Null>
Bear Ck. Bridge, W Valley View Rd	9/10/2021 18:52	No	<Null>	No	No	No	<Null>
Talent Ave. perlite filters	9/10/2021 18:30	No	<Null>	No	No	No	<Null>
Park View Townhomes	9/10/2021 18:25	No	<Null>	No	No	No	<Null>
Talent Ave. perlite filters	9/10/2021 18:15	No	<Null>	No	No	No	<Null>
Talent Ave. perlite filters	9/10/2021 18:11	No	<Null>	No	No	No	<Null>
Talent Ave. perlite filters	9/10/2021 18:07	No	<Null>	No	No	No	<Null>
Talent Ave. perlite filters	9/10/2021 18:03	No	<Null>	No	No	No	<Null>
Talent Ave. perlite filters	9/10/2021 18:00	No	<Null>	No	No	No	<Null>
Talent Ave. perlite filters	9/10/2021 17:57	No	<Null>	No	No	No	<Null>
Gangnes Feature	9/10/2021 17:42	No	<Null>	No	No	No	<Null>
Suncrest Feature	9/10/2021 17:33	No	<Null>	No	No	No	<Null>
4th st Feature @ Bike Path	9/10/2021 17:14	No	<Null>	No	No	No	<Null>
Church Street Improvements	9/10/2021 17:06	No	<Null>	No	No	No	<Null>
4Th	9/10/2021 17:02	No	<Null>	No	No	No	<Null>
Huntley Feature	9/10/2021 16:53	No	<Null>	No	No	No	<Null>
Lawrence Extension\Chelsea Gardens	9/10/2021 16:46	No	<Null>	No	No	No	<Null>
SOUTHERN OREGON GOODWILL	8/16/2021 16:54	No	<Null>	<Null>	<Null>	<Null>	<Null>
AGATE MEADOWS	8/16/2021 16:25	No	<Null>	<Null>	<Null>	<Null>	<Null>
Antelope Run	8/16/2021 16:19	No	<Null>	<Null>	<Null>	<Null>	<Null>
McAlister Meadows	8/16/2021 15:52	No	<Null>	<Null>	<Null>	<Null>	<Null>
DESERT VIEW ESTATES	8/16/2021 15:44	No	<Null>	<Null>	<Null>	<Null>	<Null>
Tamarack Estates	8/16/2021 15:38	No	<Null>	<Null>	<Null>	<Null>	<Null>

RVSS Maintained Manufactured SW Facilities in the ROW FY22

Project Name	Inspection Date	Annual Cleaning	Priority	Remove Trash?	Remove Sediment?	Other Issue	Notes
Eagles Nest Subdivision	8/16/2021 15:34	No	<Null>	<Null>	<Null>	<Null>	<Null>
Saddlebrook Meadows Phase 2	8/16/2021 14:59	No	<Null>	<Null>	<Null>	<Null>	<Null>
ANTELOPE COVE	8/16/2021 14:55	No	<Null>	<Null>	<Null>	Yes	Feature is buried in landscaping.

53 Facilities are MX'd RVSS

38 Facilities Inspected

11 Facilities Require Maintenance

FY22 RVSS Stormwater Facility Maintenance Conducted

Project Name	MX Date	Employee Responding	Removed Trash?	Trash Amount	Trash Units	Removed Sediment	Sediment Amount	Sediment Units
BIRCHWOOD ESTATES	2/2/2022 17:48	Flusher1	Yes	1	Gallons	No	<Null>	<Null>
FIELDSTONE ESTATES	2/2/2022 18:23	Flusher1	Yes	1	Gallons	No	<Null>	<Null>
FREEDOM SQUARE	2/1/2022 21:46	Flusher2	No	<Null>	<Null>	No	<Null>	<Null>
MIRACLE MEADOW SUBDIVISION	2/1/2022 22:35	Flusher2	Yes	10	Gallons	No	<Null>	<Null>
NICHOLAS VIEW SUBDIVISION	2/1/2022 22:22	Flusher2	No	<Null>	<Null>	No	<Null>	<Null>
SADDLEBROOK MEADOWS	2/1/2022 22:15	Flusher2	Yes	5	Gallons	No	<Null>	<Null>
SHARON WAY	2/2/2022 17:41	Flusher1	Yes	5	Gallons	No	<Null>	<Null>
WEST CHANNEL B	2/2/2022 16:32	Flusher1	Yes	5	Gallons	No	<Null>	<Null>
WHITE MOUNTAIN	2/2/2022 17:17	Flusher1	Yes	5	Gallons	No	<Null>	<Null>
WOODLAND VILLAGE	2/1/2022 21:45	Flusher2	Yes	5	Gallons	No	<Null>	<Null>

APPENDIX F: Pollution Prevention and Good Housekeeping for Municipal Operations

Question 130. Jackson County Airport SWPCP

Jackson County Facility Stormwater Maintenance SOPs
Jackson County Expo Stormwater Maintenance SOPs
Jackson County Roads and Parks Stormwater Maintenance SOPs

ROGUE VALLEY INTERNATIONAL-MEDFORD AIRPORT

STORMWATER POLLUTION CONTROL PLAN

October 15, 2021

Prepared by:

Alpine Environmental Consultants, LLC
Mr. Doug Keeler, P.E. and Mr. Jonathan Williams, R.G.
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541.944.4685
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Prepared for:

Site Operator:

Jackson County Airport Authority
1000 Terminal Loop Pkwy, Suite 201
Medford, Oregon 97504

Site Contact Person:

Mr. Brian H. Gebhard
Director of Operations & Maintenance
3570 Fire Station Spur
Medford, Oregon 97504
541.776.7228
✈ GebharBH@JacksonCounty.org

Site Physical Address:

1000 Terminal Loop Pkwy, Suite 201
Medford, Oregon 97504
Jackson County

DEQ File Number: 100901 / EPA Number: ORR801628 / Facility SIC Code: 4581

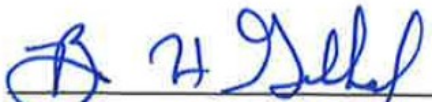
ALPINE ENVIRONMENTAL CONSULTANTS, LLC

TABLE OF CONTENTS

APPENDICES

1.0 PLAN CERTIFICATION

Per 40 CFR 122.22, 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 gathered and evaluated 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.

Alpine Environmental Consultants, LLC (Preparer)	Jackson County Airport Authority (Owner / Operator)
Doug Keeler, P.E.	Brian H. Gebhard
By	*By*
Senior Engineer	Director of Operations & Maintenance
Title	*Title*
	
Signature	*Signature*
10/15/2021	10/15/2021
Date	*Date*

2.0 INTRODUCTION

The Clean Water Act passed in 1972 established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point sources of pollution that discharge to waters of the United States. The Environmental Protection Agency manages the NPDES program and delegates administration to state environmental agencies. The Oregon Department of Environmental Quality (DEQ) administers the NPDES program in Oregon.

Stormwater runoff from industrial Sites can be a significant source of water pollution. Rain and snow impacted by pollutants such as oil and metals can convey such pollutants to lakes, rivers, and streams. For this reason, the NPDES permit program regulates stormwater discharges from industrial Sites. DEQ created the 1200-Z general permit to authorize the discharge of stormwater from industrial activities into waters of the state. Facilities covered by the 1200-Z permit include those with the primary Standard Industrial Classification (SIC) code 45 (Transportation by Air) that have vehicle maintenance shops (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, and/or airport deicing operations.

As described in its letter dated May 17, 2021, DEQ reissued the NPDES Industrial Stormwater Discharge 1200-Z permit (permit) to the Rogue Valley International – Medford Airport (Site, or Airport). The letter is presented in this Stormwater Pollution Control Plan (SWPCP, or plan) as **Appendix A**. The permit, which became effective July 1, 2021, and is scheduled to expire June 30, 2026, is kept at the Site and is to be made available for review to DEQ upon request.

This SWPCP is a guide for Site personnel and staff of the Site's tenants to protect stormwater quality as part of their day-to-day operations. The plan describes the Site's industrial activities, drainage areas, potential pollutants, Site controls, monitoring requirements, and permit benchmark exceedance actions. Numerous tenants operate businesses at the Site and conduct aviation-related support functions. In accordance with federal and state regulations, tenants are included as co-permittees under the Site's stormwater program, or they must obtain separate permit coverage for their discharges. Site personnel and tenants are responsible for stormwater compliance in their operations. The control measures outlined in this plan are intended to meet the requirements of Schedule A and Schedule E of the 1200-Z permit.

The permit requires the Site to revise its existing SWPCP and implement it in accordance with Schedule A of the permit. This October 2021 revision by Alpine Environmental Consultants, LLC (AEC) addresses significant, recent changes to the Site and changes to the 1200-Z permit issued by DEQ. In addition,

the Site is required to submit a copy of the signed, revised plan to DEQ, along with DEQ's document *DEQ 2021 Industrial Permit Stormwater Pollution Control Plan Checklist*. The revised plan and checklist are due to be received by DEQ by October 15, 2021, per the due date extension granted by DEQ on October 1, 2021.

PLAN REVISION HISTORY

This revised SWPCP builds on previous plans prepared by the authors listed below:

- 2007 – David Evans and Associates and Land and Water Environmental Services, Inc. prepared the original SWPCP.
- 2008 – David Evans and Associates updated the 2007 SWPCP.
- 2012 – Hardey Engineering & Associates, Inc. updated the 2008 SWPCP by addendum to reflect Site improvements and address updates to the 1200-Z permit.
- 2016 – ESA Vigil-Agrimis updated the plan by addendum in response to a DEQ Tier 2 Corrective Action.
- 2018 – OTAK, Inc. revised the plan to address changes in the updated 1200-Z permit that became effective October 22, 2018.
- 2021 – AEC revised the plan to address new permit requirements and significant changes to the Site.

3.0 SITE DESCRIPTION

The Airport is owned and operated by Jackson County. The Site is located approximately three miles north of the City of Medford, as shown on **Figure 1**. Most of the Site is bounded by Table Rock Road and Biddle Road on the west, International Way to the East, East Vilas Road to the North, and Crater Lake Highway (Oregon Highway 62) to the south. There are two areas (Basins 5 and 6) located outside this area. One area identified as Basin 5 is located south of Crater Lake Highway and the other area identified as Basin 6 is located north of East Vilas Road. No industrial activities take place in Basins 5 and 6. The Site is a primary services airport that serves private, commercial, and business aircraft with a single runway, 14-32.

The Site is in operation 24 hours a day. Commercial flights operate from 5:00 AM to 12:45 AM, and Site administrative hours are 8:00 AM to 5:00 PM. Annually there are more than 7,500 commercial flight departures, the majority of which are non-propeller departures.

SITE MAPS

The SWPCP includes Site specific maps showing Site location, activities, drainage, and the storm sewer system. The General Location Map (**Figure 1**) depicts the location of the Site within its surrounding area. The Airport Activities Site Maps (**Figure 2** and **Figure 3**) show the following features:

1. Stormwater Outfalls (monitored and unmonitored)
2. Drainage area (basin) for each stormwater outfall
3. Paved areas and buildings within each drainage area
4. Location and description of authorized non-stormwater discharges (vehicle washing areas, etc.)
5. Material handling and access areas include:
    a. Fueling areas
    b. Chemical storage areas (deicing fluid storage and fuel storage areas)
    c. Vehicle cleaning areas
    d. Sewage transfer and disposal areas (aircraft holding tank transfer area and dump station)
6. Used oil, hazardous waste treatment, storage and disposal facilities
7. Location of spill prevention and cleanup materials (spill kits)

The Drainage and Storm Sewer Site Maps (**Figure 4** through **Figure 7**) show one or more of the following features:

1. Outfalls (monitored and unmonitored)
2. Drainage area for each stormwater outfall (basins)
3. Drainage patterns (stormwater runoff directions)
4. Location of wetlands, and other surface water bodies
5. Conveyance and discharge structures (piping, ditches, etc.)
6. Existing structural control measures for minimizing pollutants in stormwater runoff (oil/water separators, Lynch-style catch basins, etc.)
7. Stormwater features that reduce flow or minimize impervious surfaces (detention ponds, etc.)

The following items are not shown on the map because they are not applicable:

1. Areas used for outdoor manufacturing, treatment, and disposal of significant materials
2. Locations of wells (including groundwater wells, waste injection wells, seepage pits,and drywells)
3. Location of springs
4. Locations of residual contamination to soil and/or groundwater

DRAINAGE AREA DESCRIPTIONS AND PERVIOUS SURFACES

Receiving Waters – General Description

Stormwater from the Site flows directly to Upton Slough and Lone Pine Creek and indirectly to Bear Creek. Upton Slough flows through Basins 1 and 4 from southeast to northwest and empties into Bear Creek northwest of the Site. Lone Pine Creek flows through Basins 1 and 2 from southeast to northwest and joins Bear Creek west of the Site. Parts of the Site also drain to the Rogue Valley Sewer Services (RVSS) system of ditches and storm drains. The locations of all of these ditches and storm drains off-Site are not well mapped, but ultimately discharge to Bear Creek within the City of Medford and the City of Central Point. RVSS is a regional, public organization providing stormwater collection and transmission services to the Site. Upton Slough, Lone Pine Creek, Bear Creek, and the RVSS system are part of the Middle Rogue River watershed.

Impairments

The Clean Water Act section 303(d) requires states to inventory and evaluate state waters (rivers, streams, lakes, etc.) and develop lists of waters that do not fully support beneficial uses. These inventories are known as *303(d) Lists* and characterize waters as fully supporting, impaired or threatened. Beneficial uses include drinking water, fisheries, and contact by people for recreation. Each beneficial use requires a specific water to meet a set of water quality standards. Water quality standards for Oregon are established in Oregon Administrative Rule (OAR) 340-041. Per Schedule A of the 1200-Z permit, the Site must not cause or contribute to a violation of water quality standards.

If a water is categorized as impaired, technology-based regulations and other required controls are not sufficient to support the beneficial uses established by the state. The law requires the state to develop Total Maximum Daily Loads (TMDLs) for each pollutant exceeding a water quality standard for impaired waters. The state allocates the loading capacity among the point and non-point sources that contribute pollutants to a water. Impaired waters without a TMDL require special monitoring per Schedule B of the 1200-Z permit. The specific monitoring requirements and concentrations are detailed in **Section 5.0** under Stormwater Monitoring Requirements. A summary of Receiving Water Impairments for waters receiving runoff from the Site is presented in **Table 1**.

Table 1 – Receiving Water Impairments

CONSTITUENT	IMPAIRMENT CATEGORY	ADDITIONAL MONITORING REQUIREMENT
RECEIVING WATER: BEAR CREEK		
Aquatic weeds or algae	Category 4a (impaired, TMDL approved)	No
Dissolved oxygen (October 15 – May 15)	Category 4a (impaired, TMDL approved)	No
pH	Category 4a (impaired, TMDL approved)	No
E.coli	Category 4a (impaired, TMDL approved)	No

CONSTITUENT	IMPAIRMENT CATEGORY	ADDITIONAL MONITORING REQUIREMENT
Arsenic	Category 5 (water quality limited, no TMDL)	No
Dissolved oxygen (year-round)	Category 5 (water quality limited, no TMDL)	No
Alkalinity	Category 2 (attaining some criteria/uses)	No
Ammonia	Category 2 (attaining some criteria/uses)	No
Cadmium	Category 2 (attaining some criteria/uses)	No
Chlorophyll a	Category 3 (insufficient data)	No
Chromium	Category 2 (attaining some criteria/uses)	No
Copper	Category 2 (attaining some criteria/uses)	No
Flow Modification	Category 4c (water quality limited, not a pollutant)	No
Habitat Modification	Category 4c (water quality limited, not a pollutant)	No
Lead	Category 2 (attaining some criteria/uses)	No
Nickel	Category 2 (attaining some criteria/uses)	No
Pesticides	Category 3 (insufficient data)	No
Phosphate Phosphorus	Category 3b (insufficient data, potential concern)	No
Phosphorus	Category 4a (impaired, TMDL approved)	No
Sedimentation	Category 3 (insufficient data)	No
Selenium	Category 2 (attaining some criteria/uses)	No

CONSTITUENT	IMPAIRMENT CATEGORY	ADDITIONAL MONITORING REQUIREMENT
Silver	Category 2 (attaining some criteria/uses)	No
Temperature	Category 4a (impaired, TMDL approved)	No
Zinc	Category 2 (attaining some criteria/uses)	No
RECEIVING WATER: LONE PINE CREEK		
pH	Category 5 (water quality limited, no TMDL)	No
Dissolved oxygen	Category 5 (water quality limited, no TMDL)	No
E. Coli	Category 4a (water quality limited, TMDL approved)	No
Temperature (Summer)	Category 4a (water quality limited, TMDL approved)	No
RECEIVING WATER: UPTON SLOUGH		
N/A	N/A	No

SITE DRAINAGE AND AIRPORT ACTIVITIES

The Site has been broken into six drainage basins based upon review of topographic maps. The basin features are illustrated in the following maps:

Figure 2 Site Map (North) Airport Activities
Figure 3 Site Map (South) Airport Activities
Figure 4 Site Map (North) Drainage and Storm Sewer
Figure 5 Site Map (South) Drainage and Storm Sewer
Figure 6 Site Map (North) Sub-basin Drainage and Outfalls
Figure 7 Site Map (South) Sub-basin Drainage and Outfalls

Each basin is described below by outlining the drainage characteristics, the activities within each basin, and the potential pollutants from these activities that could impact stormwater quality. A summary of the approximate sizes of the basins and sub-basins feeding the Outfalls is presented in **Table 2**, including the approximate sizes of impervious areas. A list of Potential Site Stormwater

Pollutants for each basin is summarized in **Table 3**, including the industrial activities occurring in each basin and potential pollutants related to those activities.

Table 2 – Basin and Sub-Basin Area Summary

Basin or Sub-Basin Number [1]	Outfall Number	Total Area or Total Sub-Basin Area Contributing to Outfall (acres)	Impervious Area or Area Contributing to Outfall (acres)	Percent Impervious Area
1	**N/A**	272.9	27.6	10
2	**N/A**	150.9	41.2	27
3	**N/A**	64.4	35.6	55
4	**N/A**	333.6	141.4	42
5	**N/A**	47.2	0.0	0
6	**N/A**	40.4	0.0	0
Total Site	**N/A**	909.4	245.8	27
1-006	**006**	58.4	9.7	17
1-013	**013**	56.2	14.4	26
2-002	**002**	24.2	20.9	86
2-004	**004**	10.6	10.1	96
2-008	**008**	0.47	0.43	91
2-007	**007**	0.32	0.03	9
2-010	**010**	2.2	1.5	70
2-012	**012**	0.95	0.82	87
2-014	**014**	9.8	4.7	48
3-001	**001**	18.2	16.0	88

Basin or Sub-Basin Number [1]	Outfall Number	Total Area or Total Sub-Basin Area Contributing to Outfall (acres)	Impervious Area or Area Contributing to Outfall (acres)	Percent Impervious Area
3-003	**003**	5.5	4.1	74
3-009	**009**	3.2	1.9	60
3-091	**091**	6.8	4.8	71
3-092	**092**	5.0	3.6	71
3-011	**011**	8.6	5.8	68
4-005	**005**	336.5	139.8	42

N/A = Not applicable

[1] = Nomenclature starts with Basin Number, followed by Sub-Basin Number defined by Outfall Number

Table 3 – Potential Site Stormwater Pollutants

BASIN NUMBER(S)	INDUSTRIAL ACTIVITIES	POTENTIAL POLLUTANT(S)
1, 2, 3, 4	Aircraft and ground vehicle fueling Fuel storage Aircraft and ground vehicle maintenance outdoors Runways, taxiways, aprons, service roads	Petroleum and other hydrocarbons
3, 4	Aircraft deicing operations	Propylene glycol
1, 2, 3, 4	Deicing of sidewalks, runway, & taxiways as needed	Sodium formate/acetate
1, 2, 3, 4	Vegetation control (non-industrial activity)	Glyphosate (Roundup brand)
2, 4	Aircraft and ground vehicle washing outdoors	Detergents and solvents

BASIN NUMBER(S)	INDUSTRIAL ACTIVITIES	POTENTIAL POLLUTANT(S)
2, 3, 4	Aircraft and ground vehicle maintenance outdoors	Metals
4	Material transfer (USFS tanker base)	PHOS-CHEK brand fire retardant
2, 4	Material transfer - at Aircraft Rescue and Fire Fighting Station (ARFF Station)	Nitrogen
2, 4	Material transfer – at ARFF Station	Aqueous film forming foam
2, 3	Material transfer (aircraft wastewater holding tanks, dump station)	Untreated domestic wastewater

BASIN 1

Basin 1 is located along the eastern property line of the Site. The basin is approximately 273 acres in size, and about 28 acres (10%) of this area is impervious. Much of the pervious area that exists is currently grassy fields. Runoff in Basin 1 generally drains overland from south to north and through a series of underground pipes and roadside ditches. Stormwater runoff from Basin 1 discharges at Outfalls 006 and 013.

Outfall 006. Stormwater collected in underground pipes from the airport runway and taxiway discharges at Outfall 006 to a vegetated swale which joins Upton Slough. Outfall 006 is a monitoring point.

Industrial activities:

- Runways
- Taxiways
- Service roads

Additional development:

- Aircraft hangar
- Equipment storage building

Outfall 013. Stormwater collected in underground pipes from the airport apron, taxiway and buildings housing airport storage, Immigration and Customs Enforcement (ICE), and the Free Trade Zone (FTZ) discharges at Outfall 013 through roadside ditches to Upton Slough. Outfall 013 is a monitoring point.

Industrial activities:

- Runways
- Taxiways
- Service roads

Additional development:

- Site storage building
- FTZ building
- ICE building

BASIN 2

Basin 2 is located along the southern-southwestern property lines of the Site. The basin is approximately 151 acres in size, and about 41 acres (27%) of this area is impervious. Runoff from Basin 2 generally drains from north to south overland and through a series of underground pipes and discharges to Lone Pine Creek east of Biddle Road at Outfalls 002, 004, 007, 008, 012, and 014. Stormwater collected from the rental car facility passes through a stormwater detention pond and discharges at Outfall 010 near Lawnsdale Road and into the RVSS system of ditches and storm drains.

Outfall 002. Stormwater collected in underground pipes from the airport apron, terminal building roof, terminal parking lot, ARFF Station, and the FedEx building discharges at Outfall 002 to a mitigation wetland. Two oil/water separators treat runoff before it reaches Outfall 002. One is located south of the terminal building and treats runoff from the airport cargo apron before it joins the rest of the basin's runoff. Normal flows discharge from the flow control structure to Lone Pine Creek through an oil/water separator. Higher flows are diverted into an adjacent grass detention pond during heavy rain events. Outfall 002 is a monitoring point.

Industrial activities:

- Taxiways
- Service roads
- Aircraft and ground vehicle fueling
- Fuel storage
- Aircraft and ground vehicle outside maintenance (aircraft parking apron, ARFF Station)
- Ground vehicle outside washing (FedEx, ARFF Station)

Additional development:

- Terminal building
- Terminal parking lot

Outfalls 004 and 008. Stormwater collected in underground pipes from parking areas as well as the roofs of the cargo buildings and snow removal equipment storage buildings passes through a stormwater detention pond and discharges at Outfalls 004 and 008 via mitigation wetlands to Lone Pine Creek. The South Drainage and Storm Sewer Map (Figure 5) depicts that Outfalls 004 and 008 drain similar activities, but both outfalls are monitored. Outfalls 004 and 008 are monitoring points.

Industrial activities:

- Taxiways
- Service roads
- Ground vehicle maintenance (snow removal equipment building)
- Ground vehicle outside washing (snow removal equipment building)

Additional development:

- Cargo buildings
- Vehicle parking lot

Outfalls 007 and 012. Stormwater collected from street drains on Bullock Road and the intersection of Bullock Road and Terminal Spur Road is carried by underground pipes and discharges to Lone Pine Creek at Outfalls 007 and 012. Because no industrial activities take place in the areas contributing stormwater flow to Outfalls 007 and 012, they are not

monitoring points.

Industrial activities:

- None

Additional development:

- Access roads

Outfall 014. Stormwater collected in underground pipes from portions of the taxiway and airport apron discharges at Outfall 014 to Lone Pine Creek. Outfall 014 is a monitoring point.

Industrial activities:

- Taxiway
- Site apron

Additional development:

- None

Outfall 010. Stormwater collected from the rental car facility roof and parking areas passes through a stormwater detention pond and discharges from Outfall 010 to Lawnsdale Road and the RVSS system of ditches and storm drains. Outfall 010 is a monitoring point.

Industrial activities:

- Ground vehicle fueling (car rental facility)

Additional development:

- Vehicle parking lot

BASIN 3

As shown in the (South) Airport Activities Map (**Figure 3**), Basin 3 is along the western property line of the Site and lies between Basin 4 to the north and Basin 2 to the south. The basin is approximately 64 acres in size, and about 36 acres (56%) of this area is impervious. Basin 3 discharges at Biddle Road at Outfalls 001, 009 and 011. Outfalls 003, 091, and 092 discharge as described below.

Outfall 001. Stormwater collected in underground pipes discharges at Outfall 001 to Biddle Road and into the RVSS system of ditches and storm drains. Activities and structures in the area include a portion of the airport apron, a portion of the taxiways, the control tower, the administration building, fixed base operator (FBO) buildings and operations. An oil/water separator treats runoff from the taxiway system, aircraft parking, aircraft fueling, and fuel storage tanks, but not the building roofs. Outfall 001 is a monitoring point.

Industrial activities:

- Taxiways
- Service roads
- Aircraft fueling
- Fuel storage
- Outside aircraft maintenance on the aircraft parking apron
- Aircraft deicing
- Material transfer of aircraft wastewater holding tanks and deicing chemicals
- Taxiways

Additional development:

- FBO buildings
- Air traffic control tower
- Site administration building
- Mercy Flights Emergency Response Center

Outfall 003. Stormwater is collected in underground pipes from a portion of the airport apron, hangar, and other aircraft buildings and passes through an oil/water separator and discharges to the RVSS at Milligan Way north of the Superior Aircraft Maintenance driveway at Outfall 003. Outfall 003 is a

monitoring point.

Industrial activities:

- Outside aircraft maintenance (aircraft parking apron)

Additional development:

- Site buildings
- Vehicle parking

Outfall 009. Stormwater is collected in underground pipes from the former crosswind runway, the Erickson Aviation building, the building parking lot, and a large, paved area between the building and runway that is currently used to store mechanical equipment and discharges to Outfall 009. The Erickson Aviation building roof was identified as a potential source of zinc as part of a Tier 2 corrective action in 2016. The roof has been coated to prevent contact with stormwater. Additionally, runoff from a portion of the basin, including the Erickson Aviation building roof, is routed through a newly constructed vegetated swale and discharges just south of the intersection between Cirrus Drive and Milligan Way. The roof coating and vegetated swale were constructed in response to a Tier 1 Corrective Action triggered by the exceedance of zinc benchmarks. Outfall 009 is a monitoring point.

Industrial activities:

- Taxiways
- Service roads
- Aircraft fueling
- Fuel storage
- Aircraft deicing
- Outside aircraft maintenance (on aircraft parking apron)

Additional development:

- Erickson Aviation building

Outfall 091. Stormwater runoff is collected from the access roads adjacent to Milligan Way into a catch basin in the median of the access roads. Outfall 091 was formerly identified as Outfall 009.1 in

Discharge Monitoring Reports (DMRs), but the former nomenclature is not consistent with new permit requirements for outfall naming, allowing only three digits. Outfall 091 is a monitoring point.

Industrial activities:

- Taxiways
- Service roads
- Aircraft deicing

Additional development:

- None

Outfall 092. Stormwater runoff is collected from the aircraft taxiway adjacent to Milligan Way and from Milligan Way itself into a catch basin between the access road and the taxiway. Outfall 092 was formerly identified as Outfall 009.2 in DMRs, but the former nomenclature is not consistent with new permit requirements for outfall naming, allowing only three digits. Outfall 092 is a monitoring point.

Industrial activities:

- Taxiways
- Aircraft deicing

Outfall 011. The Terminal Parking Lot collects stormwater runoff in two detention ponds then drains through a vegetated swale to the RVSS system of ditches and storm drains at Biddle Road from Outfall 011. Outfall 011 is a monitoring point.

Industrial activities:

- None

Additional development:

- Terminal parking lot

BASIN 4

Basin 4 is located along the northern-northwestern property lines of the Site. The basin is approximately 334 acres in size, and about 141 acres (42%) of the area is impervious. Drainage in the basin flows from south to north, eventually discharging into Upton Slough. Stormwater discharges from this basin at Outfall 005.

Outfall 005. Runoff collected in underground pipes from a portion of the runway and taxiway system, general aviation aircraft parking and hangars, two FBOs (Jet Center Medford and Million Air), Civil Air Patrol, Erickson Aviation, aircraft fueling, fuel storage tanks, several aircraft storage hangar buildings, and the United States Forest Service (USFS) tanker base discharges to a ditch running parallel to taxiway A. Two stormwater detention facilities drain these areas. The USFS fire retardant transfer area drains to a lined retention pond east of the tanker base. Stormwater from the northeast portion of the runway and taxiway collects in underground pipes and discharges to a ditch north of taxiway A. Runoff flows through ditches until it leaves the basin at the northwest corner at Outfall 005. Outfall 005 is a monitoring point.

Industrial activities:

- Runways
- Taxiways
- Service roads
- Aircraft fueling
- Fuel storage
- Aircraft outside washing
- Aircraft outside maintenance
- Material transfer of fire retardant

Additional development:

- FBO buildings
- Erickson Aviation building
- Aircraft hangars

BASINS 5 AND 6

Basins 5 and 6 consist of approximately 47 and 40 acres, respectively, and are entirely pervious. These basins are part of the runway protection zone and are mostly undeveloped. Neither basin is connected to the Site's drainage system. Runoff from Basin 5 flows overland to a grassy ditch and is collected by the RVSS system of ditches and storm drains. Runoff from Basin 6 flows overland to Upton Slough. There are no outfalls associated with either basin.

Industrial activities:

- None

Additional development:

- Access roads

4.0 SITE CONTROLS

This section describes the Site controls used to reduce the contribution of pollutants from the Site to stormwater discharges.

NARRATIVE TECHNOLOGY-BASED EFFLUENT LIMITS

EXPOSURE MINIMIZATION

Permit Requirement. Minimize exposure of manufacturing, processing, material storage areas, including loading and unloading, disposal, cleaning, maintenance and fixed fueling areas to rain, snow, snowmelt and runoff.

Site Activities and Controls

Aircraft and ground vehicle fueling:

- Aircraft fuel loading is done using closed hose transfer connections.
- Spill cleanup kits are stored near fueling points. Spills are immediately contained by absorption materials. Spill kits at the Site contain adsorbent pads, kitty litter, booms, peat moss, storm drain plugs, and/or storm drain covers.

Fuel storage:

- Fuel loading into storage tanks is done using closed hose transfer connections.
- Spill cleanup kits are stored near fueling points. Spills are immediately contained by absorption materials.
- All five fuel farms are enclosed within chain link fences and have emergency shut off valves.
- Fuel is stored in double-walled tanks to provide secondary containment of contents.

Aircraft and ground vehicle outside maintenance:

- Most aircraft maintenance and repair activities take place in hangars.
- Firefighting and snow removal vehicles and equipment are stored and maintained inside buildings.
- Small spills of lubricating oils, hydraulic oils, and degreasers that may occur when maintaining

aircraft and vehicles are cleaned up with absorbent materials and wastes are properly disposed of. Municipal waste is removed from the Site every day of the week except Sunday and no hazardous waste is generated.

- All indoor maintenance facilities have floor drains connected to the sanitary sewer collection system.

Material Transfer:

- The aircraft wastewater holding tank dump station is contained within a small concrete berm.
- Spill kits are located on the wastewater transport vehicles and at the wastewater dump station. Spills are immediately contained and cleaned up with absorbent spill cleanup materials.

Chemical Storage Areas:

- Engine fluids, solvents, and degreasers are stored inside hangars. Hangar floor drains discharge to the sanitary sewer system.
- Aircraft deicing solution (propylene glycol) is stored in a shed with walls on two sides. The tanks are located on concrete pavement graded and curbed to contain spills. The storage shed has floor drains that connect to the sanitary sewer system.
- Pavement deicing granules (sodium acetate) are stored in a dry, enclosed room in the snow removal equipment building.
- The herbicide brand Roundup is stored in small quantities (less than 10 gallons) in the snow removal equipment building.

Building and Grounds Maintenance:

- The Site uses the herbicide brand Roundup to control vegetation. The product is applied by a licensed pesticide applicator in accordance with its label and is stored indoors.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

OIL AND GREASE

Permit Requirement. Employ oil/water separators, booms, skimmers and/or other methods to eliminate or minimize oil and grease contamination in stormwater discharges.

Site Activities and Controls

Aircraft, Ground Vehicle outside Maintenance and Aircraft and Ground Vehicle Fueling:

Oil-Water Separators. The seven oil/water separators are deployed to remove petroleum products from stormwater. Those in use are shown on **Figure 4** and **Figure 5**:

- Three oil/water separators are deployed in Basin 2. One treats runoff from the airport cargo apron before it joins runoff from the rest of the basin. The second treats runoff immediately before it discharges from Outfall 002, and the third treats runoff at the rental car fueling and washing facility before it discharges to Outfall 010.
- Three oil/water separators are deployed in Basin 3. One treats runoff from a portion of the airport passenger apron before it joins runoff from the rest of the basin and discharges from Outfall 001. The second treats runoff from the airport apron west of Taxiway B before it discharges from Outfall 003, and the third treats runoff from the Million Air Fuel Farm before it discharges into a stormwater detention basin and ultimately Outfall 092.
- A single oil/water separator is deployed in Basin 4. This oil/water separator treats runoff from a portion of the airport passenger apron and a portion of Taxiway A prior to joining runoff from the rest of the basin and discharging from Outfall 005.

Fuel Storage Areas and Runways, Taxiways, and Service Roads:

- The taxiways and runways are adjacent to grassy areas and vegetated ditches that provide a degree of filtration of stormwater prior to entering catch basins.

- Catch basins. In select areas, the Site employs Lynch-style catch basins with sediment traps and oil trapping baffles on the outlet pipe as an additional treatment method to reduce oil, grease, and sediment levels in stormwater runoff. These catch basins provide treatment to stormwater flows in areas of the Site that do not flow through oil/water separators.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

WASTE CHEMICALS AND MATERIALS DISPOSAL

Permit Requirement. Recycle or properly dispose of wastes to eliminate or minimize exposure of pollutants to stormwater. Cover all waste contained in bins or dumpsters where there is a potential for drainage of stormwater through the waste to prevent exposure of stormwater to these pollutants. Acceptable covers include storage of bins or dumpsters under roofed areas and/or the use of lids or temporary covers such as tarps.

Site Activities and Controls

Material Transfer:

- The aircraft wastewater holding tank dump station is contained within a small concrete berm. The dump station discharges to the sanitary sewer.
- Spill kits are located on the wastewater transport vehicles and at the wastewater dump station. Spills are immediately contained and cleaned up with absorbent spill cleanup materials.
- Fire retardant from the USFS tanker base is collected in a retention pond and recycled.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

EROSION AND SEDIMENT CONTROL

Permit Requirement. Stabilize exposed areas and contain runoff using structural and nonstructural controls to minimize erosion of soil at the Site and sedimentation. Employ erosion control methods, such as vegetating exposed areas, graveling or paving to minimize erosion of soil at the Site. Employ sediment control methods, such as detention facilities, vegetated filter strips, bioswales, flow velocity dissipation devices or other permanent erosion or sediment controls to minimize sediment loads in

stormwater discharges. For activities that involve land disturbance, the Site must contact the local municipality to determine if there are other applicable requirements related to stormwater control.

Site Activities and Controls

All Industrial Activity:

- The Site grounds have surfaces of asphalt, concrete, gravel, or natural grassy vegetation to control erosion and sediment transport.
- Bare soil and stockpiles are not typically present during day-to-day operations.
- The Site frequently sweeps paved surfaces, which reduces sediment entering the storm system.

Construction:

- Appropriate erosion and sediment control best management practices (BMPs) are employed during improvement projects to minimize disturbance and the release of sediment into the storm system.
- Construction activities over 1 acre will operate under a 1200-C series stormwater construction permit. All construction activities on-Site will employ appropriate erosion and sediment control BMPs.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

DEBRIS CONTROL

Permit Requirement. Employ screens, booms, settling ponds, or other methods to eliminate or minimize waste, garbage and floatable debris in stormwater discharges and ensure that this debris is not discharged to receiving waters.

Site Activities and Controls

All Industrial Activity:

- All dumpsters at the Site are covered.
- The Site frequently sweeps paved areas which reduces debris entering the stormwater collection system.
- Catch basins, vegetated swales, and detention ponds are used to reduce the volume of debris in stormwater discharges and are cleaned as needed based upon regular inspections.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

DUST GENERATION AND VEHICLE TRACKING OF INDUSTRIAL MATERIALS

Permit Requirement. Minimize generation of fugitive dust and tracking on exposed surfaces within and between operational areas and off-Site of soil, particulate, and raw, final, or waste materials.

Site Activities and Controls

All Industrial Activity:

- The Site does not produce dust from smokestacks or vents and does not stockpile raw materials.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

HOUSEKEEPING

Permit Requirement. Routinely clean all exposed areas that may contribute pollutants to stormwater

with measures such as daily sweeping, litter pick-up, keeping materials orderly and labeled, prompt clean-up of spills and leaks, proper maintenance of vehicles and storing materials in appropriate containers.

Site Activities and Controls

All Industrial Activities:

- The existing oil/water separators are inspected and cleaned annually to provide the maximum reduction of oil and grease in the flow.
- Catch basins are inspected regularly and cleaned as needed to reduce oil, grease, sediment, and debris in the stormwater runoff.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

SPILL PREVENTION AND RESPONSE PROCEDURE

Permit Requirement. Minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop and implement plans that include methods for spill prevention and clean-up and notification procedures. Properly notify Site leadership and agencies in the event of a spill as appropriate.

Site Activities and Controls

- Aircraft, Ground Vehicle outside Maintenance and Aircraft and Ground Vehicle Fueling
- Spill Prevention

All Site personnel who handle fuel or chemical products are responsible for spill prevention. Spill Response Actions from the Site Spill Prevention Countermeasures and Control (SPCC) Plan are included in **Appendix B**. The SPCC Plan covers safe operating procedures to reduce the likelihood of a spill while handling, storing or using significant materials and consists of the following procedures:

1. Directs personnel to read and become familiar with the SPCC Plan.
2. Provides employee training program outlining spill prevention practices.
3. Provides chemical and fuel absorbent material and have it readily available at all chemical and fuel handling and transfer operations. Do not disperse with water.
4. During transportation of chemicals and fuels, personnel should be alert to possible container or tanker truck damage due to unstable loading or collision with obstacles.
5. When transferring fuel or chemical products, all connections and transfer points should be carefully monitored for leaks.
6. Tanks receiving fuel should be gauged prior to filling to ensure adequate space in the tank for the product being delivered. Adequate headspace at the top of the tank should be left to allow for product expansion.
7. Tanks, containers and vehicles receiving fuel and oil should be carefully checked prior to and during delivery to ensure that there are no leaks or open drain valves.
8. Storm drains and floor drains in the immediate vicinity of the tank being filled should be covered with a mat, plug or other suitable device during filling operations to prevent the flow of product into the drain in case of leak or spill. Transferring materials in the vicinity of storm drains should be avoided.
9. All waste oil should be deposited in designated waste oil collection containers or tanks for collection. No waste oil or oily wastes should be deposited in the sanitary or storm sewer system or trash containers or dumpsters.
10. Containers of five gallons or more should be stored in an area that will not drain to a sanitary sewer or stormwater drain.
11. Containers of fuel or chemicals should be stored in a manner to prevent damage from stacking or falling, equipment and personnel handling, and impact by vehicles. Containers should be stored to permit access to each item without need to reposition other containers.
12. Container storage areas should be maintained in a clean and orderly manner, with absorbent material and clean-up gear available in the immediate area.
13. Maintain a minimal inventory of required chemicals to reduce the magnitude of potential spills and limit waste generation.
14. Provide safeguards against accidental releases:

    A. Overflow protection devices to warn operator or automatic shutdown transfer pump.

B. Protective guards around tanks and piping to prevent damage from vehicles or forklifts.
C. Legible container labeling.
D. Restricted access to chemical and fuel storage areas.

15. In event of a spill, the appropriate agencies shall be notified based on the nature and volume of the release. These may include the Oregon Emergency Response System (OERS), the National Response Center and NOTAM (Notice to Airman) inthe event the runway is closed. Instructions and telephone numbers have been posted in a conspicuous area to describe how to report spills to the appropriate agencies and contact information appears below in Table 4 – Spill Response Notifications.
16. If a spill occurs, clean up should begin immediately. No emulsifier or dispersant shall be used. If the spill reaches sanitary or storm sewers or surface waters, local and state agencies should be notified immediately.
17. Large spills or leaks should be reported immediately to the Spill Response Team of the Site ARFF Department.

Table 4 – Spill Response Notifications

SPILL RESPONSE NOTIFICATIONS	
AGENCY	**PHONE**
Aircraft Rescue and Firefighting Department (ARFF Department)	911
Site Leadership	541-776-7222
USCG National Response Center	800-424-8802
Oregon Emergency Response Center	800-452-0311
Notice to Airman (NOTAM)	877-487-6867

Spill Response Procedures

Spill response procedures are coordinated by the Rogue Valley International-Medford ARRF Department. ARRF department personnel are certified and recognized by DEQ to contain and clean-up hazardous materials. They are on-call 24 hours a day and located on-Site. Relevant Spill Response Actions from the Site SPCC Plan of the ARRF Department's operating instructions for

hazardous materials spill response are included in **Appendix B**. The complete response procedure for the Site is on file at the Site ARFF Station.

Tenant/Operator Responsibilities

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

PREVENTIVE MAINTENANCE

Permit Requirement. Regularly inspect, clean, maintain, and repair all industrial equipment and systems and materials handling and storage areas that are exposed to stormwater to avoid situations that may result in leaks, spills, and other releases of pollutants discharged to receiving waters. Clean, maintain and repair all control measures, including stormwater structures, catch basins, and treatment facilities to ensure effective operation as designed and in a manner that prevents the discharge of pollution.

Site Characteristics and Activities

Maintenance of the Site storm system will be conducted and recorded in accordance with the inspections and maintenance schedules described Stormwater System Maintenance Action Checklist which is included as **Appendix C**.

Inspections of stormwater controls are documented using the Monthly Stormwater Inspection Form found in **Appendix D**. Information to be documented includes:

1. The inspection date and time.
2. The name(s) of inspector(s).
3. Control measures and treatment facilities needing cleaning, replacement, maintenance, reconditioning or repair.
4. The condition of the drainage and conveyance system and need for maintenance.
5. Previously unidentified sources of pollutants.
6. Stormwater discharge visual observations, a Tier 1 report is required if visual observation shows evidence of stormwater pollution.
7. Nature of the discharge; whether snow or rain.
8. Any corrective action, source control, or maintenance taken or scheduled to remedy

problems found.

Tenant/Operator Responsibilities

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

EMPLOYEE EDUCATION

Permit Requirement. The permit requires the Site to develop and maintain an employee orientation and education program to inform personnel on the pertinent components and goals of this permit and the SWPCP. It is recommended that the following topics are discussed:

- Familiarity with the SWPCP
- Spill prevention and response procedures
- Fueling procedures
- Oil, chemical and waste handling procedures
- Good housekeeping practices

Those employees with direct stormwater duties will also be trained in the stormwater monitoring, inspection, reporting, and documentation requirements identified in the 1200-Z permit.

All Site employees receive training in this plan and the spill response procedures outlined in the Site's SPCC Plan within 30 days of hire or change in duties, and annually thereafter. Copies of the SWPCP and the SPCC Plan are available in the office for all employees working at the Site.

Stormwater protection training is accomplished through classroom training.

Tenant/Operator Responsibilities

The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

NON-STORMWATER DISCHARGES

Permit Requirement. Prevent non-stormwater discharges which are not authorized by a NPDES

permit.

Site Characteristics and Activities:

Non-stormwater discharges that are not authorized by a NPDES permit are prohibited by Site policy. The following authorized non-stormwater discharges are applicable to the Site:

- Discharges from emergency or unplanned fire-fighting activities.
- Landscape watering and irrigation drainage.
- Exterior vehicle wash water that does not use hot water or detergent; restricted to less than 8 per week.
- Pavement wash water that does not use hot water, detergent or other cleaning products, no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed), and surfaces are swept before washing.
- Routine external building wash down that does not use hot water, detergent or other cleaning products.

The car rental facility has an automatic car wash and bays for each rental agency to clean vehicles. The wash water from this facility discharges to the sanitary sewer under a pre-treatment permit from the City of Medford, permit number 14-R4-1079.

Tenant/Operator Responsibilities

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

SECTOR-SPECIFIC EFFLUENT LIMITS: SECTOR S – AIR TRANSPORTATION

The Site is subject to sector-specific requirements in addition to the general requirements contained in Schedules A and B. The Site falls under Sector S – Air Transportation, making the following additional technology-based effluent limits applicable. Additional information is available in the relevant sections of the permit.

ADDITIONAL TECHNOLOGY-BASED EFFLUENT LIMITS

The additional technology-based limits from Sector S requirements are BMPs that fall within one of

two categories: good housekeeping measures and the deicing season, as described below.

GOOD HOUSEKEEPING MEASURES

Aircraft, Ground Vehicle and Equipment Maintenance Areas

Permit Requirement. Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangars).

Site Characteristics and Activities. Maintenance activities primarily take place in hangars or other buildings. Controls for outside maintenances are covered by activities under the narrative technology-based effluent limits to minimize exposure and for oil and grease.

Aircraft, Ground Vehicle and Equipment Cleaning Areas

Permit Requirement. Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of stormwater from cleaning areas.

Site Characteristics and Activities. Aircraft are cleaned at wash racks located near the T-hangars in Basin 4. Ground vehicles are cleaned by FedEx and the ARRF Department at designated areas in Basin 2. Controls in these areas are covered by activities under the narrative technology-based effluent limits to minimize exposure and for oil and grease.

Aircraft, Ground Vehicle and Equipment Storage Areas

Permit Requirement. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of stormwater from these storage areas.

Site Characteristics and Activities. Aircraft, ground vehicles and equipment to be maintained are stored indoors in hangars or buildings or outdoors in designated areas. Outdoor areas are inspected regularly, and any problems identified are documented and tracked until corrected.

Material Storage Areas

Permit Requirement. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., "Used Oil," "Contaminated Jet A Fuel," etc.). Minimize contamination of stormwater from these areas.

Site Characteristics and Activities. Chemical products other than fuel are primarily stored in aircraft hangars and other buildings. Controls meeting this requirement are covered by activities under the narrative technology-based effluent limits to minimize exposure and for housekeeping.

Airport Fuel System and Fueling Areas

Permit Requirement. Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system.

Site Characteristics and Activities. Fuel is stored in double-walled tanks and fueling operations are conducted using closed hose systems with spill kits stored nearby. All fuel areas are also surrounded by chain link security fencing. this requirement is covered by activities under the narrative technology-based effluent limits to minimize exposure and for oil and grease.

Source Reduction of Urea and Glycol-Based Deicing Chemical Products

Permit Requirement. Minimize, and where feasible eliminate, the use of urea and glycol-based deicing chemicals, to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact.

Source reduction, with respect to these additional technology-based effluent limits, is comprised of both (a) runway deicing operations and (b) aircraft deicing operations.

(a) Runway Deicing Operations

Permit Requirement. Minimize the discharge of pollutants in stormwater from runway deicing operations by implementing source reduction control measures when feasible, accommodating

considerations of safety, space, operational constraints, and flight considerations.

Site Characteristics and Activities. The Site does use runway and taxiway deicer (sodium acetate and/or sodium formate/acetate blend) on an infrequent, as-needed basis. No urea is currently used for deicing pavement. The Site uses sodium acetate to deice sidewalks and walkways in passenger areas. Glycol-based deicers are minimized to the extent possible while balancing the needs of safety. No other controls are implemented.

(b) Aircraft Deicing Operations

Permit Requirement. Minimize the discharge of pollutants in stormwater from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. Determine whether alternatives to glycol and whether containment measures for applied chemicals are feasible.

Site Characteristics and Activities. The Site conducts aircraft deicing in areas adjacent to the gate parking positions. Employees who conduct deicing receive training in environmental requirements and proper application of deicing products. Employee stormwater training includes spill prevention and spill response procedures.

Management of Stormwater

Permit Requirement. Minimize the discharge of pollutants in stormwater from the Site from deicing chemicals for both aircraft deicing and runway deicing operations.

Site Characteristics and Activities. The Site conducts aircraft deicing in areas adjacent to the gate parking positions. Employees who conduct deicing receive training in environmental requirements and proper application of deicing products. Employee stormwater training includes spill prevention and spill response procedures. The Site does use runway and taxiway deicer (sodium acetate and/or sodium formate/acetate blend) on an infrequent, as-needed basis.

Clear Ice Deicing - Applying Deicing Fluids During Non-Precipitation Events

Permit Requirement. Implement control measures to prevent unauthorized discharge of pollutants or to minimize the discharge of pollutants from deicing fluids in later stormwater discharges.

Site Characteristics and Activities. The Site conducts aircraft deicing in areas adjacent to the gate parking positions. Employees who conduct deicing receive training in environmental requirements and proper application of deicing products. Employee stormwater training includes spill prevention and spill response procedures. The Site does use runway and taxiway deicer (sodium acetate and/or sodium formate/acetate blend) on an infrequent, as-needed basis.

DEICING SEASON

Permit Requirement. Determine the seasonal timeframe (e.g., December – February, October – March, etc.) during which deicing activities typically occur at the Site. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season.

Site Characteristics and Activities. The Site has determined its seasonal timeframe for deicing activities typically occur during the period October through April. The Site will inspect and monitor the relevant outfalls with emphasis during this window of time.

ADDITIONAL SWPCP REQUIREMENTS

Permit Requirement. Schedule E, Section S.4.1 defines four additional sector-specific requirements as described below:

Drainage Area Site Map

Permit Requirement. Document in the SWPCP the following areas of the Site and indicate whether activities occurring there may be exposed to precipitation/stormwater. These Site features or activities include aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

Site Characteristics and Activities. Information on the Site features and activities listed above is presented in this plan in **Section 3.0** and illustrated on **Figure 3** and **Figure 4**.

Potential Pollutant Sources

Permit Requirement. In the inventory of exposed materials in the SWPCP, describe the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations.

Site Characteristics and Activities. This information is provided in **Table 3**. The Site does use runway and taxiway deicer (sodium acetate and/or sodium formate/acetate blend) on an infrequent, as-needed basis.

Vehicle and Equipment Washwater Requirements

Permit Requirement. If applicable, in the SWPCP attach or reference a copy of the NPDES permit issued for discharging vehicle/equipment washwater.

Site Characteristics and Activities. The Site has not been issued a washwater discharge permit.

Documentation of Control Measures Used for Management of Stormwater

Permit Requirement. Document in the SWPCP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

Site Characteristics and Activities. The Site's stormwater control measures are described within its SWPCP. If additional stormwater BMPs are deemed necessary, the DEQ Industrial Stormwater Best Management Practices Manual is an available resource that describes BMPs to prevent pollution in stormwater discharges. This manual can be accessed on DEQ's website at:

https://oregon.gov/deq/filterdocs/IndBMP021413.pdf

STORMWATER MANAGEMENT - CONTINUOUS IMPROVEMENT

In 2021 the Site embarked on a project to significantly improve stormwater quality in Basin 4 using passive methods including stormwater detention and swale infiltration.

The following narrative is excerpted from a project summary provided by Mr. Josh Lekkerkerker, P.E. of Precision Approach Engineering, Inc. in September 2021.

The Site contains approximately 930 acres of land. Approximately 243 acres (or 26% of the total airport property) have been developed with impervious surfaces. Of the total impervious airport surfaces, approximately 55 acres (23% of total impervious area) currently have a stormwater facility designed to RVSS stormwater design manual standards (adopted by the City of Medford) for detention and treatment current at the time of construction. Stormwater runoff from the remaining 188 acres of impervious airport surfaces does not flow through facilities specifically designed to restrict offsite flow rates and filtrate typical pollutants found in stormwater runoff. Of the untreated impervious surfaces, approximately 139 acres are contained in Airport Basin 4 which outlets via a drainage ditch into Upton Creek at the north end of the airport.

During the summer of 2021, the airport has constructed a stormwater facility for Basin 4 designed to exceed City of Medford standards. Although the City typically requires stormwater facility design for only new or reconstructed impervious surfaces, the design for the Basin 4 stormwater facility includes all existing and planned future impervious surfaces. As a result, stormwater runoff from approximately 139 acres of existing impervious surfaces has been collected into a facility to restrict peak flows below predeveloped rates and filter pollutants. The project has dramatically increased stormwater management on total airport impervious surface areas from approximately 23% to 80%. In addition, the water quality design storm for the newly constructed Basin 4 facility exceeds the minimum storm outlined in the RVSS stormwater design manual. The RVSS design manual outlines a facility design to treat 1.0 inch of rainfall in a 24-hr period, however, the Basin 4 facility design collects 50% of the 2-yr storm, or 1.17 inches in a 24-hr period. The stormwater treatment facility removes pollutants in approximately 33% more flow than the current City standard.

At the time of this plan revision, construction of the project is continuing and is expected to be substantially complete by the end of October 2021.

AEC personnel will visit the Site in 2022 after the new stormwater detention basin has been completed to observe discharge at the Site's Outfalls during a large precipitation event. Based on observations made during this Site visit, the SWPCP will be updated and submitted to DEQ in 2022, if warranted.

5.0 STORMWATER MONITORING REQUIREMENTS

Runoff from the Site eventually flows to Bear Creek, Upton Slough and Lone Pine Creek. The Site's monitoring program helps ensure these water resources are protected in accordance with Site's permit.

MONITORING REQUIREMENTS

Table 5, **Table 6**, **Table 7**, and **Table 8** summarize the required stormwater monitoring at designated outfalls to meet the requirements for analysis based upon regional, industrial activities (SIC code 4581), technology-based effluent limits, and receiving water impairments. The tables list specific pollutants, benchmarks, units, outfalls to be monitored, and monitoring frequencies for the Site. Reference information for these tables is provided in DEQ's Letter for Reissuance of NPDES Permit No. 1200-Z, which is included as **Appendix A**.

Regional Monitoring Requirements. Regional requirements are based on the Site's location in the stormwater Coastal Georegion and apply to all Site monitoring points as shown in Table 5 – Coastal Georegion Monitoring Requirements.

Table 5 – Coastal Georegion Monitoring Requirements

POLLUTANT	BENCHMARK VALUE	UNIT	OUTFALLS / MONITORING POINTS	FREQUENCY
Total copper	0.017	mg/L	All but 007, 012	Four times per year [1]
Total Lead	0.039	mg/L	All but 007, 012	Four times per year [1]
Total Zinc	0.086	mg/L	All but 007, 012	Four times per year [1]
Total Suspended Solids	100	mg/L	All but 007, 012	Four times per year [1]
pH	5.5 – 9.0	Standard pH Units, S.U.	All but 007, 012	Four times per year [1]

[1] See Table 10 – Discharge Monitoring Report Due Dates.

Sector-Specific Monitoring Requirements. Sector-specific monitoring requirements are based upon the Site's single SIC code, 4581, and apply to the monitoring points shown in **Table 6**. These requirements are found in Table E.S-1 of the permit. Unless the Airport starts using more than 100,000 gallons of glycol-based and/or 100 tons or more of urea deicing chemicals on an annual basis, monitoring for the constituents identified in **Table 6** will not be required.

Table 6 – Sector-Specific Monitoring Requirements

POLLUTANT	BENCHMARK VALUE	UNIT	OUTFALLS / MONITORING POINTS	FREQUENCY
Biochemical Oxygen Demand (BOD) [1]	30	mg/L	002, 004, 005, 006, 008, 013, 014	Four times per year [2]
Chemical Oxygen Demand (COD) [1]	120	mg/L	002, 004, 005, 006, 008, 013, 014	Four times per year [2]
Ammonia [1]	2.14	mg/L	002, 004, 005, 006, 008, 013, 014	Four times per year [2]
pH	5.5 – 9.0	Standard pH Units, S.U.	002, 004, 005, 006, 008, 013, 014	Four times per year [2]

[1] Required if more than 100,000 gallons of glycol-based and/or 100 tons or more of urea deicing chemicals is used on an average annual basis. Monitor at discharge points that collect stormwater from areas where deicing activities occur and when deicing activities are occurring.

[2] See **Table 10** – Discharge Monitoring Report Due Dates.

Effluent Limitations Monitoring Requirements. The Site is required by permit Schedule E.S-7 to meet the technology-based effluent limit for ammonia as nitrogen if it uses urea for airfield pavement deicing. Since the Site does not currently use urea, no monitoring is required unless operations change, and it begins using urea for deicing purposes. These requirements are found in Table E.S-1 of the permit and summarized under the Effluent Limitations Monitoring Requirements in **Table 7**.

Table 7 – Effluent Limitations Monitoring Requirements

POLLUTANT	NUMERIC EFFLUENT LIMIT	UNIT	OUTFALLS / MONITORING POINTS	FREQUENCY
Ammonia as Nitrogen from Airfield Pavement Deicing	14.7	Daily Maximum, mg/L	Currently none. See text.	Semi-annually [1]

[1] Monitoring not currently required because urea is not used for airfield pavement deicing.

Receiving Water Impairment Monitoring Requirements. Monitoring for parameters due to receiving water impairment is not required. The Site's receiving waters are listed in Table 8 – Receiving Water Impairment Monitoring Requirements.

Table 8 – Receiving Water Impairment Monitoring Requirements

RECEIVING WATER	POLLUTANT	IMPAIRMENT CONCENTRATION	UNIT	FREQUENCY
Bear Creek	N/A	N/A	N/A	N/A
Upton Slough	N/A	N/A	N/A	N/A
Lone Pine Creek	N/A	N/A	N/A	N/A

Site Outfall / Monitoring Locations and Parameters. The Site has 16 stormwater Outfalls and monitors 14 of these Outfalls for stormwater quality. The two unmonitored Outfalls receive discharge that is unimpacted by industrial activity. Monitoring includes both collection of grab samples for analytical evaluation (field and laboratory testing) and visual observation of specific parameters. Site Outfall locations, monitoring parameters, and other relevant information are summarized in **Table 9**. Please note that monitoring for BOD, COD, and ammonia at select Outfalls (i.e. 002, 004, 005, 006, 008, 013, and 014) is only required if the Airport uses more than 100,000 gallons of glycol-based and/or

100 tons of urea deicing chemicals on an annual basis.

Table 9 – Outfall Monitoring Locations and Parameters

OUTFALL	BASIN	LOCATION (LAT. / LONG.)	RECEIVING WATER	MONITORING POINT	MONITORING REQUIREMENT
001	3	42.370257 / -122.879262	Bear Creek via RVSS	Yes	[1]
002	2	42.365503 / -122.874937	Lone Pine Creek	Yes	[2]
003	3	42.372810 / -122.881342	Bear Creek via RVSS	Yes	[1]
004	2	42.364699 / -122.872591	Lone Pine Creek	Yes	[2]
005	4	42.391041 / -122.883565	Upton Slough	Yes	[2]
006	1	42.377398 / -122.872557	Upton Slough	Yes	[2]
007	2	42.363794 / -122.871961	Lone Pine Creek	No	[3]
008	2	42.364120 / -122.872290	Lone Pine Creek	Yes	[2]
009	3	42.375446 -122.882303	Bear Creek via RVSS	Yes	[1]
010	2	42.363297 / -122.873418	Bear Creek via RVSS	Yes	[1]
011	3	42.368819 / -122.877882	Bear Creek via RVSS	Yes	[1]
012	2	42.363014 / -122.870709	Lone Pine Creek	No	[3]
013	1	42.374989 / -122.868651	Upton Slough	Yes	[2]
014	2	42.363226 / -122.870095	Lone Pine Creek	Yes	[2]

OUTFALL	BASIN	LOCATION (LAT. / LONG.)	RECEIVING WATER	MONITORING POINT	MONITORING REQUIREMENT
091	3	42.374967 / -122.881666	Bear Creek via RVSS	Yes	[1]
092	3	42.374474 / -122.881946	Bear Creek via RVSS	Yes	[1]

[1] Total copper, Total lead, Total zinc, pH, TSS, Visual observations.

[2] Total copper, Total lead, Total zinc, pH, TSS, Visual observations, BOD, COD, Ammonia.

[3] No monitoring required.

Monitoring Frequency. The frequency of primary stormwater monitoring is four times per year – twice between July 1 and December 31 and twice between January 1 and June 30, inclusive. Stormwater samples must be collected at least 14 days apart. The discharge must be monitored during the first 12 hours of the discharge event, which is a storm event resulting in an actual discharge from a Site. If it is not practicable to collect the sample within this period, the sample must be collected as soon as practicable and documentation explaining the variance must be provided to DEQ along with the Discharge Monitoring Report. Sampling outside of regular business hours of operation or during unsafe conditions is not required.

Secondary stormwater monitoring is completed monthly by conducting visual assessments on a representative sample at all monitored outfalls as part of the monthly stormwater inspection.

Visual Observation Monitoring. Secondary stormwater monitoring is completed monthly by conducting visual assessments on a representative sample at each outfall as part of the monthly stormwater inspection. Visual observations are made for the presence of the following in the stormwater discharge:

- Floating and suspended solids
- Color
- Odor
- Foam
- Visible oil sheen
- Other obvious indicators of pollution.

Visual observations are to be made on a sample in a clean, colorless glass or plastic container in a well-lit area during regular business hours of operation under safe conditions. Results are to be recorded on the Monthly Stormwater Inspection Form found in **Appendix D**. Completed forms are to be kept with the Site stormwater files.

Notes on Stormwater Monitoring and Inspection.

- Stormwater sampling will be conducted using the procedures described in Schedule B.7 of the permit.
- Sampling and visual inspections must be conducted by personnel who have completed employee stormwater training, who are familiar with all aspects of the SWPCP, and are knowledgeable on proper sampling technique, locations and timing.
- In addition to completing the Chain of Custody document for transferring samples to the laboratory, a Field Sampling & Data Sheet (FSDS) should be completed to document the sample collection and field pH data.
- Visual inspections are completed monthly when the facility is in operation. A visual inspection must be made if a discharge event occurs during the month, regardless of whether the monthly Site inspection has already occurred.
- Visual observations of samples must be representative of the stormwater discharge but are not reported to DEQ.
- Upon discovery of the discharge of pollutants, the Site must immediately take all reasonable steps to temporarily minimize or prevent further discharge until a permanent corrective action is complete.
- Conduct all corrective actions required resulting from inspections and visual observations.

EXCEEDANCE RESPONSE ACTIONS

Tier 1 Requirements

Should monitoring indicate that benchmarks (both analytical and visual) are not being met, Tier 1 requirements are triggered and must be acted upon. To assess whether analytical requirements are triggered, upon receipt of the laboratory results from each NPDES sampling event, the results should be compared to the benchmarks listed in **Table 5**, **Table 6**, **Table 7**, and **Table 8** in this plan. The results of pH field monitoring should be checked against the relevant benchmark as well. Similarly, each visual monitoring event should be evaluated with respect to the relevant benchmarks (i.e., the presence of

floating or suspended solids and other parameters listed in the *Visual Observation Monitoring* discussion in this section of this plan).

If any sample result exceeds its respective benchmark, the Site must review the detailed actions listed in Schedule A, Section 11 of the permit and take steps as appropriate. The schedule for implementing responses is given in the permit and time is of the essence.

In summary, responses include:

1) Investigate the cause of the exceedance(s).

2) Review this SWPCP and revise if necessary to address the cause of the exceedance(s) and submit any revisions to DEQ along with a schedule for implementation of any corrective actions.

3) Summarize the results of the investigation and corrective action(s) in a Tier 1 report that is retained on Site.

4) Implement the corrective actions prior to the next storm event or as soon as practicable.

DEQ maintains the Tier 1 Report Form and instructions for its completion in the Industrial Stormwater Permits section of its website. The completed Tier 1 Report Form is to be kept in the Site's stormwater records and is not required to be submitted to DEQ unless the SWPCP is revised or DEQ requests it. Additional details regarding benchmark exceedances are included in Schedule A, Section 11 of the permit.

The Site was under no Tier 1 requirements at the time this revised SWPCP became effective.

Tier 2 Requirements

Upon completion of each stormwater year (July 1 – June 30), the Site must evaluate its pattern of compliance for the year at each monitoring point for each analytical parameter listed in **Table 5**, **Table 6**, **Table 7**, and **Table 8** in this plan. Tier 2 actions are triggered if mathematical analysis results in the geometric mean for any analyte for that year shows an exceedance of the respective benchmark.

Similarly, Tier 2 actions are triggered if 50 percent or more of qualifying pH sample results collected

at any monitoring point during the preceding two full stormwater reporting years are outside the pH benchmark range.

If statistical analysis indicates an exceedance of its respective benchmark, the Site must review the detailed actions listed in Schedule A, Section 12 of the permit and take steps as appropriate. The schedule for implementing responses is given in the permit and time is of the essence.

No such statistical benchmark compliance evaluation is necessary if all the laboratory analytical results from an outfall have remained below their respective benchmark or for any analytical parameters that have received a monitoring waiver.

If a Tier 2 corrective action is required, the Site must investigate the cause and develop a solution. These activities are guided by the permit and the Tier 2 Revised Stormwater Pollution Control Plan Checklist and instructions for its completion. DEQ maintains these documents in the Industrial Stormwater Permits section of its website.

The detailed description of the corrective action, reporting, and schedule are found in Schedule A, Section 12 of the permit.

The Site submitted a Tier 2 Corrective Action report to DEQ in April 2016. The report remains an addendum to this plan and is found in **Appendix E**. The Site was under no active Tier 2 requirements at the time this revised SWPCP became effective.

6.0 INSPECTIONS, REPORTING, AND RECORDKEEPING

Inspections. Monthly inspections of the Site stormwater infrastructure and BMPs are performed. The inspection findings are recorded on the Site Monthly Stormwater Inspection Form (**Appendix D**) and completed forms are kept with Site stormwater records. Maintenance actions implemented to correct deficiencies noted during the inspection are also be recorded on the form when completed.

If an inspection results in a major re-configuration of the Site stormwater system or BMP, the Site may need to revise the SWPCP to reflect the change. The SWPCP revision must be submitted to DEQ within 30 days.

Reporting. DMRs cover the four calendar quarters of the year (January through March, etc.) and are to be submitted to DEQ by the 15th of the second month following the reporting quarter, about 6 weeks after the quarter ends. For example, the DMR for the reporting period July through September 2021 is due to be received by DEQ by November 15, 2021. The "reporting year" begins on July 1 and ends June 30 of the following year.

The schedule of DMR submittal deadlines is as shown in **Table 10**.

Table 10 – Discharge Monitoring Report Due Dates

Reporting Quarter	Months	DMR Due Date
1	July – September	November 15
2	October – December	February 15 [1]
3	January – March	May 15
4	April – June	August 15 [1]

[1] If monitoring is not possible because there is no stormwater discharge during the monitoring period, a variance request must be submitted. Variance requests are required to be submitted by February 15 and August 15 with the DMR for each missed sample. A "no discharge" claim monitoring variance request must include supporting data and analysis demonstrating why there was no discharge for monitoring to occur.

The form for the DMR is now provided by DEQ in a web-based utility.

Significant spills or leaks of materials that impact or have the potential to impact stormwater or surface waters will be recorded in a spill report. Spill reports document significant spill incidents and properly evaluate the cause of the spill, any actions needed to prevent reoccurrence, and for spill prevention and response training. Significant spills as defined in the Site's SPCC require immediate reporting to state and federal agencies. Contact information is presented in **Table 4**.

Recordkeeping. The following records are required to be kept for a minimum of 3 years and presented to DEQ upon request. Records archiving beyond this period shall be done in accordance with the Site's record retention policy:

- A copy of the SWPCP and any revisions, including any engineer stamped SWPCP amendments due to a Tier 2 corrective action.
- A copy of the current 1200-Z permit.
- DEQ's notice of permit coverage under the current permit term (see Appendix A).
- Documentation of maintenance and repairs of control measures, treatment systems and mass reduction measures.
- Mass reduction measures re-certification as required by Schedule A, Section 6.
- Tier 1 reports, including industrial-specific checklist(s).
- All inspection reports.
- Documentation of any benchmark exceedance and corrective action taken.
- All copies of any reports or corrective actions submitted to DEQ.
- Spills or leaks of significant materials (See permit Schedule D, Section 3 for definition) that impacted or had the potential to impact stormwater or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature.
- Documentation to support a claim that a facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct routine facility inspections.
- DMRs, laboratory reports, laboratory chains-of-custody, pH instrument calibration records, and field sampling notes.
- Compliance schedule reports as specified in Schedule C.
- Employee education materials and records of training.

FIGURES

APPENDICES

FIGURES

SOURCE: Otak, Inc., Project No. 18672, Figure 1 - General Location Map, 2018

ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 9/6/21 DRAWN BY: SRM

Figure 1
General Location Map
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon

LEGEND

- FUEL ACTIVITIES
- SPILL KIT LOCATIONS
- CHEMICAL HANDLING AREAS
- VEHICLE WASHING AREAS
- DE-ICING AREAS
- AIRCRAFT HOLDING TANK TRANSFER AREAS
- BASIN BOUNDARY
- PROPERTY LINE
- EXISTING IMPERVIOUS AREA
- EXISTING BUILDINGS/STRUCTURES
- NEW BUILDINGS
- GRAVEL ROAD
- STREAMS

EXISTING AIRPORT FACILITIES

NO.	FACILITY	NO.	
1	Jet Center	21	Underground Fuel
2	Erickson Air Group	22	Fuel Farm
3	United States Forest Service	23	T-Hangars
4	Erickson Aviation	24	Hangar
5	Hangar	25	T-Hangars (A-J)
6	Airport Maintenance Facility	26	Conventional Hangars
7	Mercy Flights	27	Conventional Hangars
8	Millionair	28	Conventional Hangars
9	Fire Retardant Retention Pond	29	Conventional Hangar
10	Mercy Flights	30	Conventional Hangars
16	Civil Air Patrol	34	Card Lock Fuel Facility
17	Jet Center - North	35	Port-a-Port Hangars
19	Weather Service (NOAA)		
20	Balloon Inflation Building		

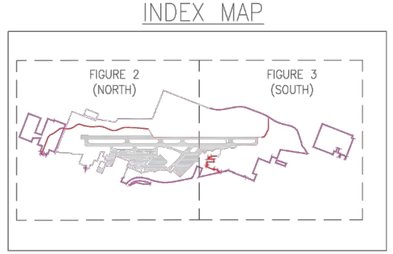
600 0 600 1200
SCALE IN FEET

BASIN 6
BASIN 4
BASIN 4
BASIN 1
BASIN 4
BASIN 3

N Runway Dr
NDB
Upton Cr
RUNWAY 14-32
TAXIWAY A
TAXIWAY A
T/W A6
T/W A5
T/W A4
T/W A3
TAXIWAY C
TAXIWAY B3
TAXIWAY B
TAXIWAY A4
Nebula Way

DISCHARGE POINT #005 MONITORING POINT
DISCHARGE POINT #005 MONITORING POINT
DISCHARGE POINT #013 MONITORING POINT
DISCHARGE POINT #091 MONITORING POINT
DISCHARGE POINT #092 MONITORING POINT
DISCHARGE POINT #009 MONITORING POINT
DISCHARGE POINT #003 MONITORING POINT
DISCHARGE POINT #001 MONITORING POINT

INDEX MAP

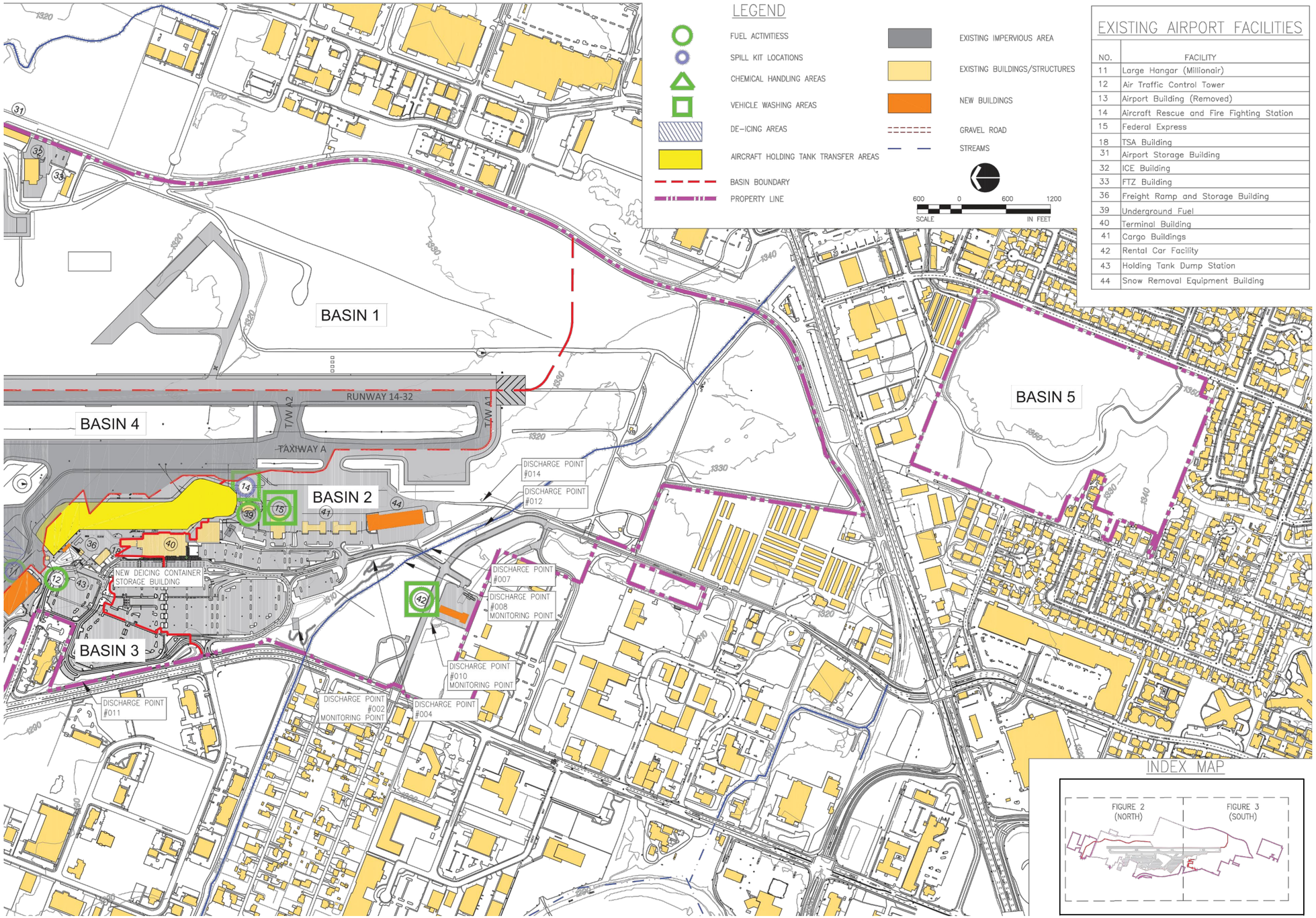


SOURCE: Otak, Inc., Project No. 18672, Figure 2 - Site Map (North) Airport Activities, 2018

ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/14/21 DRAWN BY: SRM

Figure 2
Site Map (North) Airport Activities
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon



LEGEND

- FUEL ACTIVITIESS
- SPILL KIT LOCATIONS
- CHEMICAL HANDLING AREAS
- VEHICLE WASHING AREAS
- DE-ICING AREAS
- AIRCRAFT HOLDING TANK TRANSFER AREAS
- BASIN BOUNDARY
- PROPERTY LINE
- EXISTING IMPERVIOUS AREA
- EXISTING BUILDINGS/STRUCTURES
- NEW BUILDINGS
- GRAVEL ROAD
- STREAMS

600 0 600 1200
SCALE IN FEET

EXISTING AIRPORT FACILITIES

NO.	FACILITY
11	Large Hangar (Millionair)
12	Air Traffic Control Tower
13	Airport Building (Removed)
14	Aircraft Rescue and Fire Fighting Station
15	Federal Express
18	TSA Building
31	Airport Storage Building
32	ICE Building
33	FTZ Building
36	Freight Ramp and Storage Building
39	Underground Fuel
40	Terminal Building
41	Cargo Buildings
42	Rental Car Facility
43	Holding Tank Dump Station
44	Snow Removal Equipment Building

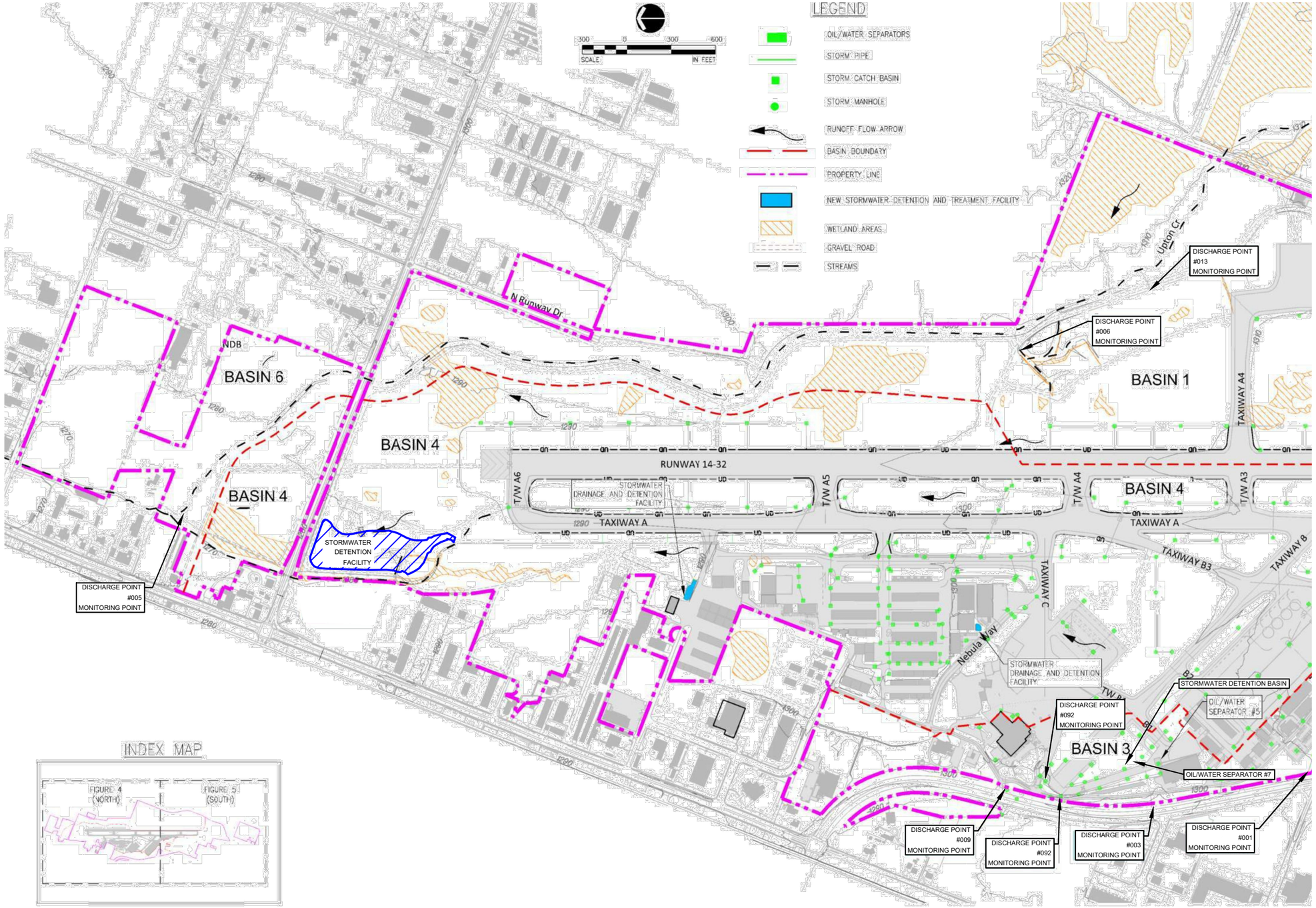
INDEX MAP

SOURCE: Otak, Inc., Project No. 18672, Figure 3 - Site Map (South) Airport Activities, 2018

ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 9/6/21 DRAWN BY: SRM

Figure 3
Site Map (South) Airport Activities
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon



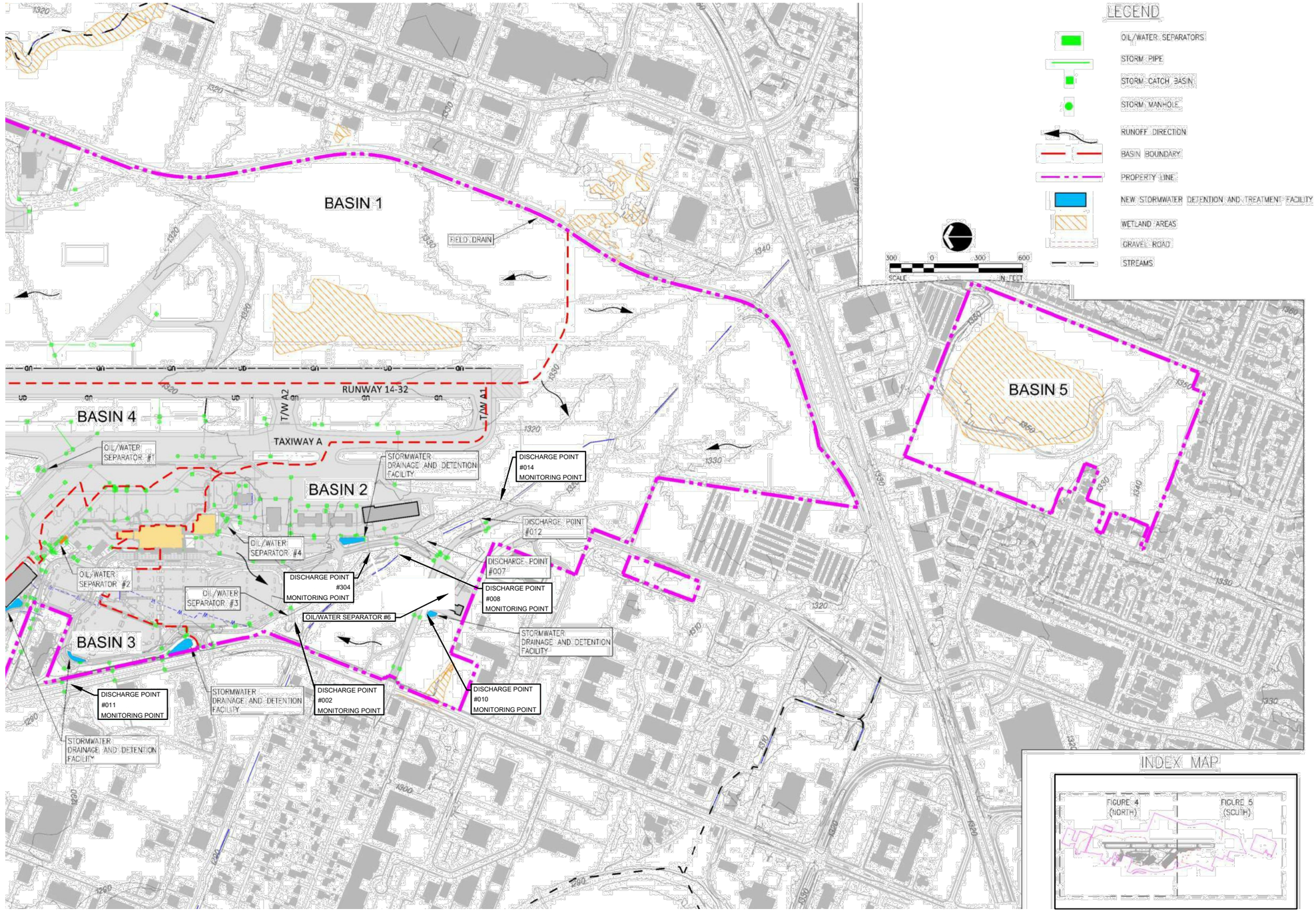
INDEX MAP

SOURCE: Otak, Inc., Project No. 18672, Figure 4 - Site Map (North) Drainage and Storm Sewer, 2018

ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/14/21 DRAWN BY: SRM

Figure 4
Site Map (North) Drainage and Storm Sewer
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon

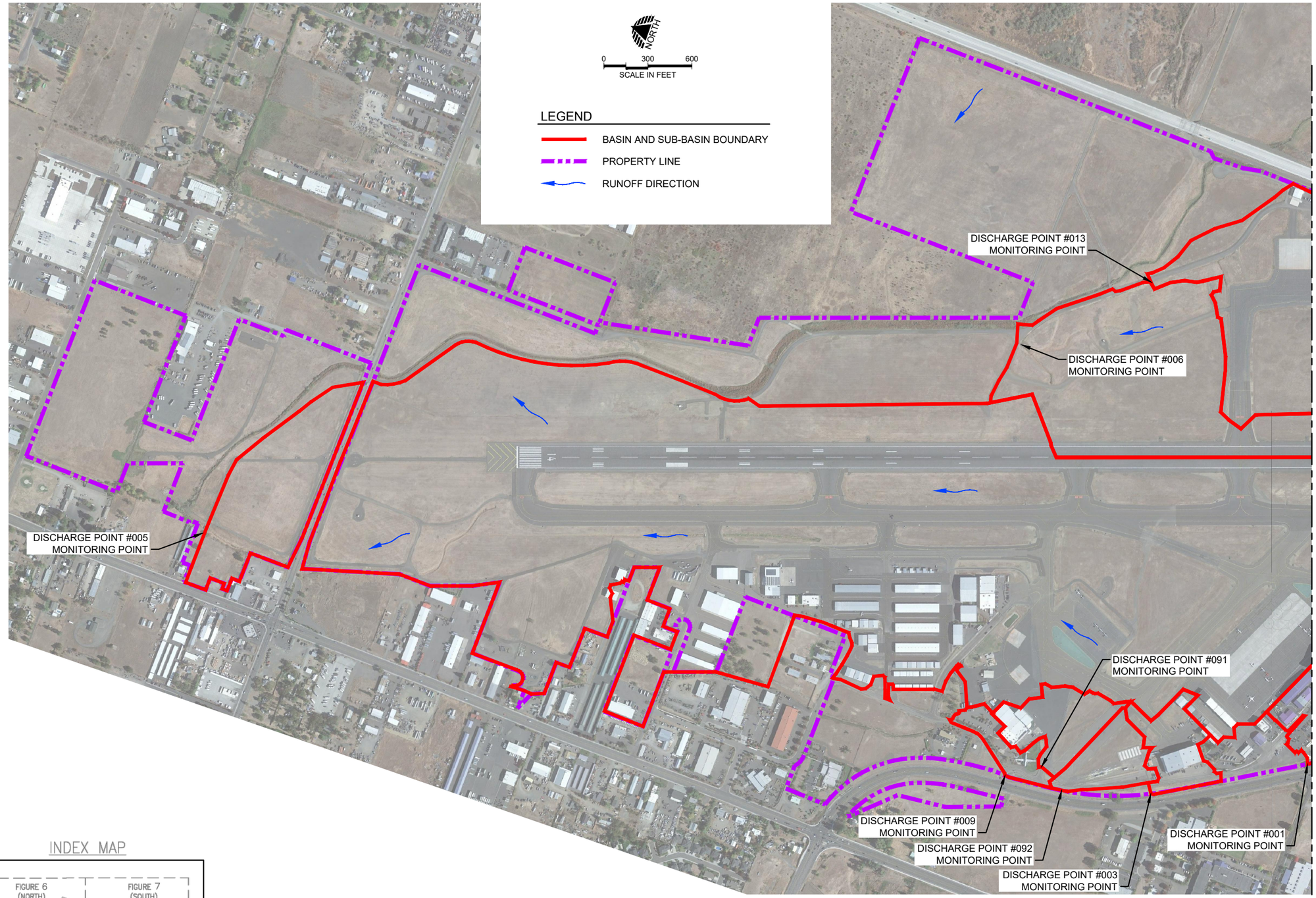


SOURCE: Otak, Inc., Project No. 18672, Figure 5 - Site Map (South) Drainage and Storm Sewer, 2018

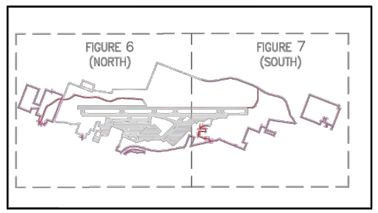
ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/14/21 DRAWN BY: SRM

Figure 5
Site Map (South) Drainage and Storm Sewer
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon



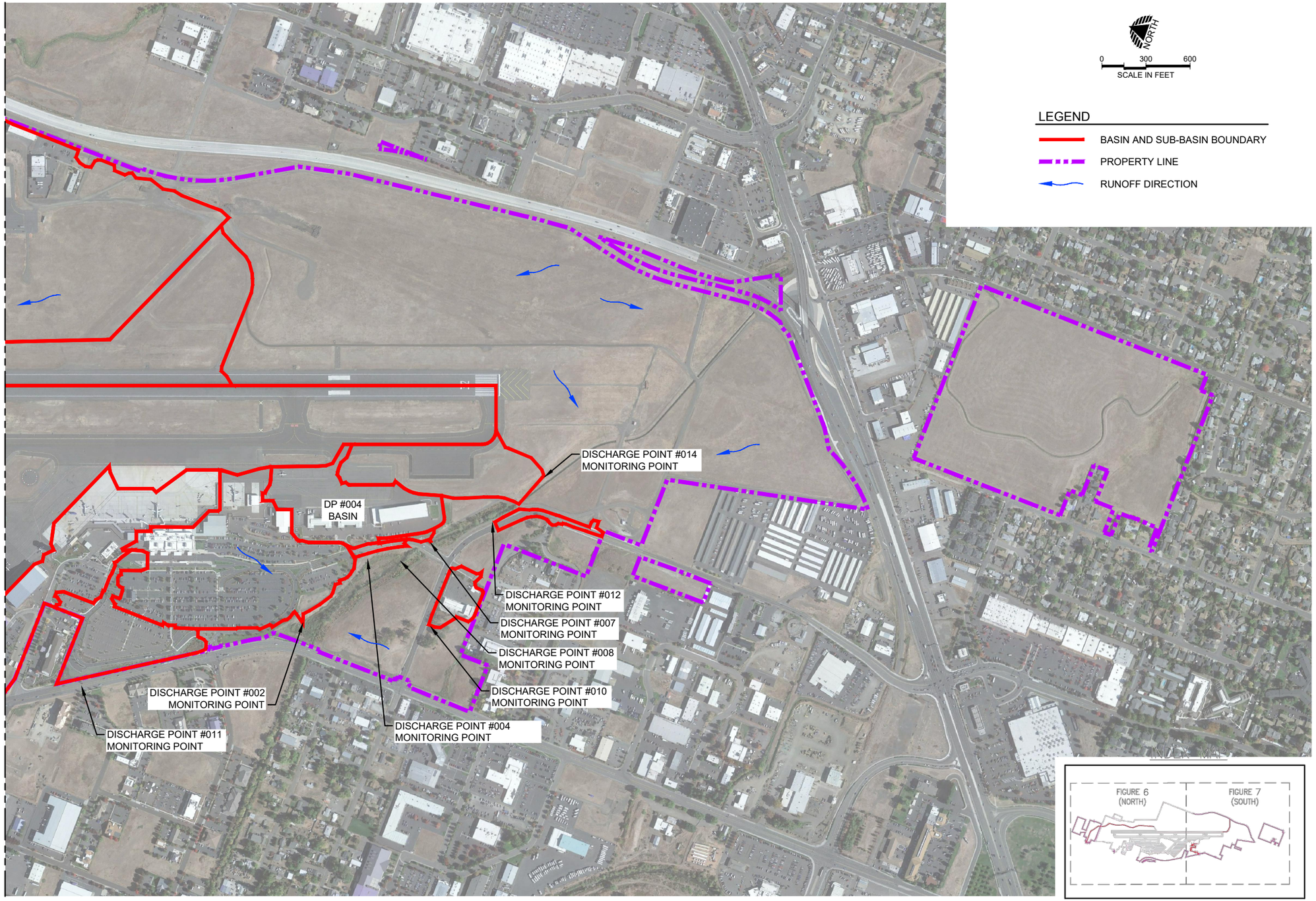
INDEX MAP



ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/13/21 DRAWN BY: JAW

Figure 6
Site Map (North) Sub-Basin Drainage and Outfalls
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon



ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/13/21 DRAWN BY: JAW

Figure 7
Site Map (South) Sub-Basin Drainage and Outfalls
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon

APPENDIX A

DEQ LETTER FOR REISSUANCE OF NPDES PERMIT NO. 1200-Z

Oregon
Kate Brown, Governor

Department of Environmental Quality
Western Region Eugene Office
165 East 7th Avenue, Suite 100
Eugene, OR 97401
(541) 686-7838
FAX (541) 686-7551
TTY 711

May 17, 2021

Jerry Brienza
Airport Director
Jackson County Airport Authority
1000 Trmnl Loop Pkwy Ste 201
Medford, OR 97504-4218

RE: Reissuance NPDES Permit Number 1200-Z
File Number: 100901; EPA Number: ORR801628
Facility: Rogue Valley Int. - Medford Airport, 3650 Fire Station Spur, Medford
Jackson County
SIC Code(s): 4581

Dear Permit Registrant:

The Oregon Department of Environmental Quality (DEQ) has reissued the 1200-Z, effective July 1, 2021. Attached is your revised monitoring requirements under the reissued permit, starting July, 1, 2021. All monitoring waivers expire on July 1, 2021. Please review the information closely. If you identify any discrepancies in the tables, please contact me as soon as possible.

It is your responsibility to comply with the new permit conditions and monitoring requirements starting July 1, 2021. DEQ will be transitioning to electronic Discharge Monitoring Reports during this permit cycle. As such, you will not receive the first page of the permit identifying your facility as registered under the renewed permit. Please visit our industrial stormwater permits webpage to find a copy of the permit and associated documents. https://www.oregon.gov/deq/wq/wqpermits/Pages/Stormwater-Industrial.aspx Thank you.

If you have any questions about this permit, contact the Stormwater Permit Coordinator at 541-686-7930.

Respectfully,

LeeAnn Gates

LeeAnn Gates
Western Region Permit Coordinator – Eugene Office
Gates.leeann@deq.state.or.us

1200-Z NPDES Monitoring Requirements

You must monitor for the pollutants in the table below. If discharge to a Category 5: 303(d) listed receiving water for pH, total copper, total lead, total zinc and/or E. coli, the table below will not include statewide or sector-specific benchmarks for those pollutants. Exceedance of impairment monitoring may escalate to a water quality-based effluent limit during this permit cycle. Please read Schedule A.13 and Schedule C carefully. Tier 2 geometric mean evaluations are required annually. Please read Schedule A.12 carefully.

Georegion	**Pollutant**	**Statewide Benchmark**	**Unit**	**Frequency**
Coastal	pH	5.5-9.0	s.u.	Four times per year
Coastal	Total Copper	0.017	mg/L	Four times per year
Coastal	Total Lead	0.039	mg/L	Four times per year
Coastal	Total Zinc	0.086	mg/L	Four times per year
Coastal	TSS	100	mg/L	Four times per year
SIC code of Industrial Activity	**Pollutant**	**Sector-specific Benchmark**	**Units**	**Frequency**
4581	BOD[1]	30	mg/L	Four times per year
4581	COD[1]	120	mg/L	Four times per year
4581	Ammonia[1]	2.14	mg/L	Four times per year
Receiving Water **LLID:** 1228896423700 **AUID: 105815** **River Mile: 0.9**	**Pollutant**	**Impairment Concentration**	**Units**	**Frequency**
Upton Slough	N/A	N/A	N/A	N/A
Technology-based Effluent Limit[2]	**Pollutant**	**Numeric Effluent Limit**	**Units**	**Frequency**
Airfield pavement deicing per Schedule E.S.7	Ammonia as Nitrogen[2]	14.7	daily maximum, mg/L	See Table E.S.2

[1] When use more than 100,000 gallons of glycol-based deicing chemicals on an average annual basis
[2] If operations change and urea deicing is used

APPENDIX B

SPILL RESPONSE ACTIONS FROM SITE SPPC SPILL RESPONSE PLAN

ROGUE VALLEY INTERNATIONAL-MEDFORD AIRPORT

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

March 2007

Prepared for:

Jackson County, Oregon
3650 Biddle Road
Medford, Oregon 97504

Prepared by:

David Evans and Associates, Inc.
1128 NE Second St. Suite 201
Corvallis, Oregon 973330

Land And Water Environmental Services, Inc.
525 SE Main St.
Roseburg, Oregon 97470

SPILL PREVENTION – PERSONNEL TRAINING

Spill prevention consists of implementing safe operating procedures to reduce the likelihood of a spill while handling, storing, or using significant materials.

The greatest likelihood of spills happening exists with the handling of fuels and chemicals. The following steps should be taken to prevent spills and ultimately contamination of receiving waters.

1) Personnel have read and become familiar with this Plan.

2) Provide employee training program outlining spill prevention practices. (See Employee Awareness Program Section.)

3) Provide chemical and fuel absorbent and have it readily available at all chemical and fuel handling and transfer operations. Do not disperse with water.

4) During transportation of fuels and chemicals, personnel should be alert to possible container or tanker truck damage due to unstable loading or collision with obstacles.

5) When transferring fuel or chemical products, all connections and transfer points should be carefully monitored for leaks.

6) Tanks receiving fuel should be gauged prior to filling to ensure adequate space in the tank for the product being delivered. Adequate headspace at the top of the tank should be left to allow for product expansion.

7) Tanks, containers, and vehicles receiving fuel and oil should be carefully checked prior to and during delivery to ensure that there are no leaks or open drain valves.

8) Storm drains and floor drains in the immediate vicinity of the tank being filled should be covered with a mat, plug or other suitable device during filling operations to prevent the flow of product into the drain in case of leak or spill. Transferring materials in close proximity to storm drains should be avoided.

9) All waste oil should be deposited in designated waste oil collection containers or tanks for collection. No waste oil or oily wastes should be deposited in the sanitary or storm sewer system or trash containers or dumpsters.

10) Containers of five gallons or more should be stored in an area that will not drain to a sewer or storm drain.

11) Containers of fuel or chemicals should be stowed in a manner to preclude damage from stacking or falling, equipment and personnel handling, and impact with vehicles. Containers should be stowed to permit access to each item without moving and/or re-stowing containers.

12) Container storage areas should be maintained in a clean and orderly manner, with absorbent material and clean-up gear available in the immediate area.

13) Maintain a minimal inventory of required chemicals to reduce the magnitude of potential spills and limit waste generation.

14) Provide safeguards against accidental releases:

a. Overflow protection devices to warn operator or automatic shut down transfer pump.

b. Protection guards around tanks and piping to prevent damage from vehicles or forklifts

c. Clear container labeling

d. Restricted access to chemical and fuel storage areas.

15) In event of a spill, the appropriate agencies would be notified. This includes the Department of Environmental Quality (DEQ) and NOTAM (Notice to Airman) issued in the event the runway is closed. Instructions and telephone numbers have been posted in a conspicuous area which relates to reporting spills to the:

Fire Department	541-776-2830
EPA	1-800-424-4372
DEQ	541-776-6010
NOTAM	800-672-6211

16) Large spills or leaks should be reported to the Spill Response Team (Rogue Valley International-Medford Airport Fire Department) immediately.

FUTURE SPILL PREVENTION PLANS

Whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon adjoining shorelines, amendments to this plan will be made as soon as possible, but no later than six months after the change occurs. Amendments will be certified in accordance with guidelines for preparation of Spill Prevention and Control Countermeasure Plans.

RVI-M AIRPORT FIRE DEPARTMENT **GUIDELINE 3.0-8**
REVISED 07-16-04

METHOD MANUAL

FUEL SPILLS

PURPOSE: This Method will provide guidelines in the event of a fuel spill.

SCOPE: This Method applies to all personnel at the Airport Fire Department.

RESPOSIBILITY: The Fire Chief and/or SFO will ensure this Method is followed.

PROCEDURES: The following are guidelines to use in case of an emergency involving a fuel spill.

A. Use normal emergency response procedures to the spill location.

B. When possible position up wind and up hill.

C. One person will remain in 7981 at all times.

D. The Incident Commander will utilize all resources available to control the spill.

E. The aircraft or vehicle involved in spill must not be moved under their own power until the spill has been stabilized.

F. A hot zone will be established and the area will be evacuated.

G. Personnel in the hot zone will be in full protective clothing including SCBA.

H. If the fuel spill occurs on airline ramp area, fuel can be washed into the fuel separator system using water. But monitor amount of water used. The separators will need to be cleaned if the spill is large.

I. Fuel pillows, pads and/ or dikes will be utilized to prevent fuel runoff from entering all other drainage systems.

J. Do not use absorb-a-clean if the ground is wet with water or rain.

K. When finished fill out the Spill Clean-Up sheet so we can bill for the use of our equipment.

RVI-M AIRPORT FIRE DEPARTMENT

GUIDELINE 3.0-12
REVISED 07-15-04

METHOD MANUAL

HAZARDOUS MATERIALS INCIDENT

PURPOSE: This Method is to provide guidelines in the event of a Hazardous Material Incident.

SCOPE: This Method applies to all personnel at the Air Port Fire Department.

RESPONSIBILITY: The Fire Chief and/or SFO will ensure this Method is followed.

PROCEDURES: The following are guidelines to use in case of an emergency involving hazardous materials.

A. Use normal emergency response procedures to the emergency scene.

B. Position apparatus up wind and up hill. If the name of the product or material is unknown, use Guide Number 111 of the DOT Handbook.

C. Secure the scene. Without entering the immediate hazard area, isolate the area and assure the safety of people and the environment, keep people away from the scene and outside the safety perimeter.

D. Identify the hazards. Placards, container labels, shipping documents and/or knowledgeable persons on the scene are valuable sources of information. Evaluate all available information and consult the North American Emergency Response Guidebook or other reference source to reduce immediate risks. Remember, the Guidebook and other reference sources provide only general guidelines to follow in the first minutes of a hazardous materials incident. As more material-specific information becomes available, the response should be tailored to the situation.

E. Assess the situation. Consider the following:

1. Is there a fire, a spill or a leak?
2. What are the weather conditions?
3. What is the terrain like?
4. Who/what is at risk: people, property or the environment?
5. What actions should be taken: Is an evacuation necessary? Is diking necessary? What resources (human and equipment) are required and readily available?
6. What can be done immediately?

F. Obtain help. Notify dispatch of the situation and request additional resources, as needed, i.e. activation of the Haz-Mat team. Notify the Duty Officers.

G. Decide on site entry. Any efforts to rescue persons, protect property or the environment must be weighed against the possibility that you could become part of the problem. Enter the area only when wearing appropriate protective gear (refer to the DOT Guidebook or other reference source).

H. Respond in an appropriate manner. Establish a command post. Rescue casualties where possible and evacuate if necessary. Maintain control of site. Continually reassess the situation and modify the response accordingly.

APPENDIX C

STORMWATER SYSTEM MAINTENANCE ACTION CHECKLIST

STORMWATER SYSTEM MAINTENANCE ACTION CHECKLIST

Introductory Note. This Stormwater System Maintenance Checklist has been provided by Rogue Valley Sewer Services and has been revised to align with the needs of the Site SWPCP. It is presented as guidance for the site to maintain the elements of its stormwater collection, conveyance and treatment features and should be applied as appropriate to elements of the stormwater system. The documentation of stormwater inspections is to be completed on the Monthly Stormwater Inspection Form. Note that detailed information on catch basins follows the tables of maintenance action checklists.

The following inspection and maintenance action checklists are provided primarily for maintenance field staff. The checklists indicate recommended inspection frequency and timing, conditions to look for, corrective actions, and estimated time to perform the work. They can assist management staff with maintenance planning, scheduling, staffing, and budgeting. The work time estimates given on the checklists should be compared to actual effort required to perform each task in the future and revised as necessary. Continual review, feedback, and revision of the checklists will make them more effective tools in the effort to manage stormwater.

Inspection Timing: Specific elements of the stormwater facilities are assigned to be inspected annually or seasonally. W = winter, Sp = Spring, Su = Summer and F = Fall. **At least one inspection per year should occur during a storm event.**

Manufactured treatment structures will have maintenance requirements from the manufacturer that are included in the back of this packet.

Maintenance Records: Maintenance records must be kept on all stormwater facilities, an example maintenance record is provided in this packet. Record the date and description of repairs and maintenance activities. Invoices and work orders for supplies and hiring contractors to complete work should be kept on file. The property owner/owners shall keep records of facility system inspections and maintenance for five years from the date of each inspection. Records shall be made available to jurisdictional authority upon request, at no cost.

Herbicides and Pesticides: Utilize integrated pest management and avoid the use of herbicides and pesticides as much as possible due to the potential to contaminate downstream waters. If pesticides or herbicides must be used, a licensed applicator should be hired.

Fertilizers: Avoid the use of fertilizers in stormwater treatment and detention facilities. Instead, mulch plants with shredded wood chips or coarse compost. Mulch shall be either shredded wood chips or coarse compost. Mulch must be dye, pesticide and weed free.

Pollution Prevention: Best Management Practices must be implemented on all sites to prevent stormwater contamination. Spills should be cleaned up following best management practices and should never be washed into a stormwater treatment facility. Report spills into the stormwater facility by calling the local jurisdiction.

Maintenance Action Checklist		Pervious Pavement
Inspection Timing	**Conditions to Check For**	**Suggested Action**
Sp, F	Erosion from landscape areas	Implement erosion prevention and sediment control and replant per the approved landscape plan.
F, W, Sp	Trash and Leaves	Pick up trash, blow or sweep leaves. Remove and dispose of waste properly.
F, Sp	Weed and moss growth over 10% of area or more	Mechanically remove during the dry season. Avoid mossicides and herbicides.
Su, F	Sediment/debris accumulation	• Dry sweep • Vacuum-sweep at least twice a year. • Or, pressure wash at a right angle to the pavement. • Sediment should be disposed of properly at a landfill or approved facility.
Annual	Unraveling or settled pavement	Repair per manufacturer specification. Do not apply sealants to pervious pavement.
Annual	Aggregate loss	**Do not** seal coat. Replace with aggregate per original design. 50sf or less of damage may be patched with conventional asphalt, up to 10% of the entire porous surface.
W, Sp	Reduced infiltration	If storms are not infiltrating, contact the jurisdiction.
W, Sp, Su, F	Landscape Contractors stockpiles/ blown debris	Ensure landscape contractors understand that the surface is permeable. Inform them that they cannot stage material on the surface or blow grass/leaves/etc. onto the surface.
Annual	Settling of pavers or loss of paver filling.	Reset pavers and replace missing fill material per original design.
Annual	Signage describing Pervious Pavement in Place	Ensure sign is visible and legible
W	Snow Removal	Use salt-free deicers only. Do not apply to concrete <1 year old. Plow with the blade one inch above the surface.

Maintenance Action Checklist		Vegetated Facilities*
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, Su, F	**Trash and debris**.	Remove and dispose of waste in regular trash.
Annual	**Sediment or debris accumulation in facility** exceeding 2 inches.	Remove with appropriate equipment to limit compaction or damage to plants and infiltration media. Record amount of sediment collected. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Clogged inlets, outlets, pipes**	Remove sediment and debris. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Damaged inlets or outlets, cracked pipe**	Repair or seal cracks, replace when needed.
Annual	**Scouring under Inlet to Facility**	Replace rock or gravel in energy dissipator according to design specifications. Remove blockage manually or with appropriate equipment.
Annual	**Perforated Liner.**	Repair or replace as necessary per manufacturer specification.
Annual	**Erosion within facility**. Check inlets, slopes, energy dissipators and facility bottom.	Determine cause of erosion and eliminate. Apply appropriate temporary erosion control best management practices. Evaluate options for permanent solution.
Annual	**Poorly draining facility**.	If facility does not drain in 48 hours after a storm, scrape 1 inch of soil out of the facility and scarify to 3 inches. If infiltration does not improve, contact the jurisdictional authority. Consider installation of sediment trap.
W, Sp, Su, F	**Odor, sludge, or color**. Presence of any chemical pollutants.	Notify appropriate jurisdiction to investigate and determine chemical type. Remove contaminant by appropriate methods and dispose of as directed by hazardous waste protocols. Provide sign or stencil as necessary.
Sp, F	**Hydraulic performance**. Flow has become channelized and does not spread over bottom of swale.	Recontour and replant vegetated facility bottom following approved landscape plan; consider installing a flow spreader device. Contact the stormwater jurisdiction for advice on flow spreader installation.
Sp	**Check Dams Functioning**	Maintain design number, spacing and elevation, of check dams.
Sp, F	**Vegetation covers < 90% of facility bottom or is unhealthy looking.**	Determine cause of poor growth. Revegetate following approved landscape plan to achieve 95% coverage. Avoid use of fertilizers.
Sp, Su, F	**Vegetation is overgrown. Weeds. Vegetation poses potential health hazard** (poison oak, stinging nettles, tansy).	• Prune vegetation that blocks sight lines, inlets, outlets, or is a health hazard and remove cuttings. Do not string trim grasses, sedges or rushes. Remove weeds mechanically, avoid pesticides and herbicides. • Facilities seeded with low-mow or no-mow seed mix, should be mown a maximum of three to four times a year for aesthetics and to reduce fire risk. If possible, utilize a weed whacker rather than a mower to reduce • compaction of the facilities soils.
Sp, Su	**Irrigation system functioning properly.**	• Irrigation will be needed frequently during first 3 years, once plants mature frequency of watering can decrease unless >90 F.

* Vegetated Facilities include rain gardens, water quality swales, planters, and vegetated filter strips.

Maintenance Action Checklist		Detention Ponds*
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, Su, F	**Trash and debris**.	Remove and dispose of waste properly.
Annual	**Sediment accumulations** exceeding 20 percent of the forebay depth or 4 inches, whichever is less.	Evaluate whether cleaning can be performed with an eductor, backhoe, or excavator. Perform work or contract out. Record amount of waste collected. Reshape and reseed as necessary. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Clogging of check dam** between forebay and detention area with sediment or debris.	Manually remove sediment or use mechanical equipment as described for sediment removal.
Annual	**Inspect facility geometry for erosion and settlement to ensure inlets and outlets are functioning as intended.**	Determine cause of erosion and eliminate it. Repair and revegetate as per the approved designs.
	Odor, sludge, or unusual color. Presence of any chemical pollutants.	Notify appropriate jurisdiction to investigate. Remove contaminant by appropriate methods and dispose of as directed by hazardous waste protocols.
Sp, Su, F	**Vegetation is overgrown.**	• Prune vegetation that blocks inlets, outlets and remove cuttings. Do not string trim ornamental grasses, sedges or rushes. Remove weeds mechanically, avoid use of pesticides and herbicides. • Facilities seeded with low-mow or no-mow seed mix, should be mown a maximum of three to four times a year for aesthetics and to reduce fire risk. If possible, utilize a weed whacker rather than a mower to reduce compaction of the facilities soils.
Sp, F	**Facility vegetated < 90% of original plan.**	Determine cause of poor growth. Revegetate following approved landscape plan. Avoid use of fertilizers.

Maintenance Action Checklist		Underground Detention Structures
Inspection Timing	**Conditions to Check For**	**Action**
Annual	**Sediment and debris** exceeding 15% of the structure height or 6" in depth, whichever is less.	Sediment should be disposed of properly at a landfill or approved facility. Contract for cleaning if necessary.
Annual	**Plugged or blocked air vents.** Accumulations of debris or sediment exceed one-half of the vent end area.	Remove and dispose of waste in regular trash.
Every 5-yrs	**Cracks** in joints between tank or pipe sections that leak soil into the facility.	Manually seal all cracks with appropriate grout material.
Every 5-yrs	**Underground facility structurally deficient or restricting flow.**	Repair or replace structure to design.
W, Sp, F	**Clogged inlets, manholes, catch basins or silt traps**	Remove blockages.
W, SP, Su, F	**Missing or open manhole cover.** Locking mechanism difficult to open or lacking more than 1/2 inch of thread; cover difficult to remove.	Replace cover or repair and reinstall. Cover should operate properly and be removed easily by one maintenance person.
Su	**Cleanout shear gate damaged**, rusted, leaking* or missing. Gate cannot be adjusted by one person. Chain or rod missing or damaged	Repair or replace to meet design standards. Repair, lubricate, or replace gate as necessary. Repair or replace chain or rod as necessary.
W, SP, Su, F	**Odor, sludge, or unusual color**. Presence of any chemical pollutants.	Notify appropriate jurisdiction to investigate and determine chemical type. Remove contaminant by appropriate methods and dispose of as directed by hazardous waste protocols.

*Leaking is permissible provided it is less than 2 gallons per hour.

Maintenance Action Checklist		Catch Basins and Inlets
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, Su, F	**Trash, debris, and sediment on grating.** More than 1/2 cu ft in front of or on grating, blocking capacity by more than 10%	Remove and dispose of waste in regular trash. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Sediment or debris in sump**. Depth exceeds 1/2 the distance between the bottom of basin and the invert of lowest pipe into or out of the basin.	Evaluate whether cleaning can be performed manually or mechanically. Perform work or contract out. Record amount of sediment collected at each basin.

Catch Basin/Area Drain: A structure, typically concrete, into which stormwater flows to be conveyed downstream.

Stormwater Inlet /Curb Inlet: A pipe or opening in a curb that conveys runoff into a stormwater facility.

Maintenance Action Checklist		Outlet Control Structures/Flow Restrictors
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, F	**Sediment, debris, or trash** is blocking or sump is less than 50% from restrictor/orifice plate	Remove and dispose of waste in regular trash. Sediment should be disposed of properly at a landfill or approved facility. Contract for cleaning if necessary.
Annual	**Structural integrity**. Tee-type flow restrictor is not securely attached to manhole wall and outlet pipe. Weir or baffle flow restrictor not securely attached to manhole. Flow restrictor is not plumb within 10% Connections to outlet pipe are leaking and show signs of rust Holes in plates, baffles, elbows, etc.	Determine best method for anchoring flow restrictor based on materials and severity of situation. Consult supervisor if necessary. Replumb and realign restrictor, securing as necessary. Repair or replace as necessary to eliminate leakage. Plug or patch holes if structural integrity is not affected. Replace part if possible, replace entire structure if severely failing.
Sp, F	**Trash, sediment, or debris** blocking overflow pipe.	Remove material manually or with mechanical equipment. Contract for cleaning if necessary.

Outlet Control Structure: Located at the downstream end of a stormwater facility, it controls the rate at which stormwater can flow out through the use of a flow restrictor or orifice.

Flow Restrictor (Orifice): A hole cut into the outlet control structure that is specifically sized to control stormwater outflow.

Maintenance Action Checklist		Culverts/Pipes
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, F	**Trash, debris, or sediment** restricting pipe flow.	Evaluate whether cleaning can be performed manually or mechanically using an eductor, jet or bucket loader. Perform work or contract out. Record amount of waste collected at each culvert. Sediment should be disposed of properly at a landfill or approved facility.
Su	**Vegetation** that reduces free movement of water through culvert.	Cut vegetation to 6 inches minimum and remove. Take care to limit damage to embankment and side slopes. Prune back woody vegetation without killing and leaving roots in place if possible.
Su	**Damage to pipe** such as rusting through wall of pipe , dents, bent or crushed ends that affects efficient flow.	Repair or replace pipe as necessary.
Annual	**Cracking or buckling of headwall**. Erosion or piping occurring at backside or around ends of headwall.	Determine extent of problem and monitor for changes. Contact appropriate city staff for evaluation. Repair or replace as necessary.
Annual	**Missing rock or riprap** within upstream or downstream apron areas or side slopes. Active erosion within area.	Repair eroded areas as necessary. Determine cause of rock movement and replace with similar size rock or larger as necessary.

Maintenance Action Checklist		Energy Dissipators
Inspection Timing	**Conditions to Check For**	**Suggested Action**
External Energy Dissipator		
Su	**Missing layer of rock**. Exposed soil.	Replace rock of size and at depth specified. Evaluate need to replace with larger rock.
Su	**Broken wires** in gabion structure.	Replace rock as necessary and wire shut. Evaluate need to replace structure.
	Bypassing beneath structure	Backfill with smaller rock to fill the voids.
Dispersing Trench		
Sp, F	**Accumulated sediment** in pipe.	Vacuum or jet clean pipe, catching or collecting sediment for proper disposal. Sediment should be disposed of properly at a landfill or approved facility.
F, W	**Discharge flow is concentrated**, not dispersed, causing erosion.	Regrade trench lip to provide "sheet" flow. Evaluate need to redesign and rebuild.
Su	**Perforated pipe is plugged** for half of openings.	Jet clean, catching sediment for proper disposal. Evaluate need to replace pipe.
F, W	**Stormwater flows out** top of distribution manhole or catch basin.	Check outlet pipe for restrictions and clean if necessary. Confirm design storm parameters. Provide erosion control BMPs. Evaluate need to redesign and reconstruct.
F, W, Sp	**Oversaturated receiving area**, slope failure; potential for landslide.	Divert flow if possible, stabilize bank using appropriate BMPs.
Manhole Chamber		
Su	**Worn or damaged dissipating structure** or walls.	Replace structure to design standards. Evaluate need for alternative design.

Energy Dissipators: Typically located below an inlet to a stormwater facility and made of riprap, concrete, or a proprietary structure. They prevent scouring of the stormwater facility substrate.

Maintenance Action Checklist		Constructed SW Wetlands, Wet Ponds
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, Su, F	**Yard waste, trash, and debris** of more than 1 cu ft (1 garbage can)	Remove and dispose of waste. Notify appropriate city staff for potential enforcement or public education.
Annual	**Trash rack or bar screen** missing or more than 25% covered	Remove debris and dispose of waste. Repair or replace rack as necessary.
Su	**Weedy, invasive or poisonous vegetation** such as blackberry, purple loosestrife, tansy ragwort, poison oak, stinging nettles, etc. **Sparse vegetation**, sickly or overgrown.	Ask if there is an O&M plan for the facility or if an evaluation by a wetland ecologist is recommended prior to maintenance. If not, remove manually or use mechanical equipment as necessary; minimize disturbance to other vegetation. Do not spray pesticides without consulting appropriate jurisdiction. Determine cause of poor plant growth; correct problem and replant as specified or directed by appropriate city staff. If vegetation is cut, remove all cuttings and dispose offsite.
W, Sp	**Inlet, outlet, or check dam clogged** with sediment or debris.	Remove blockage manually or with appropriate equipment. Minimize disturbance to surrounding vegetation. Evaluate need for facility modifications to eliminate problem. Sediment should be disposed of properly at a landfill or approved facility.
F, W, Sp	**Sediment accumulation** interfering with treatment function.	Remove sediment using appropriate equipment to restore design contours. Minimize disturbance to surrounding vegetation and replant as necessary using specified vegetation. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Settlement of structures** dikes, berms, pipes, by 4 inches.	Notify appropriate the stormwater jurisdiction and request an inspection. Stabilize slopes or structures as necessary until final evaluation and specific solution is determined.
W, Sp, Su, F	**Odor, sludge, or unusual color**. Presence of any chemical pollutants.	Notify appropriate jurisdiction to investigate. Remove contaminant by appropriate methods and dispose of as directed by hazardous waste protocols.
Annual	**Overflow berms or spillways exposed** and either actively eroding or vulnerable to erosion.	Replace armoring or replant as specified in design plans and specifications.
Annual	**Erosion** at inlet or on side slopes or scouring of pond bottom of > 6”.	Consult appropriate city staff on cause of erosion. Stabilize eroded areas ASAP using proper erosion control methods.

Maintenance Action Checklist		Access Roads & Easements
Inspection Timing	**Conditions to Check For**	**Suggested Action**
Annual	No access road for maintenance by motorized equipment.	Determine whether an easement to a drainage feature exists. If so, obtain permits and construct gravel (or equivalent) access road. If not, call lack of easement to jurisdiction's attention.
W, Sp, Su, F	Debris blocks access or could damage vehicle tires (glass or metal).	Remove debris and dispose of properly.
Annual	Obstructions reduce clearance above road surface to less than 14 feet.	Clear overhead area to 14 feet high.
Annual	Settlement, potholes, mush spots, or ruts . Surface defect hinders or prevents maintenance access.	Grade road uniformly smooth with no evidence of settlement, potholes, mush spots, or ruts. Apply additional gravel or pit-run rock as needed
Annual	Woody vegetation or excessive weed cover blocks vehicular access.	Remove woody growth; cut back weeds regularly or when they encroach on road surface.
Annual	Erosion damage is within 1 foot of the roadway and is more than 8 inches wide and 6 inches deep.	Place fill material or rock to match the surrounding slope; Revegetate as necessary.

Maintenance Action Checklist		Vegetated Roofs
Inspection Timing	**Conditions to Check For**	**Suggested Action**
F	Leaks in roof	Identify leaks of structural problems and contact manufacturer for repair or replacement.
Wi, Sp	Clogged Drains	Remove sediment and debris.
Sp, F	Stressed or dead vegetation	Remove and replace per approved landscape plan. Irrigate, if planting in the summer.
Sp, F	Excessive weeds	Mechanically remove weeds.
Wi, Sp	Erosion	Fill eroded area with approved soil, plant to prevent erosion.
F	Excessive Vegetation	Prune and remove cut vegetation.
W, Sp	Standing Water	Check for leaks in irrigation, amend soils, clear drains.

Fact Sheet

Portland Harbor: Catch Basins

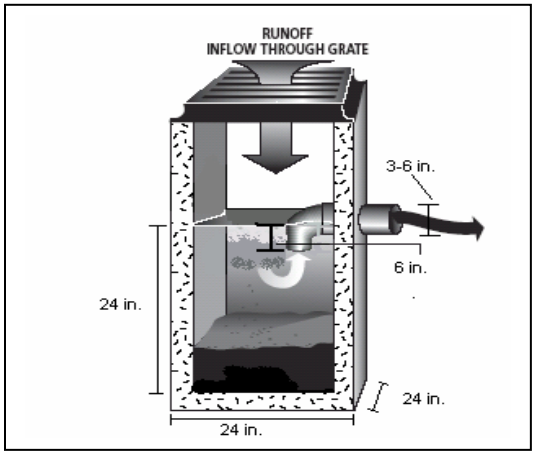
The purpose of this fact sheet is to provide basic information on catch basin design, effectiveness and sediment sampling.

A catch basin is an inlet to a storm drain system that typically includes a grate where stormwater enters, and a sump to capture sediment, debris and associated pollutants.

Catch basins are designed specifically for capturing and conveying stormwater. It is important to note, that although catch basins often have sumps for the collection of sediment, the actual design specifications and placement of catch basins are not based on expected sediment load.

Design

Trapped catch basins, commonly referred to as Lynch-style catch basins, are constructed of concrete, cast iron or steel. According to the 1997 City of Portland Uniform Plumbing Code §1108.0 - .5, catch basins must adhere to the design specifications in the drawing below:



Standard Lynch-style catch basin

Typically, on private commercial or industrial sites, there is no standard for the placement of catch basins. Stormwater drain systems are often installed based on the best professional judgment and experience of the design engineer.

The estimated peak stormwater flow rate dictates the number of catch basins needed on a site. The percent impervious surface, slope, average rainfall and rainfall intensity are all factors in calculating the peak flow rate. Catch basins are designed to hold water below the one-quarter bend outlet pipe or elbow pipe. The pipe is also referred to as a 90 degree invert.
Standing water allows some larger sediments to settle out. Any oil or grease washed into the basin will float to the top of the water level, above the elbow pipe. The catch basin is only effective for oil and grease separation if the water level is maintained above the elbow pipe intake.

Effectiveness

There are several factors that contribute to the capture efficiency of catch basins. These include: catch basin placement, catch basin design; maintenance frequency; flow rate; pollutant loading and particle size.

The sump in a catch basin captures settleable solids under low flow conditions. According to information obtained from EPA, catch basins are typically best at removing particles greater than 0.04 inches (approximately 1millimeter in diameter). They are not designed to remove total suspended solids or soluble pollutants.

There is limited data on the effectiveness of Lynch style standard catch basins to capture Total suspended solids. Several studies indicate total suspended solids may be reduced by about 20 percent in some catch basins.

Re-suspension and discharge of sediments previously collected in a catch basin is a potential problem during large storm events or first flush scenarios.

Catch basin efficiency can be improved by frequent maintenance, implementation of best management practices or with the use of catch basin inserts.

Maintenance

Maintaining catch basins is critical to effectiveness. A catch basin should be cleaned when the amount of sediment is greater than one third the distance between the bottom of the basin and the water line. It is recommended that catch basins draining industrial areas be cleaned once per month or more frequently if sediment accumulates above the one third threshold.

A study of 60 catch basins draining industrial land in Alameda County, California showed that monthly cleaning of catch basins at industrial sites increased the total pounds of collected sediment from 30 pounds when cleaned annually

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Contact: Alex Liverman
www.oregon.gov/DEQ

Last Updated: 7/25/17
By: Alex Liverman

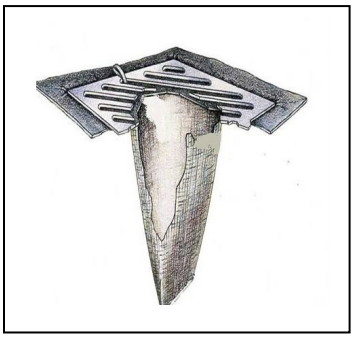
to 180 pounds when cleaned monthly. For more information on catch basin maintenance, see the City of Portland Bureau of Transportation fact sheet titled, "Catch Basin Care" at: www.portlandoregon.gov/transportation/article/319801

Best management practices

Implementation of best management practices, such as frequent sweeping and covering material storage and manufacturing areas help to reduce sediment and pollutants from getting into stormwater conveyance systems. Best management practices recommended by DEQ are available on our website at: http://www.oregon.gov/deq/FilterDocs/IndBMP021413.pdf.

Catch basin inserts

Sediment and pollutant loading can be reduced using a catch basin insert. Many different styles of catch basin inserts are available. Some provide oil absorbent strips while others just provide sediment capture. Generally, the capacity of inserts is much less than that of the actual basin, which means more frequent maintenance is required. The advantage to using an insert is that a greater amount of sediment is expected to be captured. In addition, the maintenance is much simpler since most inserts can be removed and disposed of by hand. It is recommended that inserts without overflow slots be used to provide for maximum efficiency. The method of sediment disposal depends on whether the captured sediment is contaminated. For more information, see DEQ's fact sheet "How to Determine if Your Waste is Hazardous"



Catch Basin Insert

Stormwater Management Manual

All projects within the City of Portland, including industrial sites, developing or redeveloping over 500 square feet of impervious surface, or existing properties proposing new stormwater discharges off site are subject to the requirements of the Bureau of Environmental Services Stormwater Management Manual. The manual requires 70 percent removal of total suspended solids from 90 percent of the average annual runoff. A site may achieve this level of removal by many different means. For more details, please refer to the 2016 Portland Stormwater Manual at: https://www.portlandoregon.gov/bes/64040.

Catch basin sediment sampling

Sampling and analysis of stormwater solids is typically required at Portland Harbor upland sites. This helps to characterize and evaluate the stormwater pathway and to determine if source control measures are required to prevent contaminants from impacting the river and its sediments.

Sampling of catch basin sediments can provide a time-integrated indication of contaminants that may be or may have been transported to the river. Catch basin sample analyses protocols are based on a comprehensive review of potential contaminant sources, available in-water sediment data, and other available data. Sampling should be conducted according to a DEQ approved work plan based on DEQ's Guidance for Evaluating the Stormwater Pathway at Upland Sites.

What to look for when assessing a catch basin:

- The presence and size of the sump;
- The outlet location and type;
- The pollutant loading potential of the area drained;
- The use of catch basin inserts and frequency of replacement;
- The schedule of catch basin maintenance;
- Other implemented best management practices; and
- Available storm water monitoring data and catch basin sediment data.

For more information

If you have questions regarding Portland Harbor stormwater issues, please contact your DEQ Cleanup project manager for more information, or contact Alex Liverman, DEQ's Portland Harbor Stormwater Coordinator at 503-229-5080 or liverman.alex@deq.state.or.us

Alternative formats

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.

APPENDIX D

MONTHLY STORMWATER INSPECTION FORM

MONTHLY STORMWATER INSPECTION FORM

SITE: _____ **INSPECTED BY:** _____
DATE: _____ **WEATHER CONDITIONS:** _____
TIME: _____ **GENERAL COMMENTS:** _____

CONDITIONS INSPECTION

AREA / ITEM	ACCEPTABLE? [1]	IF NOT ACCEPTABLE, DESCRIBE LOCATION AND CONDITION	ACTION NEEDED	COMPLETION DATE
Housekeeping				
Spill Kits Stocked and Accessible				
Oil/Water Separators				
Parking Lots, Roadways				
Runways / Aprons				
Fuel Tanks and Fueling Area				
Oil and Chemical Storage				
Aircraft, Vehicle, and Equipment Storage Areas				
Ditches, Culverts				
Leaks or Spills				
Outfalls				
Use additional sheets if needed				

[1] Consider the following elements during the inspection:

1. If area or item requires cleaning, replacement, maintenance, reconditioning, or repair.
2. If industrial materials, residue, or trash may have or could come into contact with stormwater.
3. If leaks or spills are present from industrial equipment, drums, tanks, and other containers.
4. If there is offsite and internal tracking of industrial or waste materials, or sediment where vehicles enter or exit the site.
5. If there is tracking or blowing of raw, final, or waste materials that results in exposure of stormwater falling on the site.
6. If there is evidence of, or the potential for, pollutants entering the drainage system.
7. If there is evidence of pollutants discharging to receiving waters at the discharge point.
8. If stormwater control measures, including treatment, infiltration devices and mass reduction measures, are functioning properly, and maintained on designed schedules.

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 001									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

OUTFALL NO. 002									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 003									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

OUTFALL NO. 004									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 005									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

OUTFALL NO. 006									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 008					
DATE:		**TIME:**		**FLOW?**	**INSPECTOR:**
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**	
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS		VISIBLE OIL SHEEN			
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)		
ODOR					

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

OUTFALL NO. 009					
DATE:		**TIME:**		**FLOW?**	**INSPECTOR:**
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**	
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS		VISIBLE OIL SHEEN			
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)		
ODOR					

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 010				
DATE:	**TIME:**	**FLOW?**	**INSPECTOR:**	
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.
SUSPENDED SOLIDS		VISIBLE OIL SHEEN		
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)	
ODOR				

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

OUTFALL NO. 011				
DATE:	**TIME:**	**FLOW?**	**INSPECTOR:**	
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.
SUSPENDED SOLIDS		VISIBLE OIL SHEEN		
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)	
ODOR				

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 013					
DATE:		**TIME:**		**FLOW?**	**INSPECTOR:**
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**	
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS		VISIBLE OIL SHEEN			
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)		
ODOR					

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

OUTFALL NO. 014					
DATE:		**TIME:**		**FLOW?**	**INSPECTOR:**
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**	
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS		VISIBLE OIL SHEEN			
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)		
ODOR					

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 091									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

OUTFALL NO. 092									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

APPENDIX E

TIER 2 CORRECTIVE ACTION, 2016 SWPCP ADDENDUM

ESA VIGIL-AGRIMIS

819 SE Morrison Street
Suite 310
Portland, OR 97214
503.274.2010 phone
503.274.2024 fax

www.vigil-agrimis.com

memorandum

date April 6, 2016

prepared for Precision Approach Engineering and Jackson County Airport Authority (Airport)

prepared by ESA Vigil-Agrimis (ESA VA)

subject Rogue Valley International – Medford Airport (RVIMA)
Addendum to the Storm Water Pollution Control Plan (SWPCP)

The purpose of this memorandum is to provide an addendum to the RVIMA SWPCP in response to an Oregon Department of Environmental Quality (DEQ)-required Tier II Corrective Action procedure. The Tier II Corrective Action response was triggered by zinc concentrations in previous stormwater samples exceeding the benchmark contained in the Airport's National Pollutant Discharge Elimination System (NPDES) 1200-Z permit.

BACKGROUND

As part of the Airport's NPDES 1200-Z permit discharge monitoring requirements, the Airport conducted monitoring at several outfalls in the second year of their permit coverage. At Outfall #2 and Outfall #9 the geometric mean for total zinc concentrations exceeded the permit benchmark for zinc (0.12 mg/L). The exceedance triggered a Tier II Corrective Action procedure, which requires revising the SWPCP. On September 17, 2015 the Airport received a letter from DEQ informing them of the Tier II Corrective Action requirements. The letter stated that the SWPCP must be revised by December 31, 2015. A follow up letter from DEQ was received on October 20, 2015 to clarify that both Outfall #2 and Outfall #9 were the subject of the required corrective action (attached).

The Airport submitted a status update memorandum on December 31, 2015. The status update memorandum described the zinc stormwater investigation that ESA Vigil-Agrimis (ESA VA) was conducting. The memorandum also explained that additional sampling would be necessary to more clearly identify the key sources of zinc.

Based on the initial status update memorandum and a follow-up discussion between Kristy Swell and ESA VA, the response deadline was extended to March 9, 2016. The implementation deadline of June 30, 2017 remains unchanged.

AFFECTED DRAINAGE BASINS

Stormwater runoff at RVIMA drains to 6 different subbasins as shown on **Figure 1** (attached). As part of the NPDES permit-required stormwater monitoring, the Airport collects stormwater samples from 10 locations at RVIMA. Zinc concentrations in stormwater samples collected from Outfall 2 and Outfall 9 have exceeded the permit benchmark. As described below, Outfall 2 drains stormwater runoff from Basin 2 and Outfall 9 drains stormwater runoff from Basin 3.

Basin 2/Outfall 2

As shown in **Figure 2**, the area of Basin 2 that drains to Outfall 2 includes the terminal building, terminal parking lot, FedEx building, Fire Station, various minor parking lots, and several other small buildings. The runoff is collected in a series of underground pipes that drain to a flow diversion structure at the southwestern boundary of Basin 2. Normal flows discharge from the flow control structure to Lone Pine Creek through an oil-water separator. High flows are diverted into an adjacent grass detention pond during heavy rain events. The outfall that discharges to Lone Pine Creek is the Outfall 2 compliance point. The existing stormwater infrastructure is well documented in Basin 2 due to the recent improvement projects within the basin.

Basin 3/Outfall 9

As shown in **Figure 3**, the area of Basin 3 that drains to Outfall 9 includes a portion of the former cross-wind runway, the Erickson Aviation building, the building parking lot, and a large paved area between the building and runway that is currently used to store metal mechanical equipment. There is an historic plane adjacent to the building with walkways and stairs that allow permanent access into the plane. These areas are not collected into the stormwater system but infiltrate in the adjacent grass area. Runoff is collected in a series of underground pipes, and due to a lack of as-built information the system is not well understood. It is likely that the southern half of the Erickson building, including the adjacent pavement, drains south to an oversized catch basin structure. This catch basin structure also collects runoff from the former cross-wind runway. The outlet pipe from the structure likely heads west across both Milligan Way and Biddle Road to a manhole located in a driveway. It is not clear where the manhole leads or what other areas might drain to it. The northern half of the Erickson building, including the adjacent pavement, drains to an outfall just south of the intersection between Cirrus Drive and Milligan Way. This outfall is the Outfall 9 compliance point and drains the site stormwater to the manhole in the driveway across Biddle Road.

ZINC STORMWATER INVESTIGATION

As the Airport's on-call engineering consultant, Precision Approach Engineering contracted ESA Vigil-Agrimis to investigate potential sources of zinc in stormwater runoff from Basins 2 and 3. On November 6, 2015 the team conducted a reconnaissance site visit to visually inspect for potential sources of zinc (for example, galvanized metal surfaces) and to identify stormwater sample locations for the stormwater investigation. The following is a summary of the site reconnaissance findings:

Basin 2

1. Fed-Ex Building – The roofing material is a possible zinc source.
2. Terminal Building – The mechanical equipment on roof is a possible zinc source.
3. Terminal parking lot – The galvanized steel catch basin grates are possible zinc sources.
4. Oil-water separator – This structure is difficult to maintain due to the flange type access points that require the removal of many bolts. The buildup of sediment within the structure could make it a source of zinc.

Basin 3

1. Erickson Aviation Building – The roofing material is a possible zinc source.
2. Mechanical equipment storage area– The mechanical equipment is a possible zinc source.

The Stormwater Monitoring Plan details the visually identified galvanized surfaces and the stormwater investigation sample points. The stormwater plan specifies collecting samples during four rain events at the identified locations.

STORMWATER INVESTIGATION RESULTS

The stormwater investigation identified one major source of zinc in each basin.

- Basin 2 – Fed-Ex Building Roof
- Basin 3 – Erickson Aviation Building Roof

Table 1 is a summary of the key zinc stormwater investigation results.

Table 1 - Key Zinc Stormwater Investigation Results				
Sampling Location		**Event 1 Total Zinc Conc. (mg/L)**	**Event 2 Total Zinc Conc. (mg/L)**	**Event 3 Total Zinc Conc. (mg/L)**
Basin 2	Downspout on SE Corner of FedEx Building	2.80	3.78	4.58
	Outfall 2 Compliance Point	0.06	0.17	0.08
Basin 3	Downspout on East Side of Erickson Aviation Building	0.91	0.22	0.42
	Outfall 9 Compliance Point	0.07	0.21	0.13

TREATMENT MEASURES

The proposed treatment measures will include source removal through replacing or applying a durable coating to the Fed-Ex and Erickson building roofs and water quality treatment with MetalZorb media.

Source Removal

The Airport will work with the building owners of the Fed-Ex building and the Erickson Aviation Building to reconfigure the roofs to prevent rainfall and stormwater runoff from contacting galvanized roofing materials. It is likely the roofing material will be painted or otherwise coated with a durable material, which is common industry approach. Alternatively, the building owner could choose to completely replace the existing roof material if it is degraded and nearing the end of the material's design life. The roof would be replaced with a non-galvanized roofing material.

Table 2 shows our projected reduction of zinc concentrations at the compliance points for Basin 2 and Basin 3. The analysis assumes complete removal of zinc from the two buildings. The projected reduction was estimated by calculating the mass of zinc in the runoff during the Pollution Control Design Storm (1 inch in 24 hours) assuming an average concentration which was calculated using the investigation sampling results.

Table 2 – Projected Reduction of Zinc Concentrations		
Basin Number	**Percent Reduction**	**Projected Zinc Concentration at the Compliance Point (mg/L)**
Basin 2	28 %	0.07
Basin 3	26 %	0.09

*Permit Benchmark = 0.12 mg/L

As shown in Table 2, the projected zinc concentrations after source removal are below the permit benchmark of 0.12 mg/L.

Water Quality Treatment

The Airport will also install two five-foot long mesh bags filled with MetalZorb heavy metal absorption media.

In Basin 2 the sock will be installed in the pipe shown on Figure 2. This location was chosen to provide a balance between targeted water quality treatment of the most significant source of zinc and limiting the volume of water to be managed by the MetalZorb in this relatively large basin.

In Basin 3 the sock will be installed in the pipe shown on Figure 3. This location was chosen to provide an easily accessible location for maintenance, and it is feasible to treat the entire basin draining to the compliance point due to the relatively small size of Basin 3.

The removal efficiency of MetalZorb is difficult to estimate for this installation due to variable runoff flow rates and variable zinc concentrations. However, as shown above, source removal is estimated to reduce zinc concentrations below the benchmark. The MetalZorb installation will reduce zinc concentrations even further below benchmark.

The MetalZorb sock will cost approximately $1,100 per year to install and maintain.

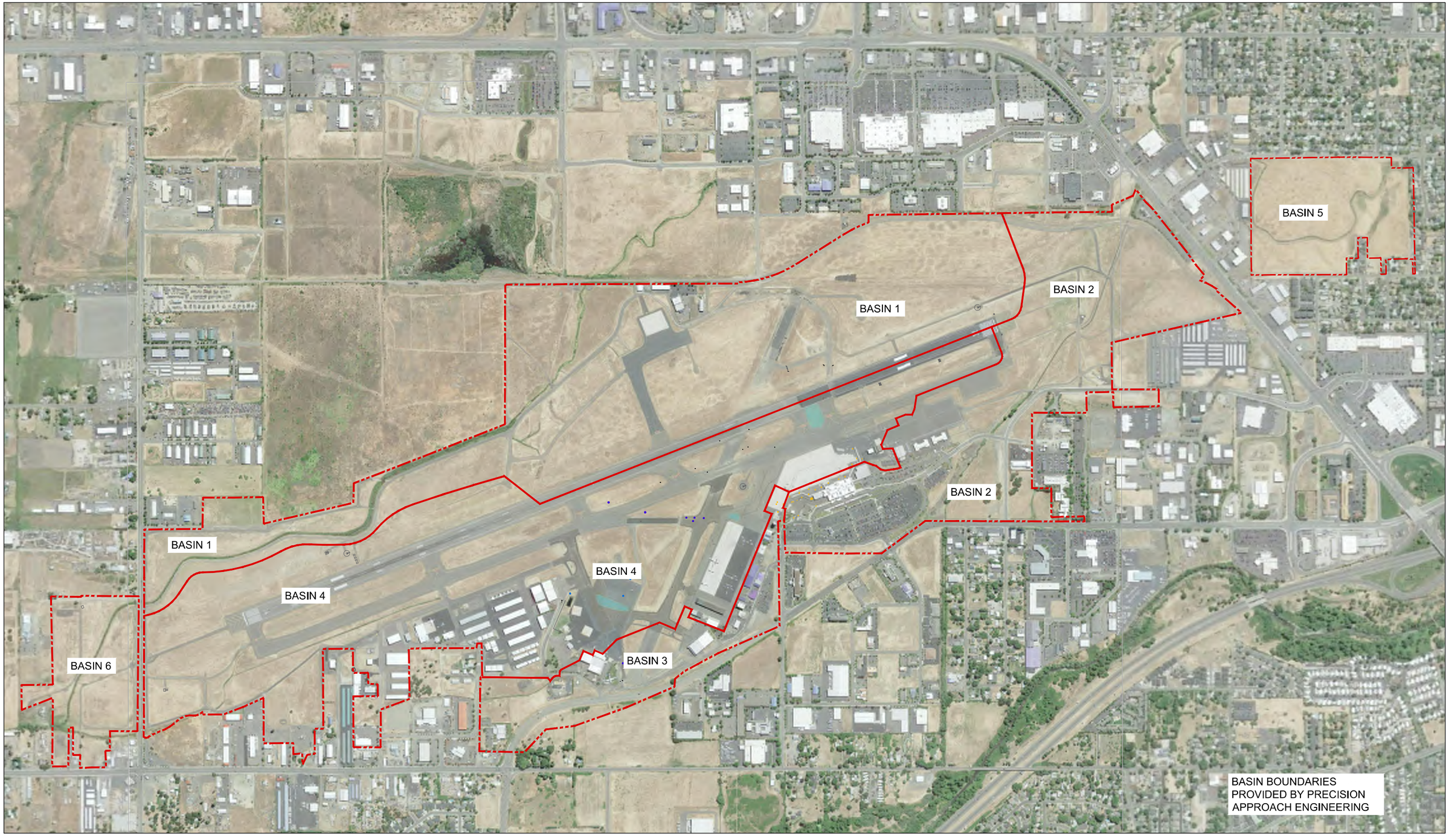
Maintenance

The MetalZorb will be visually checked at the beginning of the rainy season to make sure it is installed correctly. The media will be replaced yearly, as generally recommended for the relative pollutant loading on this site. If subsequent monitoring indicates the media is spent, then the replacement schedule will be reevaluated.

IMPLEMENTATION SCHEDULE

The Airport is currently discussing the need to address the roofs with each building owner. As described above, the work will likely consist of applying a durable coating to the existing roofing material or replacing the existing roof with new non-galvanized roofing material. Over the next several months the Airport and building owners will determine the preferred approach. The roof work will be completed by the NPDES 1200-Z permit implementation deadline of June 30, 2017.

The MetalZorb socks were installed on April 6, 2016.



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SCALE FEET

Figure 1
Ba□in O□er□iew
Rogue Valley International - Medford Airport Tier II Correcti□e Action Support Ser□ice□
Medford, Oregon

ESA VIGIL-AGRIMIS

DWG: U:\PROJECTS\PDX\Projects\2015\D150790.03 Medford Airport Tier II Support Services\08 CAD\Dwgs\Docs\Report Figure 2 Basin 2.dwg USER: ncd
DATE: Mar 18, 2016 11:18am XREFS:MFR-Alignments MFR-Basins MFR-Pavement Markings MFR-Roads and Buildings MFR-Storm Pipes MFR-Utilities MFR-Surface MFR-Electrical MFR-Shoulder Surface TB_Figure_11x17-MFR ESA Base

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SCALE FEET

Figure 2
Ba□in 2 - Outfall 2
Rogue Valley International - Medford Airport Tier II Correcti□e Action Support Ser□ice□
Medford, Oregon

ESA VIGIL-AGRIMIS

E□ISTING STORMWATER SYSTEM LINE WORK S□OWN IS APPRO□IMATE/INCOMPLETE AND BASED ON GIS INFORMATION, FIELD ST□DIES, AND AS-B□ILT DOC□MENTATION

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SCALE FEET

Figure □
Ba□in □- Outfall □9
Rogue Valley International - Medford Airport Tier II Correcti□e Action Support Ser□ice□
Medford, Oregon

ESA VIGIL-AGRIMIS

DWG: G:\2016\D150790.03 Medford Airport Tier II Support Services\08 CAD\Dwgs\Docs\Report Figure 3 Basin 3.dwg USER: rmm
DATE: Apr 06, 2016 9:46pm XREFS:MFR-Alignments MFR-Basins MFR-Pavement Markings MFR-Roads and Buildings MFR-Storm Pipes MFR-Utilities MFR-Surface MFR-Electrical MFR-Shoulder Surface TB_Figure_11x17-MFR ESA Base

Oregon
Kate Brown, Governor

Department of Environmental Quality
Western Region Eugene Office
165 East Seventh Ave., Suite 100
Eugene, OR 97401
541-686-7838
Fax 541-686-7551
TTY 711

October 20, 2015

Mr. Bern E. Case
Airport Director
Rogue Valley International – Medford Airport
1000 Terminal Loop Parkway, Suite 201
Medford, OR 97504 .

RE: **Tier II Corrective Action Required**
NPDES 1200-Z Industrial Stormwater Discharge Permit
Common Name: RVIMA
File Number: 100901, Jackson County

Dear Mr. Case:

You are receiving this letter because the facility named above has triggered Tier II Corrective Action requirements and must submit information to the DEQ by **December 31, 2015**.

After reviewing this facility's Discharge Monitoring Report (DMR), which reported the sampling results collected during the 2nd year of permit coverage, DEQ determined the geometric mean of the results for the following outfall(s) exceeds the statewide benchmark for the following parameter(s):

Outfall(s)	Parameter(s)
Outfall #2	Total Zinc
Outfall #9	Total Zinc

According to the NPDES 1200-Z Industrial Stormwater Discharge Permit, you must now select additional stormwater treatment measures, which may include a combination of source control and stormwater treatment measures, with the goal of achieving the statewide benchmark(s) in future stormwater discharges. The Stormwater Pollution Control Plan (SWPCP) must be revised to include the selected control measures, including the projected reduction of pollutant concentrations, and an implementation schedule. This portion of your SWPCP must be certified by a licensed Professional Engineer or Certified Engineering Geologist, and submitted to DEQ, along with the enclosed Tier II Revised SWPCP Checklist, no later than **December 31, 2015**. The treatment system and/or control measures must be installed no later than June 30, 2017.

If you are seeking a Tier II Waiver per Schedule A.12.d, the Waiver Report, along with the enclosed Waiver Report Checklist, must be submitted to DEQ no later than December 31, 2015.

Please carefully review the enclosed Tier II FAQ Sheet, as well as the enclosed Schedule A.12 of your permit for all of the requirements and options for your facility. If you have any questions, please contact me at 541-687-7343 or by email at riedel.mark@deq.state.or.us.

Sincerely,

Mark Riedel-Bash, RG
Stormwater Specialist

Enclosures: Schedule A.12 Tier II Excerpt from 1200-Z Industrial Discharge Permit
Tier II Revised SWPCP/Waiver Report Checklist
Tier II Fact Sheet

ROGUE VALLEY INTERNATIONAL-MEDFORD AIRPORT

STORMWATER POLLUTION CONTROL PLAN

October 15, 2021

Prepared by:

Alpine Environmental Consultants, LLC
Mr. Doug Keeler, P.E. and Mr. Jonathan Williams, R.G.
12210 Antioch Road
White City, Oregon 97503
541.944.4685
jwilliams@alpine-env-llc.com

Prepared for:

Site Operator:

Jackson County Airport Authority
1000 Terminal Loop Pkwy, Suite 201
Medford, Oregon 97504

Site Contact Person:

Mr. Brian H. Gebhard
Director of Operations & Maintenance
3570 Fire Station Spur
Medford, Oregon 97504
541.776.7228
✈ GebharBH@JacksonCounty.org

Site Physical Address:

1000 Terminal Loop Pkwy, Suite 201
Medford, Oregon 97504
Jackson County

DEQ File Number: 100901 / EPA Number: ORR801628 / Facility SIC Code: 4581

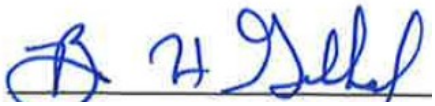
ALPINE ENVIRONMENTAL CONSULTANTS, LLC

TABLE OF CONTENTS

APPENDICES

1.0 PLAN CERTIFICATION

Per 40 CFR 122.22, 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 gathered and evaluated 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.

Alpine Environmental Consultants, LLC (Preparer)	Jackson County Airport Authority (Owner / Operator)
Doug Keeler, P.E.	Brian H. Gebhard
By	*By*
Senior Engineer	Director of Operations & Maintenance
Title	*Title*
	
Signature	*Signature*
10/15/2021	10/15/2021
Date	*Date*

2.0 INTRODUCTION

The Clean Water Act passed in 1972 established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point sources of pollution that discharge to waters of the United States. The Environmental Protection Agency manages the NPDES program and delegates administration to state environmental agencies. The Oregon Department of Environmental Quality (DEQ) administers the NPDES program in Oregon.

Stormwater runoff from industrial Sites can be a significant source of water pollution. Rain and snow impacted by pollutants such as oil and metals can convey such pollutants to lakes, rivers, and streams. For this reason, the NPDES permit program regulates stormwater discharges from industrial Sites. DEQ created the 1200-Z general permit to authorize the discharge of stormwater from industrial activities into waters of the state. Facilities covered by the 1200-Z permit include those with the primary Standard Industrial Classification (SIC) code 45 (Transportation by Air) that have vehicle maintenance shops (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, and/or airport deicing operations.

As described in its letter dated May 17, 2021, DEQ reissued the NPDES Industrial Stormwater Discharge 1200-Z permit (permit) to the Rogue Valley International – Medford Airport (Site, or Airport). The letter is presented in this Stormwater Pollution Control Plan (SWPCP, or plan) as **Appendix A**. The permit, which became effective July 1, 2021, and is scheduled to expire June 30, 2026, is kept at the Site and is to be made available for review to DEQ upon request.

This SWPCP is a guide for Site personnel and staff of the Site's tenants to protect stormwater quality as part of their day-to-day operations. The plan describes the Site's industrial activities, drainage areas, potential pollutants, Site controls, monitoring requirements, and permit benchmark exceedance actions. Numerous tenants operate businesses at the Site and conduct aviation-related support functions. In accordance with federal and state regulations, tenants are included as co-permittees under the Site's stormwater program, or they must obtain separate permit coverage for their discharges. Site personnel and tenants are responsible for stormwater compliance in their operations. The control measures outlined in this plan are intended to meet the requirements of Schedule A and Schedule E of the 1200-Z permit.

The permit requires the Site to revise its existing SWPCP and implement it in accordance with Schedule A of the permit. This October 2021 revision by Alpine Environmental Consultants, LLC (AEC) addresses significant, recent changes to the Site and changes to the 1200-Z permit issued by DEQ. In addition,

the Site is required to submit a copy of the signed, revised plan to DEQ, along with DEQ's document *DEQ 2021 Industrial Permit Stormwater Pollution Control Plan Checklist*. The revised plan and checklist are due to be received by DEQ by October 15, 2021, per the due date extension granted by DEQ on October 1, 2021.

PLAN REVISION HISTORY

This revised SWPCP builds on previous plans prepared by the authors listed below:

- 2007 – David Evans and Associates and Land and Water Environmental Services, Inc. prepared the original SWPCP.
- 2008 – David Evans and Associates updated the 2007 SWPCP.
- 2012 – Hardey Engineering & Associates, Inc. updated the 2008 SWPCP by addendum to reflect Site improvements and address updates to the 1200-Z permit.
- 2016 – ESA Vigil-Agrimis updated the plan by addendum in response to a DEQ Tier 2 Corrective Action.
- 2018 – OTAK, Inc. revised the plan to address changes in the updated 1200-Z permit that became effective October 22, 2018.
- 2021 – AEC revised the plan to address new permit requirements and significant changes to the Site.

3.0 SITE DESCRIPTION

The Airport is owned and operated by Jackson County. The Site is located approximately three miles north of the City of Medford, as shown on **Figure 1**. Most of the Site is bounded by Table Rock Road and Biddle Road on the west, International Way to the East, East Vilas Road to the North, and Crater Lake Highway (Oregon Highway 62) to the south. There are two areas (Basins 5 and 6) located outside this area. One area identified as Basin 5 is located south of Crater Lake Highway and the other area identified as Basin 6 is located north of East Vilas Road. No industrial activities take place in Basins 5 and 6. The Site is a primary services airport that serves private, commercial, and business aircraft with a single runway, 14-32.

The Site is in operation 24 hours a day. Commercial flights operate from 5:00 AM to 12:45 AM, and Site administrative hours are 8:00 AM to 5:00 PM. Annually there are more than 7,500 commercial flight departures, the majority of which are non-propeller departures.

SITE MAPS

The SWPCP includes Site specific maps showing Site location, activities, drainage, and the storm sewer system. The General Location Map (**Figure 1**) depicts the location of the Site within its surrounding area. The Airport Activities Site Maps (**Figure 2** and **Figure 3**) show the following features:

1. Stormwater Outfalls (monitored and unmonitored)
2. Drainage area (basin) for each stormwater outfall
3. Paved areas and buildings within each drainage area
4. Location and description of authorized non-stormwater discharges (vehicle washing areas, etc.)
5. Material handling and access areas include:
    a. Fueling areas
    b. Chemical storage areas (deicing fluid storage and fuel storage areas)
    c. Vehicle cleaning areas
    d. Sewage transfer and disposal areas (aircraft holding tank transfer area and dump station)
6. Used oil, hazardous waste treatment, storage and disposal facilities
7. Location of spill prevention and cleanup materials (spill kits)

The Drainage and Storm Sewer Site Maps (**Figure 4** through **Figure 7**) show one or more of the following features:

1. Outfalls (monitored and unmonitored)
2. Drainage area for each stormwater outfall (basins)
3. Drainage patterns (stormwater runoff directions)
4. Location of wetlands, and other surface water bodies
5. Conveyance and discharge structures (piping, ditches, etc.)
6. Existing structural control measures for minimizing pollutants in stormwater runoff (oil/water separators, Lynch-style catch basins, etc.)
7. Stormwater features that reduce flow or minimize impervious surfaces (detention ponds, etc.)

The following items are not shown on the map because they are not applicable:

1. Areas used for outdoor manufacturing, treatment, and disposal of significant materials
2. Locations of wells (including groundwater wells, waste injection wells, seepage pits,and drywells)
3. Location of springs
4. Locations of residual contamination to soil and/or groundwater

DRAINAGE AREA DESCRIPTIONS AND PERVIOUS SURFACES

Receiving Waters – General Description

Stormwater from the Site flows directly to Upton Slough and Lone Pine Creek and indirectly to Bear Creek. Upton Slough flows through Basins 1 and 4 from southeast to northwest and empties into Bear Creek northwest of the Site. Lone Pine Creek flows through Basins 1 and 2 from southeast to northwest and joins Bear Creek west of the Site. Parts of the Site also drain to the Rogue Valley Sewer Services (RVSS) system of ditches and storm drains. The locations of all of these ditches and storm drains off-Site are not well mapped, but ultimately discharge to Bear Creek within the City of Medford and the City of Central Point. RVSS is a regional, public organization providing stormwater collection and transmission services to the Site. Upton Slough, Lone Pine Creek, Bear Creek, and the RVSS system are part of the Middle Rogue River watershed.

Impairments

The Clean Water Act section 303(d) requires states to inventory and evaluate state waters (rivers, streams, lakes, etc.) and develop lists of waters that do not fully support beneficial uses. These inventories are known as *303(d) Lists* and characterize waters as fully supporting, impaired or threatened. Beneficial uses include drinking water, fisheries, and contact by people for recreation. Each beneficial use requires a specific water to meet a set of water quality standards. Water quality standards for Oregon are established in Oregon Administrative Rule (OAR) 340-041. Per Schedule A of the 1200-Z permit, the Site must not cause or contribute to a violation of water quality standards.

If a water is categorized as impaired, technology-based regulations and other required controls are not sufficient to support the beneficial uses established by the state. The law requires the state to develop Total Maximum Daily Loads (TMDLs) for each pollutant exceeding a water quality standard for impaired waters. The state allocates the loading capacity among the point and non-point sources that contribute pollutants to a water. Impaired waters without a TMDL require special monitoring per Schedule B of the 1200-Z permit. The specific monitoring requirements and concentrations are detailed in **Section 5.0** under Stormwater Monitoring Requirements. A summary of Receiving Water Impairments for waters receiving runoff from the Site is presented in **Table 1**.

Table 1 – Receiving Water Impairments

CONSTITUENT	IMPAIRMENT CATEGORY	ADDITIONAL MONITORING REQUIREMENT
RECEIVING WATER: BEAR CREEK		
Aquatic weeds or algae	Category 4a (impaired, TMDL approved)	No
Dissolved oxygen (October 15 – May 15)	Category 4a (impaired, TMDL approved)	No
pH	Category 4a (impaired, TMDL approved)	No
E.coli	Category 4a (impaired, TMDL approved)	No

CONSTITUENT	IMPAIRMENT CATEGORY	ADDITIONAL MONITORING REQUIREMENT
Arsenic	Category 5 (water quality limited, no TMDL)	No
Dissolved oxygen (year-round)	Category 5 (water quality limited, no TMDL)	No
Alkalinity	Category 2 (attaining some criteria/uses)	No
Ammonia	Category 2 (attaining some criteria/uses)	No
Cadmium	Category 2 (attaining some criteria/uses)	No
Chlorophyll a	Category 3 (insufficient data)	No
Chromium	Category 2 (attaining some criteria/uses)	No
Copper	Category 2 (attaining some criteria/uses)	No
Flow Modification	Category 4c (water quality limited, not a pollutant)	No
Habitat Modification	Category 4c (water quality limited, not a pollutant)	No
Lead	Category 2 (attaining some criteria/uses)	No
Nickel	Category 2 (attaining some criteria/uses)	No
Pesticides	Category 3 (insufficient data)	No
Phosphate Phosphorus	Category 3b (insufficient data, potential concern)	No
Phosphorus	Category 4a (impaired, TMDL approved)	No
Sedimentation	Category 3 (insufficient data)	No
Selenium	Category 2 (attaining some criteria/uses)	No

CONSTITUENT	IMPAIRMENT CATEGORY	ADDITIONAL MONITORING REQUIREMENT
Silver	Category 2 (attaining some criteria/uses)	No
Temperature	Category 4a (impaired, TMDL approved)	No
Zinc	Category 2 (attaining some criteria/uses)	No
RECEIVING WATER: LONE PINE CREEK		
pH	Category 5 (water quality limited, no TMDL)	No
Dissolved oxygen	Category 5 (water quality limited, no TMDL)	No
E. Coli	Category 4a (water quality limited, TMDL approved)	No
Temperature (Summer)	Category 4a (water quality limited, TMDL approved)	No
RECEIVING WATER: UPTON SLOUGH		
N/A	N/A	No

SITE DRAINAGE AND AIRPORT ACTIVITIES

The Site has been broken into six drainage basins based upon review of topographic maps. The basin features are illustrated in the following maps:

Figure 2 Site Map (North) Airport Activities
Figure 3 Site Map (South) Airport Activities
Figure 4 Site Map (North) Drainage and Storm Sewer
Figure 5 Site Map (South) Drainage and Storm Sewer
Figure 6 Site Map (North) Sub-basin Drainage and Outfalls
Figure 7 Site Map (South) Sub-basin Drainage and Outfalls

Each basin is described below by outlining the drainage characteristics, the activities within each basin, and the potential pollutants from these activities that could impact stormwater quality. A summary of the approximate sizes of the basins and sub-basins feeding the Outfalls is presented in **Table 2**, including the approximate sizes of impervious areas. A list of Potential Site Stormwater

Pollutants for each basin is summarized in **Table 3**, including the industrial activities occurring in each basin and potential pollutants related to those activities.

Table 2 – Basin and Sub-Basin Area Summary

Basin or Sub-Basin Number [1]	Outfall Number	Total Area or Total Sub-Basin Area Contributing to Outfall (acres)	Impervious Area or Area Contributing to Outfall (acres)	Percent Impervious Area
1	**N/A**	272.9	27.6	10
2	**N/A**	150.9	41.2	27
3	**N/A**	64.4	35.6	55
4	**N/A**	333.6	141.4	42
5	**N/A**	47.2	0.0	0
6	**N/A**	40.4	0.0	0
Total Site	**N/A**	909.4	245.8	27
1-006	**006**	58.4	9.7	17
1-013	**013**	56.2	14.4	26
2-002	**002**	24.2	20.9	86
2-004	**004**	10.6	10.1	96
2-008	**008**	0.47	0.43	91
2-007	**007**	0.32	0.03	9
2-010	**010**	2.2	1.5	70
2-012	**012**	0.95	0.82	87
2-014	**014**	9.8	4.7	48
3-001	**001**	18.2	16.0	88

Basin or Sub-Basin Number [1]	Outfall Number	Total Area or Total Sub-Basin Area Contributing to Outfall (acres)	Impervious Area or Area Contributing to Outfall (acres)	Percent Impervious Area
3-003	**003**	5.5	4.1	74
3-009	**009**	3.2	1.9	60
3-091	**091**	6.8	4.8	71
3-092	**092**	5.0	3.6	71
3-011	**011**	8.6	5.8	68
4-005	**005**	336.5	139.8	42

N/A = Not applicable

[1] = Nomenclature starts with Basin Number, followed by Sub-Basin Number defined by Outfall Number

Table 3 – Potential Site Stormwater Pollutants

BASIN NUMBER(S)	INDUSTRIAL ACTIVITIES	POTENTIAL POLLUTANT(S)
1, 2, 3, 4	Aircraft and ground vehicle fueling Fuel storage Aircraft and ground vehicle maintenance outdoors Runways, taxiways, aprons, service roads	Petroleum and other hydrocarbons
3, 4	Aircraft deicing operations	Propylene glycol
1, 2, 3, 4	Deicing of sidewalks, runway, & taxiways as needed	Sodium formate/acetate
1, 2, 3, 4	Vegetation control (non-industrial activity)	Glyphosate (Roundup brand)
2, 4	Aircraft and ground vehicle washing outdoors	Detergents and solvents

BASIN NUMBER(S)	INDUSTRIAL ACTIVITIES	POTENTIAL POLLUTANT(S)
2, 3, 4	Aircraft and ground vehicle maintenance outdoors	Metals
4	Material transfer (USFS tanker base)	PHOS-CHEK brand fire retardant
2, 4	Material transfer - at Aircraft Rescue and Fire Fighting Station (ARFF Station)	Nitrogen
2, 4	Material transfer – at ARFF Station	Aqueous film forming foam
2, 3	Material transfer (aircraft wastewater holding tanks, dump station)	Untreated domestic wastewater

BASIN 1

Basin 1 is located along the eastern property line of the Site. The basin is approximately 273 acres in size, and about 28 acres (10%) of this area is impervious. Much of the pervious area that exists is currently grassy fields. Runoff in Basin 1 generally drains overland from south to north and through a series of underground pipes and roadside ditches. Stormwater runoff from Basin 1 discharges at Outfalls 006 and 013.

Outfall 006. Stormwater collected in underground pipes from the airport runway and taxiway discharges at Outfall 006 to a vegetated swale which joins Upton Slough. Outfall 006 is a monitoring point.

Industrial activities:

- Runways
- Taxiways
- Service roads

Additional development:

- Aircraft hangar
- Equipment storage building

Outfall 013. Stormwater collected in underground pipes from the airport apron, taxiway and buildings housing airport storage, Immigration and Customs Enforcement (ICE), and the Free Trade Zone (FTZ) discharges at Outfall 013 through roadside ditches to Upton Slough. Outfall 013 is a monitoring point.

Industrial activities:

- Runways
- Taxiways
- Service roads

Additional development:

- Site storage building
- FTZ building
- ICE building

BASIN 2

Basin 2 is located along the southern-southwestern property lines of the Site. The basin is approximately 151 acres in size, and about 41 acres (27%) of this area is impervious. Runoff from Basin 2 generally drains from north to south overland and through a series of underground pipes and discharges to Lone Pine Creek east of Biddle Road at Outfalls 002, 004, 007, 008, 012, and 014. Stormwater collected from the rental car facility passes through a stormwater detention pond and discharges at Outfall 010 near Lawnsdale Road and into the RVSS system of ditches and storm drains.

Outfall 002. Stormwater collected in underground pipes from the airport apron, terminal building roof, terminal parking lot, ARFF Station, and the FedEx building discharges at Outfall 002 to a mitigation wetland. Two oil/water separators treat runoff before it reaches Outfall 002. One is located south of the terminal building and treats runoff from the airport cargo apron before it joins the rest of the basin's runoff. Normal flows discharge from the flow control structure to Lone Pine Creek through an oil/water separator. Higher flows are diverted into an adjacent grass detention pond during heavy rain events. Outfall 002 is a monitoring point.

Industrial activities:

- Taxiways
- Service roads
- Aircraft and ground vehicle fueling
- Fuel storage
- Aircraft and ground vehicle outside maintenance (aircraft parking apron, ARFF Station)
- Ground vehicle outside washing (FedEx, ARFF Station)

Additional development:

- Terminal building
- Terminal parking lot

Outfalls 004 and 008. Stormwater collected in underground pipes from parking areas as well as the roofs of the cargo buildings and snow removal equipment storage buildings passes through a stormwater detention pond and discharges at Outfalls 004 and 008 via mitigation wetlands to Lone Pine Creek. The South Drainage and Storm Sewer Map (Figure 5) depicts that Outfalls 004 and 008 drain similar activities, but both outfalls are monitored. Outfalls 004 and 008 are monitoring points.

Industrial activities:

- Taxiways
- Service roads
- Ground vehicle maintenance (snow removal equipment building)
- Ground vehicle outside washing (snow removal equipment building)

Additional development:

- Cargo buildings
- Vehicle parking lot

Outfalls 007 and 012. Stormwater collected from street drains on Bullock Road and the intersection of Bullock Road and Terminal Spur Road is carried by underground pipes and discharges to Lone Pine Creek at Outfalls 007 and 012. Because no industrial activities take place in the areas contributing stormwater flow to Outfalls 007 and 012, they are not

monitoring points.

Industrial activities:

- None

Additional development:

- Access roads

Outfall 014. Stormwater collected in underground pipes from portions of the taxiway and airport apron discharges at Outfall 014 to Lone Pine Creek. Outfall 014 is a monitoring point.

Industrial activities:

- Taxiway
- Site apron

Additional development:

- None

Outfall 010. Stormwater collected from the rental car facility roof and parking areas passes through a stormwater detention pond and discharges from Outfall 010 to Lawnsdale Road and the RVSS system of ditches and storm drains. Outfall 010 is a monitoring point.

Industrial activities:

- Ground vehicle fueling (car rental facility)

Additional development:

- Vehicle parking lot

BASIN 3

As shown in the (South) Airport Activities Map (**Figure 3**), Basin 3 is along the western property line of the Site and lies between Basin 4 to the north and Basin 2 to the south. The basin is approximately 64 acres in size, and about 36 acres (56%) of this area is impervious. Basin 3 discharges at Biddle Road at Outfalls 001, 009 and 011. Outfalls 003, 091, and 092 discharge as described below.

Outfall 001. Stormwater collected in underground pipes discharges at Outfall 001 to Biddle Road and into the RVSS system of ditches and storm drains. Activities and structures in the area include a portion of the airport apron, a portion of the taxiways, the control tower, the administration building, fixed base operator (FBO) buildings and operations. An oil/water separator treats runoff from the taxiway system, aircraft parking, aircraft fueling, and fuel storage tanks, but not the building roofs. Outfall 001 is a monitoring point.

Industrial activities:

- Taxiways
- Service roads
- Aircraft fueling
- Fuel storage
- Outside aircraft maintenance on the aircraft parking apron
- Aircraft deicing
- Material transfer of aircraft wastewater holding tanks and deicing chemicals
- Taxiways

Additional development:

- FBO buildings
- Air traffic control tower
- Site administration building
- Mercy Flights Emergency Response Center

Outfall 003. Stormwater is collected in underground pipes from a portion of the airport apron, hangar, and other aircraft buildings and passes through an oil/water separator and discharges to the RVSS at Milligan Way north of the Superior Aircraft Maintenance driveway at Outfall 003. Outfall 003 is a

monitoring point.

Industrial activities:

- Outside aircraft maintenance (aircraft parking apron)

Additional development:

- Site buildings
- Vehicle parking

Outfall 009. Stormwater is collected in underground pipes from the former crosswind runway, the Erickson Aviation building, the building parking lot, and a large, paved area between the building and runway that is currently used to store mechanical equipment and discharges to Outfall 009. The Erickson Aviation building roof was identified as a potential source of zinc as part of a Tier 2 corrective action in 2016. The roof has been coated to prevent contact with stormwater. Additionally, runoff from a portion of the basin, including the Erickson Aviation building roof, is routed through a newly constructed vegetated swale and discharges just south of the intersection between Cirrus Drive and Milligan Way. The roof coating and vegetated swale were constructed in response to a Tier 1 Corrective Action triggered by the exceedance of zinc benchmarks. Outfall 009 is a monitoring point.

Industrial activities:

- Taxiways
- Service roads
- Aircraft fueling
- Fuel storage
- Aircraft deicing
- Outside aircraft maintenance (on aircraft parking apron)

Additional development:

- Erickson Aviation building

Outfall 091. Stormwater runoff is collected from the access roads adjacent to Milligan Way into a catch basin in the median of the access roads. Outfall 091 was formerly identified as Outfall 009.1 in

Discharge Monitoring Reports (DMRs), but the former nomenclature is not consistent with new permit requirements for outfall naming, allowing only three digits. Outfall 091 is a monitoring point.

Industrial activities:

- Taxiways
- Service roads
- Aircraft deicing

Additional development:

- None

Outfall 092. Stormwater runoff is collected from the aircraft taxiway adjacent to Milligan Way and from Milligan Way itself into a catch basin between the access road and the taxiway. Outfall 092 was formerly identified as Outfall 009.2 in DMRs, but the former nomenclature is not consistent with new permit requirements for outfall naming, allowing only three digits. Outfall 092 is a monitoring point.

Industrial activities:

- Taxiways
- Aircraft deicing

Outfall 011. The Terminal Parking Lot collects stormwater runoff in two detention ponds then drains through a vegetated swale to the RVSS system of ditches and storm drains at Biddle Road from Outfall 011. Outfall 011 is a monitoring point.

Industrial activities:

- None

Additional development:

- Terminal parking lot

BASIN 4

Basin 4 is located along the northern-northwestern property lines of the Site. The basin is approximately 334 acres in size, and about 141 acres (42%) of the area is impervious. Drainage in the basin flows from south to north, eventually discharging into Upton Slough. Stormwater discharges from this basin at Outfall 005.

Outfall 005. Runoff collected in underground pipes from a portion of the runway and taxiway system, general aviation aircraft parking and hangars, two FBOs (Jet Center Medford and Million Air), Civil Air Patrol, Erickson Aviation, aircraft fueling, fuel storage tanks, several aircraft storage hangar buildings, and the United States Forest Service (USFS) tanker base discharges to a ditch running parallel to taxiway A. Two stormwater detention facilities drain these areas. The USFS fire retardant transfer area drains to a lined retention pond east of the tanker base. Stormwater from the northeast portion of the runway and taxiway collects in underground pipes and discharges to a ditch north of taxiway A. Runoff flows through ditches until it leaves the basin at the northwest corner at Outfall 005. Outfall 005 is a monitoring point.

Industrial activities:

- Runways
- Taxiways
- Service roads
- Aircraft fueling
- Fuel storage
- Aircraft outside washing
- Aircraft outside maintenance
- Material transfer of fire retardant

Additional development:

- FBO buildings
- Erickson Aviation building
- Aircraft hangars

BASINS 5 AND 6

Basins 5 and 6 consist of approximately 47 and 40 acres, respectively, and are entirely pervious. These basins are part of the runway protection zone and are mostly undeveloped. Neither basin is connected to the Site's drainage system. Runoff from Basin 5 flows overland to a grassy ditch and is collected by the RVSS system of ditches and storm drains. Runoff from Basin 6 flows overland to Upton Slough. There are no outfalls associated with either basin.

Industrial activities:

- None

Additional development:

- Access roads

4.0 SITE CONTROLS

This section describes the Site controls used to reduce the contribution of pollutants from the Site to stormwater discharges.

NARRATIVE TECHNOLOGY-BASED EFFLUENT LIMITS

EXPOSURE MINIMIZATION

Permit Requirement. Minimize exposure of manufacturing, processing, material storage areas, including loading and unloading, disposal, cleaning, maintenance and fixed fueling areas to rain, snow, snowmelt and runoff.

Site Activities and Controls

Aircraft and ground vehicle fueling:

- Aircraft fuel loading is done using closed hose transfer connections.
- Spill cleanup kits are stored near fueling points. Spills are immediately contained by absorption materials. Spill kits at the Site contain adsorbent pads, kitty litter, booms, peat moss, storm drain plugs, and/or storm drain covers.

Fuel storage:

- Fuel loading into storage tanks is done using closed hose transfer connections.
- Spill cleanup kits are stored near fueling points. Spills are immediately contained by absorption materials.
- All five fuel farms are enclosed within chain link fences and have emergency shut off valves.
- Fuel is stored in double-walled tanks to provide secondary containment of contents.

Aircraft and ground vehicle outside maintenance:

- Most aircraft maintenance and repair activities take place in hangars.
- Firefighting and snow removal vehicles and equipment are stored and maintained inside buildings.
- Small spills of lubricating oils, hydraulic oils, and degreasers that may occur when maintaining

aircraft and vehicles are cleaned up with absorbent materials and wastes are properly disposed of. Municipal waste is removed from the Site every day of the week except Sunday and no hazardous waste is generated.

- All indoor maintenance facilities have floor drains connected to the sanitary sewer collection system.

Material Transfer:

- The aircraft wastewater holding tank dump station is contained within a small concrete berm.
- Spill kits are located on the wastewater transport vehicles and at the wastewater dump station. Spills are immediately contained and cleaned up with absorbent spill cleanup materials.

Chemical Storage Areas:

- Engine fluids, solvents, and degreasers are stored inside hangars. Hangar floor drains discharge to the sanitary sewer system.
- Aircraft deicing solution (propylene glycol) is stored in a shed with walls on two sides. The tanks are located on concrete pavement graded and curbed to contain spills. The storage shed has floor drains that connect to the sanitary sewer system.
- Pavement deicing granules (sodium acetate) are stored in a dry, enclosed room in the snow removal equipment building.
- The herbicide brand Roundup is stored in small quantities (less than 10 gallons) in the snow removal equipment building.

Building and Grounds Maintenance:

- The Site uses the herbicide brand Roundup to control vegetation. The product is applied by a licensed pesticide applicator in accordance with its label and is stored indoors.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

OIL AND GREASE

Permit Requirement. Employ oil/water separators, booms, skimmers and/or other methods to eliminate or minimize oil and grease contamination in stormwater discharges.

Site Activities and Controls

Aircraft, Ground Vehicle outside Maintenance and Aircraft and Ground Vehicle Fueling:

Oil-Water Separators. The seven oil/water separators are deployed to remove petroleum products from stormwater. Those in use are shown on **Figure 4** and **Figure 5**:

- Three oil/water separators are deployed in Basin 2. One treats runoff from the airport cargo apron before it joins runoff from the rest of the basin. The second treats runoff immediately before it discharges from Outfall 002, and the third treats runoff at the rental car fueling and washing facility before it discharges to Outfall 010.
- Three oil/water separators are deployed in Basin 3. One treats runoff from a portion of the airport passenger apron before it joins runoff from the rest of the basin and discharges from Outfall 001. The second treats runoff from the airport apron west of Taxiway B before it discharges from Outfall 003, and the third treats runoff from the Million Air Fuel Farm before it discharges into a stormwater detention basin and ultimately Outfall 092.
- A single oil/water separator is deployed in Basin 4. This oil/water separator treats runoff from a portion of the airport passenger apron and a portion of Taxiway A prior to joining runoff from the rest of the basin and discharging from Outfall 005.

Fuel Storage Areas and Runways, Taxiways, and Service Roads:

- The taxiways and runways are adjacent to grassy areas and vegetated ditches that provide a degree of filtration of stormwater prior to entering catch basins.

- Catch basins. In select areas, the Site employs Lynch-style catch basins with sediment traps and oil trapping baffles on the outlet pipe as an additional treatment method to reduce oil, grease, and sediment levels in stormwater runoff. These catch basins provide treatment to stormwater flows in areas of the Site that do not flow through oil/water separators.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

WASTE CHEMICALS AND MATERIALS DISPOSAL

Permit Requirement. Recycle or properly dispose of wastes to eliminate or minimize exposure of pollutants to stormwater. Cover all waste contained in bins or dumpsters where there is a potential for drainage of stormwater through the waste to prevent exposure of stormwater to these pollutants. Acceptable covers include storage of bins or dumpsters under roofed areas and/or the use of lids or temporary covers such as tarps.

Site Activities and Controls

Material Transfer:

- The aircraft wastewater holding tank dump station is contained within a small concrete berm. The dump station discharges to the sanitary sewer.
- Spill kits are located on the wastewater transport vehicles and at the wastewater dump station. Spills are immediately contained and cleaned up with absorbent spill cleanup materials.
- Fire retardant from the USFS tanker base is collected in a retention pond and recycled.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

EROSION AND SEDIMENT CONTROL

Permit Requirement. Stabilize exposed areas and contain runoff using structural and nonstructural controls to minimize erosion of soil at the Site and sedimentation. Employ erosion control methods, such as vegetating exposed areas, graveling or paving to minimize erosion of soil at the Site. Employ sediment control methods, such as detention facilities, vegetated filter strips, bioswales, flow velocity dissipation devices or other permanent erosion or sediment controls to minimize sediment loads in

stormwater discharges. For activities that involve land disturbance, the Site must contact the local municipality to determine if there are other applicable requirements related to stormwater control.

Site Activities and Controls

All Industrial Activity:

- The Site grounds have surfaces of asphalt, concrete, gravel, or natural grassy vegetation to control erosion and sediment transport.
- Bare soil and stockpiles are not typically present during day-to-day operations.
- The Site frequently sweeps paved surfaces, which reduces sediment entering the storm system.

Construction:

- Appropriate erosion and sediment control best management practices (BMPs) are employed during improvement projects to minimize disturbance and the release of sediment into the storm system.
- Construction activities over 1 acre will operate under a 1200-C series stormwater construction permit. All construction activities on-Site will employ appropriate erosion and sediment control BMPs.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

DEBRIS CONTROL

Permit Requirement. Employ screens, booms, settling ponds, or other methods to eliminate or minimize waste, garbage and floatable debris in stormwater discharges and ensure that this debris is not discharged to receiving waters.

Site Activities and Controls

All Industrial Activity:

- All dumpsters at the Site are covered.
- The Site frequently sweeps paved areas which reduces debris entering the stormwater collection system.
- Catch basins, vegetated swales, and detention ponds are used to reduce the volume of debris in stormwater discharges and are cleaned as needed based upon regular inspections.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

DUST GENERATION AND VEHICLE TRACKING OF INDUSTRIAL MATERIALS

Permit Requirement. Minimize generation of fugitive dust and tracking on exposed surfaces within and between operational areas and off-Site of soil, particulate, and raw, final, or waste materials.

Site Activities and Controls

All Industrial Activity:

- The Site does not produce dust from smokestacks or vents and does not stockpile raw materials.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

HOUSEKEEPING

Permit Requirement. Routinely clean all exposed areas that may contribute pollutants to stormwater

with measures such as daily sweeping, litter pick-up, keeping materials orderly and labeled, prompt clean-up of spills and leaks, proper maintenance of vehicles and storing materials in appropriate containers.

Site Activities and Controls

All Industrial Activities:

- The existing oil/water separators are inspected and cleaned annually to provide the maximum reduction of oil and grease in the flow.
- Catch basins are inspected regularly and cleaned as needed to reduce oil, grease, sediment, and debris in the stormwater runoff.

Tenant/Operator Responsibilities:

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

SPILL PREVENTION AND RESPONSE PROCEDURE

Permit Requirement. Minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop and implement plans that include methods for spill prevention and clean-up and notification procedures. Properly notify Site leadership and agencies in the event of a spill as appropriate.

Site Activities and Controls

- Aircraft, Ground Vehicle outside Maintenance and Aircraft and Ground Vehicle Fueling
- Spill Prevention

All Site personnel who handle fuel or chemical products are responsible for spill prevention. Spill Response Actions from the Site Spill Prevention Countermeasures and Control (SPCC) Plan are included in **Appendix B**. The SPCC Plan covers safe operating procedures to reduce the likelihood of a spill while handling, storing or using significant materials and consists of the following procedures:

1. Directs personnel to read and become familiar with the SPCC Plan.
2. Provides employee training program outlining spill prevention practices.
3. Provides chemical and fuel absorbent material and have it readily available at all chemical and fuel handling and transfer operations. Do not disperse with water.
4. During transportation of chemicals and fuels, personnel should be alert to possible container or tanker truck damage due to unstable loading or collision with obstacles.
5. When transferring fuel or chemical products, all connections and transfer points should be carefully monitored for leaks.
6. Tanks receiving fuel should be gauged prior to filling to ensure adequate space in the tank for the product being delivered. Adequate headspace at the top of the tank should be left to allow for product expansion.
7. Tanks, containers and vehicles receiving fuel and oil should be carefully checked prior to and during delivery to ensure that there are no leaks or open drain valves.
8. Storm drains and floor drains in the immediate vicinity of the tank being filled should be covered with a mat, plug or other suitable device during filling operations to prevent the flow of product into the drain in case of leak or spill. Transferring materials in the vicinity of storm drains should be avoided.
9. All waste oil should be deposited in designated waste oil collection containers or tanks for collection. No waste oil or oily wastes should be deposited in the sanitary or storm sewer system or trash containers or dumpsters.
10. Containers of five gallons or more should be stored in an area that will not drain to a sanitary sewer or stormwater drain.
11. Containers of fuel or chemicals should be stored in a manner to prevent damage from stacking or falling, equipment and personnel handling, and impact by vehicles. Containers should be stored to permit access to each item without need to reposition other containers.
12. Container storage areas should be maintained in a clean and orderly manner, with absorbent material and clean-up gear available in the immediate area.
13. Maintain a minimal inventory of required chemicals to reduce the magnitude of potential spills and limit waste generation.
14. Provide safeguards against accidental releases:

    A. Overflow protection devices to warn operator or automatic shutdown transfer pump.

B. Protective guards around tanks and piping to prevent damage from vehicles or forklifts.
C. Legible container labeling.
D. Restricted access to chemical and fuel storage areas.

15. In event of a spill, the appropriate agencies shall be notified based on the nature and volume of the release. These may include the Oregon Emergency Response System (OERS), the National Response Center and NOTAM (Notice to Airman) inthe event the runway is closed. Instructions and telephone numbers have been posted in a conspicuous area to describe how to report spills to the appropriate agencies and contact information appears below in Table 4 – Spill Response Notifications.
16. If a spill occurs, clean up should begin immediately. No emulsifier or dispersant shall be used. If the spill reaches sanitary or storm sewers or surface waters, local and state agencies should be notified immediately.
17. Large spills or leaks should be reported immediately to the Spill Response Team of the Site ARFF Department.

Table 4 – Spill Response Notifications

SPILL RESPONSE NOTIFICATIONS	
AGENCY	**PHONE**
Aircraft Rescue and Firefighting Department (ARFF Department)	911
Site Leadership	541-776-7222
USCG National Response Center	800-424-8802
Oregon Emergency Response Center	800-452-0311
Notice to Airman (NOTAM)	877-487-6867

Spill Response Procedures

Spill response procedures are coordinated by the Rogue Valley International-Medford ARRF Department. ARRF department personnel are certified and recognized by DEQ to contain and clean-up hazardous materials. They are on-call 24 hours a day and located on-Site. Relevant Spill Response Actions from the Site SPCC Plan of the ARRF Department's operating instructions for

hazardous materials spill response are included in **Appendix B**. The complete response procedure for the Site is on file at the Site ARFF Station.

Tenant/Operator Responsibilities

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

PREVENTIVE MAINTENANCE

Permit Requirement. Regularly inspect, clean, maintain, and repair all industrial equipment and systems and materials handling and storage areas that are exposed to stormwater to avoid situations that may result in leaks, spills, and other releases of pollutants discharged to receiving waters. Clean, maintain and repair all control measures, including stormwater structures, catch basins, and treatment facilities to ensure effective operation as designed and in a manner that prevents the discharge of pollution.

Site Characteristics and Activities

Maintenance of the Site storm system will be conducted and recorded in accordance with the inspections and maintenance schedules described Stormwater System Maintenance Action Checklist which is included as **Appendix C**.

Inspections of stormwater controls are documented using the Monthly Stormwater Inspection Form found in **Appendix D**. Information to be documented includes:

1. The inspection date and time.
2. The name(s) of inspector(s).
3. Control measures and treatment facilities needing cleaning, replacement, maintenance, reconditioning or repair.
4. The condition of the drainage and conveyance system and need for maintenance.
5. Previously unidentified sources of pollutants.
6. Stormwater discharge visual observations, a Tier 1 report is required if visual observation shows evidence of stormwater pollution.
7. Nature of the discharge; whether snow or rain.
8. Any corrective action, source control, or maintenance taken or scheduled to remedy

problems found.

Tenant/Operator Responsibilities

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

EMPLOYEE EDUCATION

Permit Requirement. The permit requires the Site to develop and maintain an employee orientation and education program to inform personnel on the pertinent components and goals of this permit and the SWPCP. It is recommended that the following topics are discussed:

- Familiarity with the SWPCP
- Spill prevention and response procedures
- Fueling procedures
- Oil, chemical and waste handling procedures
- Good housekeeping practices

Those employees with direct stormwater duties will also be trained in the stormwater monitoring, inspection, reporting, and documentation requirements identified in the 1200-Z permit.

All Site employees receive training in this plan and the spill response procedures outlined in the Site's SPCC Plan within 30 days of hire or change in duties, and annually thereafter. Copies of the SWPCP and the SPCC Plan are available in the office for all employees working at the Site.

Stormwater protection training is accomplished through classroom training.

Tenant/Operator Responsibilities

The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

NON-STORMWATER DISCHARGES

Permit Requirement. Prevent non-stormwater discharges which are not authorized by a NPDES

permit.

Site Characteristics and Activities:

Non-stormwater discharges that are not authorized by a NPDES permit are prohibited by Site policy. The following authorized non-stormwater discharges are applicable to the Site:

- Discharges from emergency or unplanned fire-fighting activities.
- Landscape watering and irrigation drainage.
- Exterior vehicle wash water that does not use hot water or detergent; restricted to less than 8 per week.
- Pavement wash water that does not use hot water, detergent or other cleaning products, no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed), and surfaces are swept before washing.
- Routine external building wash down that does not use hot water, detergent or other cleaning products.

The car rental facility has an automatic car wash and bays for each rental agency to clean vehicles. The wash water from this facility discharges to the sanitary sewer under a pre-treatment permit from the City of Medford, permit number 14-R4-1079.

Tenant/Operator Responsibilities

- The Site shall coordinate with its tenants and operators to agree on their responsibilities in this regard.

SECTOR-SPECIFIC EFFLUENT LIMITS: SECTOR S – AIR TRANSPORTATION

The Site is subject to sector-specific requirements in addition to the general requirements contained in Schedules A and B. The Site falls under Sector S – Air Transportation, making the following additional technology-based effluent limits applicable. Additional information is available in the relevant sections of the permit.

ADDITIONAL TECHNOLOGY-BASED EFFLUENT LIMITS

The additional technology-based limits from Sector S requirements are BMPs that fall within one of

two categories: good housekeeping measures and the deicing season, as described below.

GOOD HOUSEKEEPING MEASURES

Aircraft, Ground Vehicle and Equipment Maintenance Areas

Permit Requirement. Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangars).

Site Characteristics and Activities. Maintenance activities primarily take place in hangars or other buildings. Controls for outside maintenances are covered by activities under the narrative technology-based effluent limits to minimize exposure and for oil and grease.

Aircraft, Ground Vehicle and Equipment Cleaning Areas

Permit Requirement. Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of stormwater from cleaning areas.

Site Characteristics and Activities. Aircraft are cleaned at wash racks located near the T-hangars in Basin 4. Ground vehicles are cleaned by FedEx and the ARRF Department at designated areas in Basin 2. Controls in these areas are covered by activities under the narrative technology-based effluent limits to minimize exposure and for oil and grease.

Aircraft, Ground Vehicle and Equipment Storage Areas

Permit Requirement. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of stormwater from these storage areas.

Site Characteristics and Activities. Aircraft, ground vehicles and equipment to be maintained are stored indoors in hangars or buildings or outdoors in designated areas. Outdoor areas are inspected regularly, and any problems identified are documented and tracked until corrected.

Material Storage Areas

Permit Requirement. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., "Used Oil," "Contaminated Jet A Fuel," etc.). Minimize contamination of stormwater from these areas.

Site Characteristics and Activities. Chemical products other than fuel are primarily stored in aircraft hangars and other buildings. Controls meeting this requirement are covered by activities under the narrative technology-based effluent limits to minimize exposure and for housekeeping.

Airport Fuel System and Fueling Areas

Permit Requirement. Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system.

Site Characteristics and Activities. Fuel is stored in double-walled tanks and fueling operations are conducted using closed hose systems with spill kits stored nearby. All fuel areas are also surrounded by chain link security fencing. this requirement is covered by activities under the narrative technology-based effluent limits to minimize exposure and for oil and grease.

Source Reduction of Urea and Glycol-Based Deicing Chemical Products

Permit Requirement. Minimize, and where feasible eliminate, the use of urea and glycol-based deicing chemicals, to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact.

Source reduction, with respect to these additional technology-based effluent limits, is comprised of both (a) runway deicing operations and (b) aircraft deicing operations.

(a) Runway Deicing Operations

Permit Requirement. Minimize the discharge of pollutants in stormwater from runway deicing operations by implementing source reduction control measures when feasible, accommodating

considerations of safety, space, operational constraints, and flight considerations.

Site Characteristics and Activities. The Site does use runway and taxiway deicer (sodium acetate and/or sodium formate/acetate blend) on an infrequent, as-needed basis. No urea is currently used for deicing pavement. The Site uses sodium acetate to deice sidewalks and walkways in passenger areas. Glycol-based deicers are minimized to the extent possible while balancing the needs of safety. No other controls are implemented.

(b) Aircraft Deicing Operations

Permit Requirement. Minimize the discharge of pollutants in stormwater from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. Determine whether alternatives to glycol and whether containment measures for applied chemicals are feasible.

Site Characteristics and Activities. The Site conducts aircraft deicing in areas adjacent to the gate parking positions. Employees who conduct deicing receive training in environmental requirements and proper application of deicing products. Employee stormwater training includes spill prevention and spill response procedures.

Management of Stormwater

Permit Requirement. Minimize the discharge of pollutants in stormwater from the Site from deicing chemicals for both aircraft deicing and runway deicing operations.

Site Characteristics and Activities. The Site conducts aircraft deicing in areas adjacent to the gate parking positions. Employees who conduct deicing receive training in environmental requirements and proper application of deicing products. Employee stormwater training includes spill prevention and spill response procedures. The Site does use runway and taxiway deicer (sodium acetate and/or sodium formate/acetate blend) on an infrequent, as-needed basis.

Clear Ice Deicing - Applying Deicing Fluids During Non-Precipitation Events

Permit Requirement. Implement control measures to prevent unauthorized discharge of pollutants or to minimize the discharge of pollutants from deicing fluids in later stormwater discharges.

Site Characteristics and Activities. The Site conducts aircraft deicing in areas adjacent to the gate parking positions. Employees who conduct deicing receive training in environmental requirements and proper application of deicing products. Employee stormwater training includes spill prevention and spill response procedures. The Site does use runway and taxiway deicer (sodium acetate and/or sodium formate/acetate blend) on an infrequent, as-needed basis.

DEICING SEASON

Permit Requirement. Determine the seasonal timeframe (e.g., December – February, October – March, etc.) during which deicing activities typically occur at the Site. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season.

Site Characteristics and Activities. The Site has determined its seasonal timeframe for deicing activities typically occur during the period October through April. The Site will inspect and monitor the relevant outfalls with emphasis during this window of time.

ADDITIONAL SWPCP REQUIREMENTS

Permit Requirement. Schedule E, Section S.4.1 defines four additional sector-specific requirements as described below:

Drainage Area Site Map

Permit Requirement. Document in the SWPCP the following areas of the Site and indicate whether activities occurring there may be exposed to precipitation/stormwater. These Site features or activities include aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

Site Characteristics and Activities. Information on the Site features and activities listed above is presented in this plan in **Section 3.0** and illustrated on **Figure 3** and **Figure 4**.

Potential Pollutant Sources

Permit Requirement. In the inventory of exposed materials in the SWPCP, describe the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations.

Site Characteristics and Activities. This information is provided in **Table 3**. The Site does use runway and taxiway deicer (sodium acetate and/or sodium formate/acetate blend) on an infrequent, as-needed basis.

Vehicle and Equipment Washwater Requirements

Permit Requirement. If applicable, in the SWPCP attach or reference a copy of the NPDES permit issued for discharging vehicle/equipment washwater.

Site Characteristics and Activities. The Site has not been issued a washwater discharge permit.

Documentation of Control Measures Used for Management of Stormwater

Permit Requirement. Document in the SWPCP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

Site Characteristics and Activities. The Site's stormwater control measures are described within its SWPCP. If additional stormwater BMPs are deemed necessary, the DEQ Industrial Stormwater Best Management Practices Manual is an available resource that describes BMPs to prevent pollution in stormwater discharges. This manual can be accessed on DEQ's website at:

https://oregon.gov/deq/filterdocs/IndBMP021413.pdf

STORMWATER MANAGEMENT - CONTINUOUS IMPROVEMENT

In 2021 the Site embarked on a project to significantly improve stormwater quality in Basin 4 using passive methods including stormwater detention and swale infiltration.

The following narrative is excerpted from a project summary provided by Mr. Josh Lekkerkerker, P.E. of Precision Approach Engineering, Inc. in September 2021.

The Site contains approximately 930 acres of land. Approximately 243 acres (or 26% of the total airport property) have been developed with impervious surfaces. Of the total impervious airport surfaces, approximately 55 acres (23% of total impervious area) currently have a stormwater facility designed to RVSS stormwater design manual standards (adopted by the City of Medford) for detention and treatment current at the time of construction. Stormwater runoff from the remaining 188 acres of impervious airport surfaces does not flow through facilities specifically designed to restrict offsite flow rates and filtrate typical pollutants found in stormwater runoff. Of the untreated impervious surfaces, approximately 139 acres are contained in Airport Basin 4 which outlets via a drainage ditch into Upton Creek at the north end of the airport.

During the summer of 2021, the airport has constructed a stormwater facility for Basin 4 designed to exceed City of Medford standards. Although the City typically requires stormwater facility design for only new or reconstructed impervious surfaces, the design for the Basin 4 stormwater facility includes all existing and planned future impervious surfaces. As a result, stormwater runoff from approximately 139 acres of existing impervious surfaces has been collected into a facility to restrict peak flows below predeveloped rates and filter pollutants. The project has dramatically increased stormwater management on total airport impervious surface areas from approximately 23% to 80%. In addition, the water quality design storm for the newly constructed Basin 4 facility exceeds the minimum storm outlined in the RVSS stormwater design manual. The RVSS design manual outlines a facility design to treat 1.0 inch of rainfall in a 24-hr period, however, the Basin 4 facility design collects 50% of the 2-yr storm, or 1.17 inches in a 24-hr period. The stormwater treatment facility removes pollutants in approximately 33% more flow than the current City standard.

At the time of this plan revision, construction of the project is continuing and is expected to be substantially complete by the end of October 2021.

AEC personnel will visit the Site in 2022 after the new stormwater detention basin has been completed to observe discharge at the Site's Outfalls during a large precipitation event. Based on observations made during this Site visit, the SWPCP will be updated and submitted to DEQ in 2022, if warranted.

5.0 STORMWATER MONITORING REQUIREMENTS

Runoff from the Site eventually flows to Bear Creek, Upton Slough and Lone Pine Creek. The Site's monitoring program helps ensure these water resources are protected in accordance with Site's permit.

MONITORING REQUIREMENTS

Table 5, **Table 6**, **Table 7**, and **Table 8** summarize the required stormwater monitoring at designated outfalls to meet the requirements for analysis based upon regional, industrial activities (SIC code 4581), technology-based effluent limits, and receiving water impairments. The tables list specific pollutants, benchmarks, units, outfalls to be monitored, and monitoring frequencies for the Site. Reference information for these tables is provided in DEQ's Letter for Reissuance of NPDES Permit No. 1200-Z, which is included as **Appendix A**.

Regional Monitoring Requirements. Regional requirements are based on the Site's location in the stormwater Coastal Georegion and apply to all Site monitoring points as shown in Table 5 – Coastal Georegion Monitoring Requirements.

Table 5 – Coastal Georegion Monitoring Requirements

POLLUTANT	BENCHMARK VALUE	UNIT	OUTFALLS / MONITORING POINTS	FREQUENCY
Total copper	0.017	mg/L	All but 007, 012	Four times per year [1]
Total Lead	0.039	mg/L	All but 007, 012	Four times per year [1]
Total Zinc	0.086	mg/L	All but 007, 012	Four times per year [1]
Total Suspended Solids	100	mg/L	All but 007, 012	Four times per year [1]
pH	5.5 – 9.0	Standard pH Units, S.U.	All but 007, 012	Four times per year [1]

[1] See Table 10 – Discharge Monitoring Report Due Dates.

Sector-Specific Monitoring Requirements. Sector-specific monitoring requirements are based upon the Site's single SIC code, 4581, and apply to the monitoring points shown in **Table 6**. These requirements are found in Table E.S-1 of the permit. Unless the Airport starts using more than 100,000 gallons of glycol-based and/or 100 tons or more of urea deicing chemicals on an annual basis, monitoring for the constituents identified in **Table 6** will not be required.

Table 6 – Sector-Specific Monitoring Requirements

POLLUTANT	BENCHMARK VALUE	UNIT	OUTFALLS / MONITORING POINTS	FREQUENCY
Biochemical Oxygen Demand (BOD) [1]	30	mg/L	002, 004, 005, 006, 008, 013, 014	Four times per year [2]
Chemical Oxygen Demand (COD) [1]	120	mg/L	002, 004, 005, 006, 008, 013, 014	Four times per year [2]
Ammonia [1]	2.14	mg/L	002, 004, 005, 006, 008, 013, 014	Four times per year [2]
pH	5.5 – 9.0	Standard pH Units, S.U.	002, 004, 005, 006, 008, 013, 014	Four times per year [2]

[1] Required if more than 100,000 gallons of glycol-based and/or 100 tons or more of urea deicing chemicals is used on an average annual basis. Monitor at discharge points that collect stormwater from areas where deicing activities occur and when deicing activities are occurring.

[2] See **Table 10** – Discharge Monitoring Report Due Dates.

Effluent Limitations Monitoring Requirements. The Site is required by permit Schedule E.S-7 to meet the technology-based effluent limit for ammonia as nitrogen if it uses urea for airfield pavement deicing. Since the Site does not currently use urea, no monitoring is required unless operations change, and it begins using urea for deicing purposes. These requirements are found in Table E.S-1 of the permit and summarized under the Effluent Limitations Monitoring Requirements in **Table 7**.

Table 7 – Effluent Limitations Monitoring Requirements

POLLUTANT	NUMERIC EFFLUENT LIMIT	UNIT	OUTFALLS / MONITORING POINTS	FREQUENCY
Ammonia as Nitrogen from Airfield Pavement Deicing	14.7	Daily Maximum, mg/L	Currently none. See text.	Semi-annually [1]

[1] Monitoring not currently required because urea is not used for airfield pavement deicing.

Receiving Water Impairment Monitoring Requirements. Monitoring for parameters due to receiving water impairment is not required. The Site's receiving waters are listed in Table 8 – Receiving Water Impairment Monitoring Requirements.

Table 8 – Receiving Water Impairment Monitoring Requirements

RECEIVING WATER	POLLUTANT	IMPAIRMENT CONCENTRATION	UNIT	FREQUENCY
Bear Creek	N/A	N/A	N/A	N/A
Upton Slough	N/A	N/A	N/A	N/A
Lone Pine Creek	N/A	N/A	N/A	N/A

Site Outfall / Monitoring Locations and Parameters. The Site has 16 stormwater Outfalls and monitors 14 of these Outfalls for stormwater quality. The two unmonitored Outfalls receive discharge that is unimpacted by industrial activity. Monitoring includes both collection of grab samples for analytical evaluation (field and laboratory testing) and visual observation of specific parameters. Site Outfall locations, monitoring parameters, and other relevant information are summarized in **Table 9**. Please note that monitoring for BOD, COD, and ammonia at select Outfalls (i.e. 002, 004, 005, 006, 008, 013, and 014) is only required if the Airport uses more than 100,000 gallons of glycol-based and/or

100 tons of urea deicing chemicals on an annual basis.

Table 9 – Outfall Monitoring Locations and Parameters

OUTFALL	BASIN	LOCATION (LAT. / LONG.)	RECEIVING WATER	MONITORING POINT	MONITORING REQUIREMENT
001	3	42.370257 / -122.879262	Bear Creek via RVSS	Yes	[1]
002	2	42.365503 / -122.874937	Lone Pine Creek	Yes	[2]
003	3	42.372810 / -122.881342	Bear Creek via RVSS	Yes	[1]
004	2	42.364699 / -122.872591	Lone Pine Creek	Yes	[2]
005	4	42.391041 / -122.883565	Upton Slough	Yes	[2]
006	1	42.377398 / -122.872557	Upton Slough	Yes	[2]
007	2	42.363794 / -122.871961	Lone Pine Creek	No	[3]
008	2	42.364120 / -122.872290	Lone Pine Creek	Yes	[2]
009	3	42.375446 -122.882303	Bear Creek via RVSS	Yes	[1]
010	2	42.363297 / -122.873418	Bear Creek via RVSS	Yes	[1]
011	3	42.368819 / -122.877882	Bear Creek via RVSS	Yes	[1]
012	2	42.363014 / -122.870709	Lone Pine Creek	No	[3]
013	1	42.374989 / -122.868651	Upton Slough	Yes	[2]
014	2	42.363226 / -122.870095	Lone Pine Creek	Yes	[2]

OUTFALL	BASIN	LOCATION (LAT. / LONG.)	RECEIVING WATER	MONITORING POINT	MONITORING REQUIREMENT
091	3	42.374967 / -122.881666	Bear Creek via RVSS	Yes	[1]
092	3	42.374474 / -122.881946	Bear Creek via RVSS	Yes	[1]

[1] Total copper, Total lead, Total zinc, pH, TSS, Visual observations.

[2] Total copper, Total lead, Total zinc, pH, TSS, Visual observations, BOD, COD, Ammonia.

[3] No monitoring required.

Monitoring Frequency. The frequency of primary stormwater monitoring is four times per year – twice between July 1 and December 31 and twice between January 1 and June 30, inclusive. Stormwater samples must be collected at least 14 days apart. The discharge must be monitored during the first 12 hours of the discharge event, which is a storm event resulting in an actual discharge from a Site. If it is not practicable to collect the sample within this period, the sample must be collected as soon as practicable and documentation explaining the variance must be provided to DEQ along with the Discharge Monitoring Report. Sampling outside of regular business hours of operation or during unsafe conditions is not required.

Secondary stormwater monitoring is completed monthly by conducting visual assessments on a representative sample at all monitored outfalls as part of the monthly stormwater inspection.

Visual Observation Monitoring. Secondary stormwater monitoring is completed monthly by conducting visual assessments on a representative sample at each outfall as part of the monthly stormwater inspection. Visual observations are made for the presence of the following in the stormwater discharge:

- Floating and suspended solids
- Color
- Odor
- Foam
- Visible oil sheen
- Other obvious indicators of pollution.

Visual observations are to be made on a sample in a clean, colorless glass or plastic container in a well-lit area during regular business hours of operation under safe conditions. Results are to be recorded on the Monthly Stormwater Inspection Form found in **Appendix D**. Completed forms are to be kept with the Site stormwater files.

Notes on Stormwater Monitoring and Inspection.

- Stormwater sampling will be conducted using the procedures described in Schedule B.7 of the permit.
- Sampling and visual inspections must be conducted by personnel who have completed employee stormwater training, who are familiar with all aspects of the SWPCP, and are knowledgeable on proper sampling technique, locations and timing.
- In addition to completing the Chain of Custody document for transferring samples to the laboratory, a Field Sampling & Data Sheet (FSDS) should be completed to document the sample collection and field pH data.
- Visual inspections are completed monthly when the facility is in operation. A visual inspection must be made if a discharge event occurs during the month, regardless of whether the monthly Site inspection has already occurred.
- Visual observations of samples must be representative of the stormwater discharge but are not reported to DEQ.
- Upon discovery of the discharge of pollutants, the Site must immediately take all reasonable steps to temporarily minimize or prevent further discharge until a permanent corrective action is complete.
- Conduct all corrective actions required resulting from inspections and visual observations.

EXCEEDANCE RESPONSE ACTIONS

Tier 1 Requirements

Should monitoring indicate that benchmarks (both analytical and visual) are not being met, Tier 1 requirements are triggered and must be acted upon. To assess whether analytical requirements are triggered, upon receipt of the laboratory results from each NPDES sampling event, the results should be compared to the benchmarks listed in **Table 5**, **Table 6**, **Table 7**, and **Table 8** in this plan. The results of pH field monitoring should be checked against the relevant benchmark as well. Similarly, each visual monitoring event should be evaluated with respect to the relevant benchmarks (i.e., the presence of

floating or suspended solids and other parameters listed in the *Visual Observation Monitoring* discussion in this section of this plan).

If any sample result exceeds its respective benchmark, the Site must review the detailed actions listed in Schedule A, Section 11 of the permit and take steps as appropriate. The schedule for implementing responses is given in the permit and time is of the essence.

In summary, responses include:

1) Investigate the cause of the exceedance(s).

2) Review this SWPCP and revise if necessary to address the cause of the exceedance(s) and submit any revisions to DEQ along with a schedule for implementation of any corrective actions.

3) Summarize the results of the investigation and corrective action(s) in a Tier 1 report that is retained on Site.

4) Implement the corrective actions prior to the next storm event or as soon as practicable.

DEQ maintains the Tier 1 Report Form and instructions for its completion in the Industrial Stormwater Permits section of its website. The completed Tier 1 Report Form is to be kept in the Site's stormwater records and is not required to be submitted to DEQ unless the SWPCP is revised or DEQ requests it. Additional details regarding benchmark exceedances are included in Schedule A, Section 11 of the permit.

The Site was under no Tier 1 requirements at the time this revised SWPCP became effective.

Tier 2 Requirements

Upon completion of each stormwater year (July 1 – June 30), the Site must evaluate its pattern of compliance for the year at each monitoring point for each analytical parameter listed in **Table 5**, **Table 6**, **Table 7**, and **Table 8** in this plan. Tier 2 actions are triggered if mathematical analysis results in the geometric mean for any analyte for that year shows an exceedance of the respective benchmark.

Similarly, Tier 2 actions are triggered if 50 percent or more of qualifying pH sample results collected

at any monitoring point during the preceding two full stormwater reporting years are outside the pH benchmark range.

If statistical analysis indicates an exceedance of its respective benchmark, the Site must review the detailed actions listed in Schedule A, Section 12 of the permit and take steps as appropriate. The schedule for implementing responses is given in the permit and time is of the essence.

No such statistical benchmark compliance evaluation is necessary if all the laboratory analytical results from an outfall have remained below their respective benchmark or for any analytical parameters that have received a monitoring waiver.

If a Tier 2 corrective action is required, the Site must investigate the cause and develop a solution. These activities are guided by the permit and the Tier 2 Revised Stormwater Pollution Control Plan Checklist and instructions for its completion. DEQ maintains these documents in the Industrial Stormwater Permits section of its website.

The detailed description of the corrective action, reporting, and schedule are found in Schedule A, Section 12 of the permit.

The Site submitted a Tier 2 Corrective Action report to DEQ in April 2016. The report remains an addendum to this plan and is found in **Appendix E**. The Site was under no active Tier 2 requirements at the time this revised SWPCP became effective.

6.0 INSPECTIONS, REPORTING, AND RECORDKEEPING

Inspections. Monthly inspections of the Site stormwater infrastructure and BMPs are performed. The inspection findings are recorded on the Site Monthly Stormwater Inspection Form (**Appendix D**) and completed forms are kept with Site stormwater records. Maintenance actions implemented to correct deficiencies noted during the inspection are also be recorded on the form when completed.

If an inspection results in a major re-configuration of the Site stormwater system or BMP, the Site may need to revise the SWPCP to reflect the change. The SWPCP revision must be submitted to DEQ within 30 days.

Reporting. DMRs cover the four calendar quarters of the year (January through March, etc.) and are to be submitted to DEQ by the 15th of the second month following the reporting quarter, about 6 weeks after the quarter ends. For example, the DMR for the reporting period July through September 2021 is due to be received by DEQ by November 15, 2021. The "reporting year" begins on July 1 and ends June 30 of the following year.

The schedule of DMR submittal deadlines is as shown in **Table 10**.

Table 10 – Discharge Monitoring Report Due Dates

Reporting Quarter	Months	DMR Due Date
1	July – September	November 15
2	October – December	February 15 [1]
3	January – March	May 15
4	April – June	August 15 [1]

[1] If monitoring is not possible because there is no stormwater discharge during the monitoring period, a variance request must be submitted. Variance requests are required to be submitted by February 15 and August 15 with the DMR for each missed sample. A "no discharge" claim monitoring variance request must include supporting data and analysis demonstrating why there was no discharge for monitoring to occur.

The form for the DMR is now provided by DEQ in a web-based utility.

Significant spills or leaks of materials that impact or have the potential to impact stormwater or surface waters will be recorded in a spill report. Spill reports document significant spill incidents and properly evaluate the cause of the spill, any actions needed to prevent reoccurrence, and for spill prevention and response training. Significant spills as defined in the Site's SPCC require immediate reporting to state and federal agencies. Contact information is presented in **Table 4**.

Recordkeeping. The following records are required to be kept for a minimum of 3 years and presented to DEQ upon request. Records archiving beyond this period shall be done in accordance with the Site's record retention policy:

- A copy of the SWPCP and any revisions, including any engineer stamped SWPCP amendments due to a Tier 2 corrective action.
- A copy of the current 1200-Z permit.
- DEQ's notice of permit coverage under the current permit term (see Appendix A).
- Documentation of maintenance and repairs of control measures, treatment systems and mass reduction measures.
- Mass reduction measures re-certification as required by Schedule A, Section 6.
- Tier 1 reports, including industrial-specific checklist(s).
- All inspection reports.
- Documentation of any benchmark exceedance and corrective action taken.
- All copies of any reports or corrective actions submitted to DEQ.
- Spills or leaks of significant materials (See permit Schedule D, Section 3 for definition) that impacted or had the potential to impact stormwater or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature.
- Documentation to support a claim that a facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct routine facility inspections.
- DMRs, laboratory reports, laboratory chains-of-custody, pH instrument calibration records, and field sampling notes.
- Compliance schedule reports as specified in Schedule C.
- Employee education materials and records of training.

FIGURES

APPENDICES

FIGURES

SOURCE: Otak, Inc., Project No. 18672, Figure 1 - General Location Map, 2018

ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 9/6/21 DRAWN BY: SRM

Figure 1
General Location Map
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon

LEGEND

- FUEL ACTIVITIES
- SPILL KIT LOCATIONS
- CHEMICAL HANDLING AREAS
- VEHICLE WASHING AREAS
- DE-ICING AREAS
- AIRCRAFT HOLDING TANK TRANSFER AREAS
- BASIN BOUNDARY
- PROPERTY LINE
- EXISTING IMPERVIOUS AREA
- EXISTING BUILDINGS/STRUCTURES
- NEW BUILDINGS
- GRAVEL ROAD
- STREAMS

EXISTING AIRPORT FACILITIES

NO.	FACILITY	NO.	
1	Jet Center	21	Underground Fuel
2	Erickson Air Group	22	Fuel Farm
3	United States Forest Service	23	T-Hangars
4	Erickson Aviation	24	Hangar
5	Hangar	25	T-Hangars (A-J)
6	Airport Maintenance Facility	26	Conventional Hangars
7	Mercy Flights	27	Conventional Hangars
8	Millionair	28	Conventional Hangars
9	Fire Retardant Retention Pond	29	Conventional Hangar
10	Mercy Flights	30	Conventional Hangars
16	Civil Air Patrol	34	Card Lock Fuel Facility
17	Jet Center - North	35	Port-a-Port Hangars
19	Weather Service (NOAA)		
20	Balloon Inflation Building		

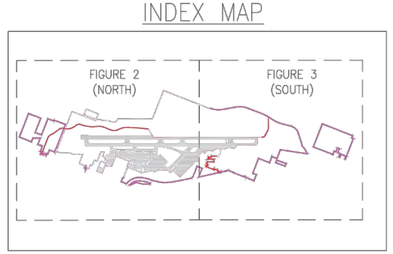
600 0 600 1200
SCALE IN FEET

BASIN 6
BASIN 4
BASIN 4
BASIN 1
BASIN 4
BASIN 3

N Runway Dr
NDB
Upton Cr
RUNWAY 14-32
TAXIWAY A
TAXIWAY A
T/W A6
T/W A5
T/W A4
T/W A3
TAXIWAY C
TAXIWAY B3
TAXIWAY B
TAXIWAY A4
Nebula Way

DISCHARGE POINT #005 MONITORING POINT
DISCHARGE POINT #005 MONITORING POINT
DISCHARGE POINT #013 MONITORING POINT
DISCHARGE POINT #091 MONITORING POINT
DISCHARGE POINT #092 MONITORING POINT
DISCHARGE POINT #009 MONITORING POINT
DISCHARGE POINT #003 MONITORING POINT
DISCHARGE POINT #001 MONITORING POINT

INDEX MAP

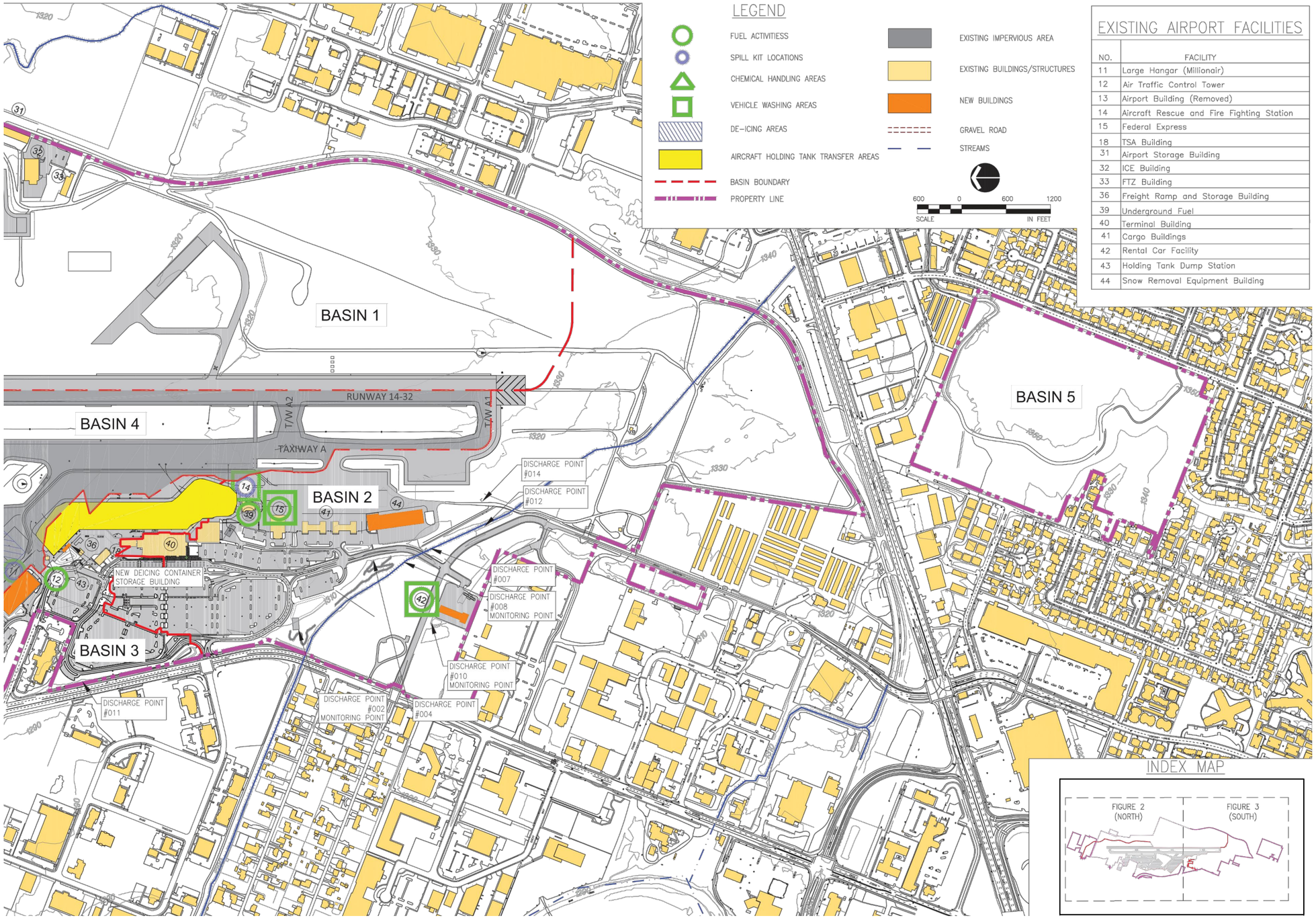


SOURCE: Otak, Inc., Project No. 18672, Figure 2 - Site Map (North) Airport Activities, 2018

ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/14/21 DRAWN BY: SRM

Figure 2
Site Map (North) Airport Activities
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon



LEGEND

- FUEL ACTIVITIESS
- SPILL KIT LOCATIONS
- CHEMICAL HANDLING AREAS
- VEHICLE WASHING AREAS
- DE-ICING AREAS
- AIRCRAFT HOLDING TANK TRANSFER AREAS
- BASIN BOUNDARY
- PROPERTY LINE
- EXISTING IMPERVIOUS AREA
- EXISTING BUILDINGS/STRUCTURES
- NEW BUILDINGS
- GRAVEL ROAD
- STREAMS

600 0 600 1200
SCALE IN FEET

EXISTING AIRPORT FACILITIES

NO.	FACILITY
11	Large Hangar (Millionair)
12	Air Traffic Control Tower
13	Airport Building (Removed)
14	Aircraft Rescue and Fire Fighting Station
15	Federal Express
18	TSA Building
31	Airport Storage Building
32	ICE Building
33	FTZ Building
36	Freight Ramp and Storage Building
39	Underground Fuel
40	Terminal Building
41	Cargo Buildings
42	Rental Car Facility
43	Holding Tank Dump Station
44	Snow Removal Equipment Building

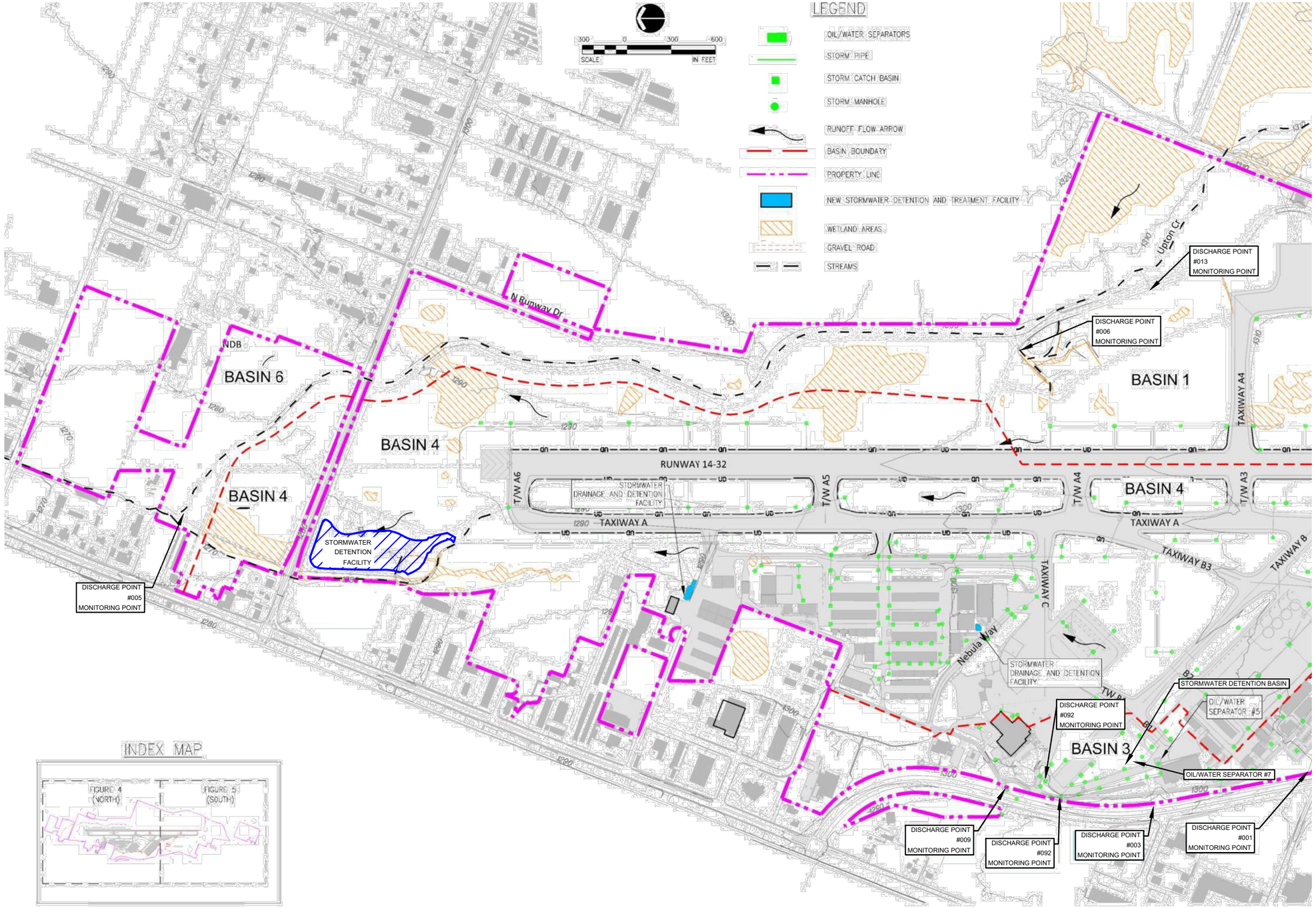
INDEX MAP

SOURCE: Otak, Inc., Project No. 18672, Figure 3 - Site Map (South) Airport Activities, 2018

ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 9/6/21 DRAWN BY: SRM

Figure 3
Site Map (South) Airport Activities
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon



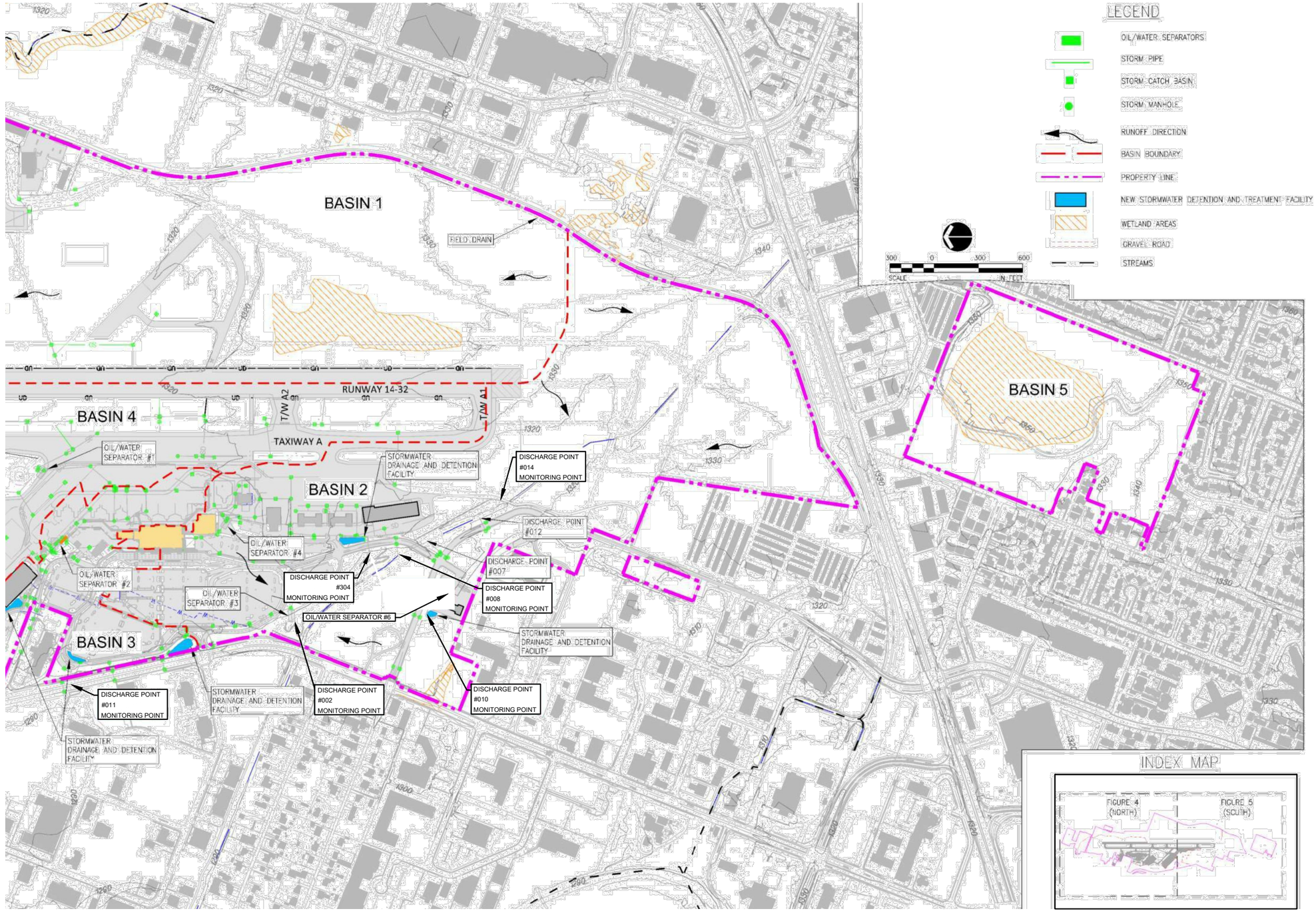
INDEX MAP

SOURCE: Otak, Inc., Project No. 18672, Figure 4 - Site Map (North) Drainage and Storm Sewer, 2018

ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/14/21 DRAWN BY: SRM

Figure 4
Site Map (North) Drainage and Storm Sewer
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon

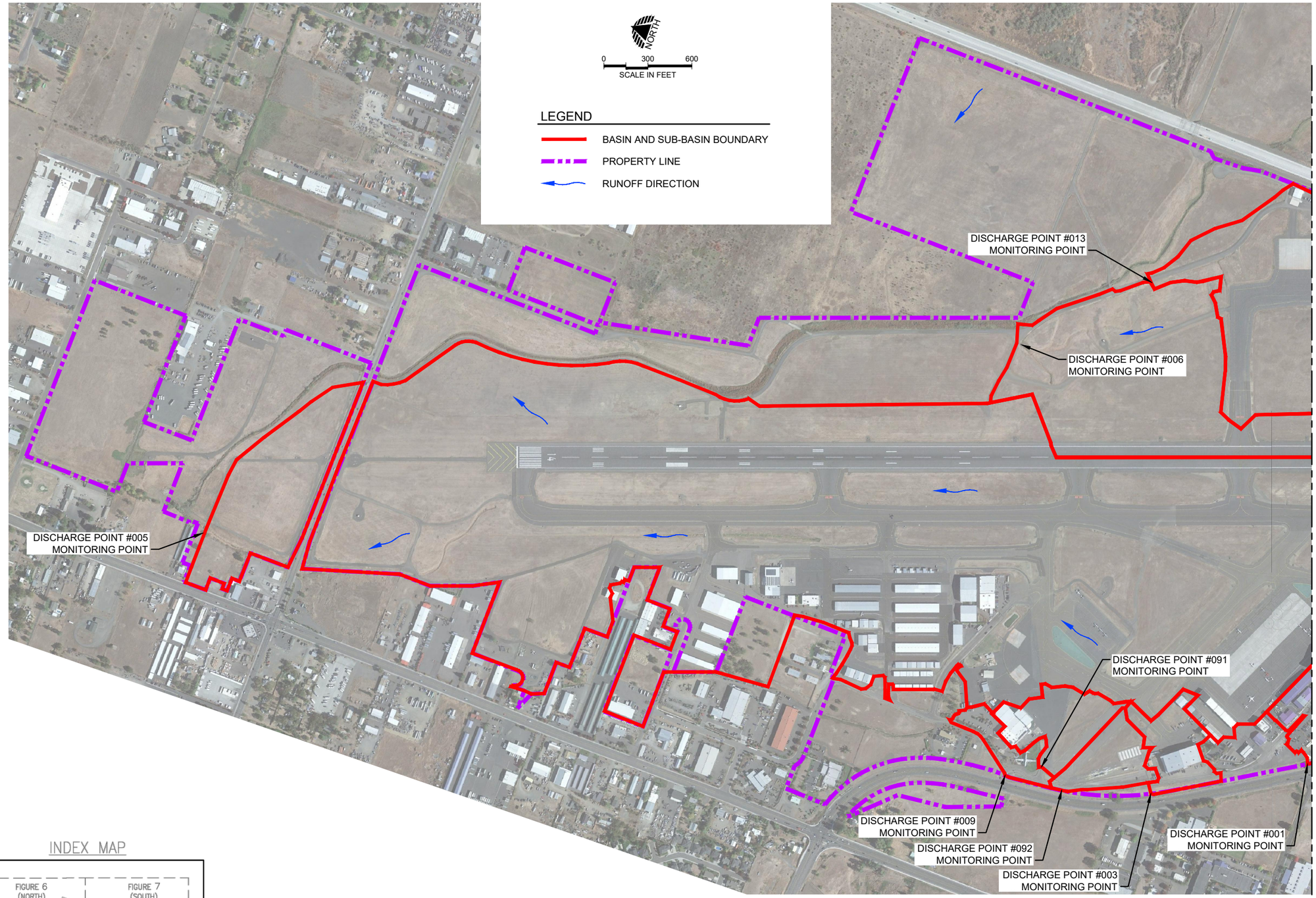


SOURCE: Otak, Inc., Project No. 18672, Figure 5 - Site Map (South) Drainage and Storm Sewer, 2018

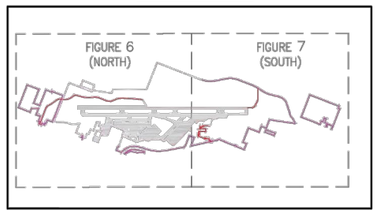
ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/14/21 DRAWN BY: SRM

Figure 5
Site Map (South) Drainage and Storm Sewer
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon



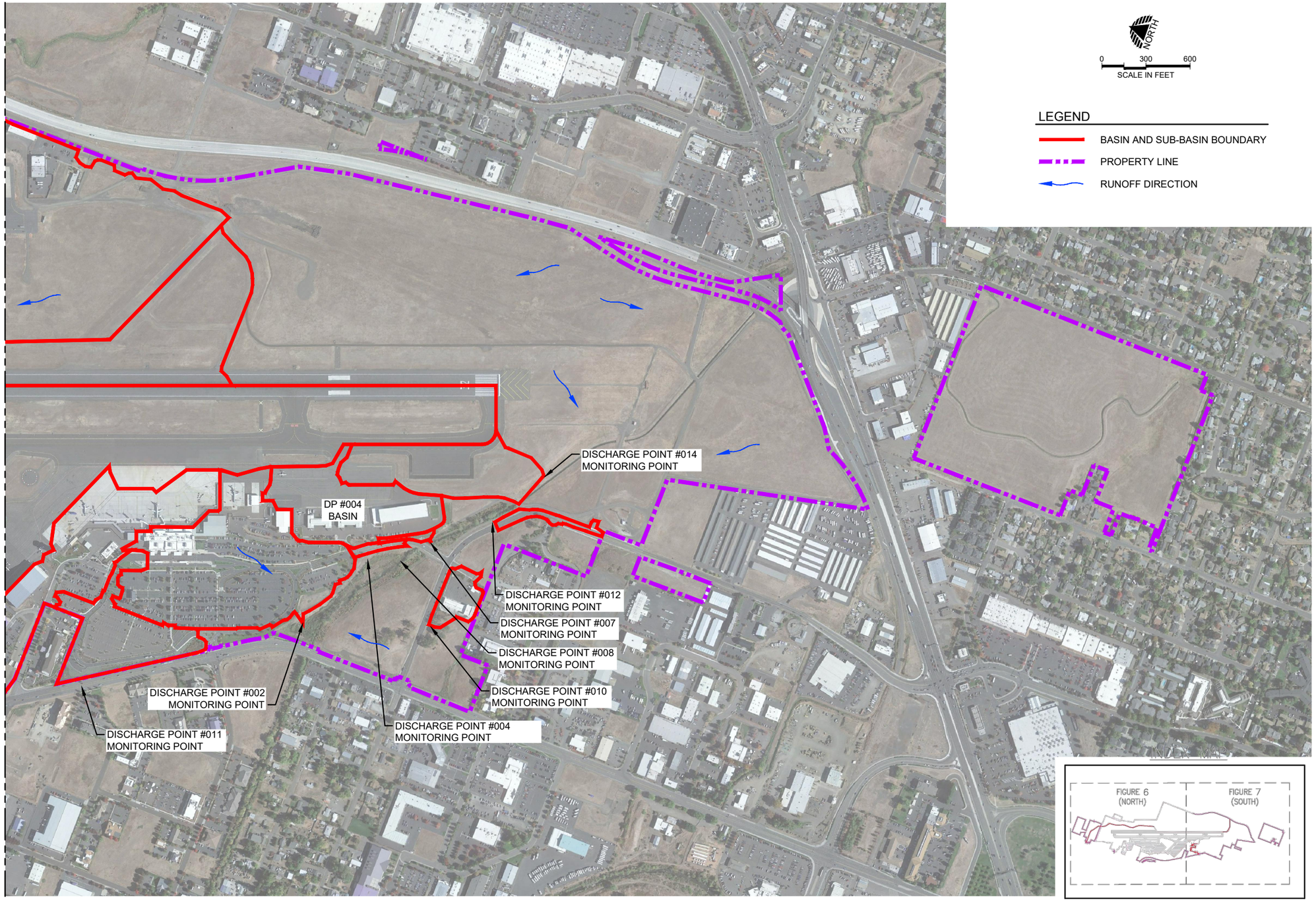
INDEX MAP



ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/13/21 DRAWN BY: JAW

Figure 6
Site Map (North) Sub-Basin Drainage and Outfalls
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon



ALPINE ENVIRONMENTAL CONSULTANTS, LLC

DATE: 10/13/21 DRAWN BY: JAW

Figure 7
Site Map (South) Sub-Basin Drainage and Outfalls
Stormwater Pollution Control Plan
Rogue Valley International - Medford Airport
Medford, Oregon

APPENDIX A

DEQ LETTER FOR REISSUANCE OF NPDES PERMIT NO. 1200-Z

Oregon
Kate Brown, Governor

Department of Environmental Quality
Western Region Eugene Office
165 East 7th Avenue, Suite 100
Eugene, OR 97401
(541) 686-7838
FAX (541) 686-7551
TTY 711

May 17, 2021

Jerry Brienza
Airport Director
Jackson County Airport Authority
1000 Trmnl Loop Pkwy Ste 201
Medford, OR 97504-4218

RE: Reissuance NPDES Permit Number 1200-Z
File Number: 100901; EPA Number: ORR801628
Facility: Rogue Valley Int. - Medford Airport, 3650 Fire Station Spur, Medford
Jackson County
SIC Code(s): 4581

Dear Permit Registrant:

The Oregon Department of Environmental Quality (DEQ) has reissued the 1200-Z, effective July 1, 2021. Attached is your revised monitoring requirements under the reissued permit, starting July, 1, 2021. All monitoring waivers expire on July 1, 2021. Please review the information closely. If you identify any discrepancies in the tables, please contact me as soon as possible.

It is your responsibility to comply with the new permit conditions and monitoring requirements starting July 1, 2021. DEQ will be transitioning to electronic Discharge Monitoring Reports during this permit cycle. As such, you will not receive the first page of the permit identifying your facility as registered under the renewed permit. Please visit our industrial stormwater permits webpage to find a copy of the permit and associated documents. https://www.oregon.gov/deq/wq/wqpermits/Pages/Stormwater-Industrial.aspx Thank you.

If you have any questions about this permit, contact the Stormwater Permit Coordinator at 541-686-7930.

Respectfully,

LeeAnn Gates

LeeAnn Gates
Western Region Permit Coordinator – Eugene Office
Gates.leeann@deq.state.or.us

1200-Z NPDES Monitoring Requirements

You must monitor for the pollutants in the table below. If discharge to a Category 5: 303(d) listed receiving water for pH, total copper, total lead, total zinc and/or E. coli, the table below will not include statewide or sector-specific benchmarks for those pollutants. Exceedance of impairment monitoring may escalate to a water quality-based effluent limit during this permit cycle. Please read Schedule A.13 and Schedule C carefully. Tier 2 geometric mean evaluations are required annually. Please read Schedule A.12 carefully.

Georegion	**Pollutant**	**Statewide Benchmark**	**Unit**	**Frequency**
Coastal	pH	5.5-9.0	s.u.	Four times per year
Coastal	Total Copper	0.017	mg/L	Four times per year
Coastal	Total Lead	0.039	mg/L	Four times per year
Coastal	Total Zinc	0.086	mg/L	Four times per year
Coastal	TSS	100	mg/L	Four times per year
SIC code of Industrial Activity	**Pollutant**	**Sector-specific Benchmark**	**Units**	**Frequency**
4581	BOD[1]	30	mg/L	Four times per year
4581	COD[1]	120	mg/L	Four times per year
4581	Ammonia[1]	2.14	mg/L	Four times per year
Receiving Water **LLID:** 1228896423700 **AUID: 105815** **River Mile: 0.9**	**Pollutant**	**Impairment Concentration**	**Units**	**Frequency**
Upton Slough	N/A	N/A	N/A	N/A
Technology-based Effluent Limit[2]	**Pollutant**	**Numeric Effluent Limit**	**Units**	**Frequency**
Airfield pavement deicing per Schedule E.S.7	Ammonia as Nitrogen[2]	14.7	daily maximum, mg/L	See Table E.S.2

[1] When use more than 100,000 gallons of glycol-based deicing chemicals on an average annual basis
[2] If operations change and urea deicing is used

APPENDIX B

SPILL RESPONSE ACTIONS FROM SITE SPPC SPILL RESPONSE PLAN

ROGUE VALLEY INTERNATIONAL-MEDFORD AIRPORT

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

March 2007

Prepared for:

Jackson County, Oregon
3650 Biddle Road
Medford, Oregon 97504

Prepared by:

David Evans and Associates, Inc.
1128 NE Second St. Suite 201
Corvallis, Oregon 973330

Land And Water Environmental Services, Inc.
525 SE Main St.
Roseburg, Oregon 97470

SPILL PREVENTION – PERSONNEL TRAINING

Spill prevention consists of implementing safe operating procedures to reduce the likelihood of a spill while handling, storing, or using significant materials.

The greatest likelihood of spills happening exists with the handling of fuels and chemicals. The following steps should be taken to prevent spills and ultimately contamination of receiving waters.

1) Personnel have read and become familiar with this Plan.

2) Provide employee training program outlining spill prevention practices. (See Employee Awareness Program Section.)

3) Provide chemical and fuel absorbent and have it readily available at all chemical and fuel handling and transfer operations. Do not disperse with water.

4) During transportation of fuels and chemicals, personnel should be alert to possible container or tanker truck damage due to unstable loading or collision with obstacles.

5) When transferring fuel or chemical products, all connections and transfer points should be carefully monitored for leaks.

6) Tanks receiving fuel should be gauged prior to filling to ensure adequate space in the tank for the product being delivered. Adequate headspace at the top of the tank should be left to allow for product expansion.

7) Tanks, containers, and vehicles receiving fuel and oil should be carefully checked prior to and during delivery to ensure that there are no leaks or open drain valves.

8) Storm drains and floor drains in the immediate vicinity of the tank being filled should be covered with a mat, plug or other suitable device during filling operations to prevent the flow of product into the drain in case of leak or spill. Transferring materials in close proximity to storm drains should be avoided.

9) All waste oil should be deposited in designated waste oil collection containers or tanks for collection. No waste oil or oily wastes should be deposited in the sanitary or storm sewer system or trash containers or dumpsters.

10) Containers of five gallons or more should be stored in an area that will not drain to a sewer or storm drain.

11) Containers of fuel or chemicals should be stowed in a manner to preclude damage from stacking or falling, equipment and personnel handling, and impact with vehicles. Containers should be stowed to permit access to each item without moving and/or re-stowing containers.

12) Container storage areas should be maintained in a clean and orderly manner, with absorbent material and clean-up gear available in the immediate area.

13) Maintain a minimal inventory of required chemicals to reduce the magnitude of potential spills and limit waste generation.

14) Provide safeguards against accidental releases:

a. Overflow protection devices to warn operator or automatic shut down transfer pump.

b. Protection guards around tanks and piping to prevent damage from vehicles or forklifts

c. Clear container labeling

d. Restricted access to chemical and fuel storage areas.

15) In event of a spill, the appropriate agencies would be notified. This includes the Department of Environmental Quality (DEQ) and NOTAM (Notice to Airman) issued in the event the runway is closed. Instructions and telephone numbers have been posted in a conspicuous area which relates to reporting spills to the:

Fire Department	541-776-2830
EPA	1-800-424-4372
DEQ	541-776-6010
NOTAM	800-672-6211

16) Large spills or leaks should be reported to the Spill Response Team (Rogue Valley International-Medford Airport Fire Department) immediately.

FUTURE SPILL PREVENTION PLANS

Whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon adjoining shorelines, amendments to this plan will be made as soon as possible, but no later than six months after the change occurs. Amendments will be certified in accordance with guidelines for preparation of Spill Prevention and Control Countermeasure Plans.

RVI-M AIRPORT FIRE DEPARTMENT **GUIDELINE 3.0-8**
REVISED 07-16-04

METHOD MANUAL

FUEL SPILLS

PURPOSE: This Method will provide guidelines in the event of a fuel spill.

SCOPE: This Method applies to all personnel at the Airport Fire Department.

RESPOSIBILITY: The Fire Chief and/or SFO will ensure this Method is followed.

PROCEDURES: The following are guidelines to use in case of an emergency involving a fuel spill.

A. Use normal emergency response procedures to the spill location.

B. When possible position up wind and up hill.

C. One person will remain in 7981 at all times.

D. The Incident Commander will utilize all resources available to control the spill.

E. The aircraft or vehicle involved in spill must not be moved under their own power until the spill has been stabilized.

F. A hot zone will be established and the area will be evacuated.

G. Personnel in the hot zone will be in full protective clothing including SCBA.

H. If the fuel spill occurs on airline ramp area, fuel can be washed into the fuel separator system using water. But monitor amount of water used. The separators will need to be cleaned if the spill is large.

I. Fuel pillows, pads and/ or dikes will be utilized to prevent fuel runoff from entering all other drainage systems.

J. Do not use absorb-a-clean if the ground is wet with water or rain.

K. When finished fill out the Spill Clean-Up sheet so we can bill for the use of our equipment.

RVI-M AIRPORT FIRE DEPARTMENT

GUIDELINE 3.0-12
REVISED 07-15-04

METHOD MANUAL

HAZARDOUS MATERIALS INCIDENT

PURPOSE: This Method is to provide guidelines in the event of a Hazardous Material Incident.

SCOPE: This Method applies to all personnel at the Air Port Fire Department.

RESPONSIBILITY: The Fire Chief and/or SFO will ensure this Method is followed.

PROCEDURES: The following are guidelines to use in case of an emergency involving hazardous materials.

A. Use normal emergency response procedures to the emergency scene.

B. Position apparatus up wind and up hill. If the name of the product or material is unknown, use Guide Number 111 of the DOT Handbook.

C. Secure the scene. Without entering the immediate hazard area, isolate the area and assure the safety of people and the environment, keep people away from the scene and outside the safety perimeter.

D. Identify the hazards. Placards, container labels, shipping documents and/or knowledgeable persons on the scene are valuable sources of information. Evaluate all available information and consult the North American Emergency Response Guidebook or other reference source to reduce immediate risks. Remember, the Guidebook and other reference sources provide only general guidelines to follow in the first minutes of a hazardous materials incident. As more material-specific information becomes available, the response should be tailored to the situation.

E. Assess the situation. Consider the following:

1. Is there a fire, a spill or a leak?
2. What are the weather conditions?
3. What is the terrain like?
4. Who/what is at risk: people, property or the environment?
5. What actions should be taken: Is an evacuation necessary? Is diking necessary? What resources (human and equipment) are required and readily available?
6. What can be done immediately?

F. Obtain help. Notify dispatch of the situation and request additional resources, as needed, i.e. activation of the Haz-Mat team. Notify the Duty Officers.

G. Decide on site entry. Any efforts to rescue persons, protect property or the environment must be weighed against the possibility that you could become part of the problem. Enter the area only when wearing appropriate protective gear (refer to the DOT Guidebook or other reference source).

H. Respond in an appropriate manner. Establish a command post. Rescue casualties where possible and evacuate if necessary. Maintain control of site. Continually reassess the situation and modify the response accordingly.

APPENDIX C

STORMWATER SYSTEM MAINTENANCE ACTION CHECKLIST

STORMWATER SYSTEM MAINTENANCE ACTION CHECKLIST

Introductory Note. This Stormwater System Maintenance Checklist has been provided by Rogue Valley Sewer Services and has been revised to align with the needs of the Site SWPCP. It is presented as guidance for the site to maintain the elements of its stormwater collection, conveyance and treatment features and should be applied as appropriate to elements of the stormwater system. The documentation of stormwater inspections is to be completed on the Monthly Stormwater Inspection Form. Note that detailed information on catch basins follows the tables of maintenance action checklists.

The following inspection and maintenance action checklists are provided primarily for maintenance field staff. The checklists indicate recommended inspection frequency and timing, conditions to look for, corrective actions, and estimated time to perform the work. They can assist management staff with maintenance planning, scheduling, staffing, and budgeting. The work time estimates given on the checklists should be compared to actual effort required to perform each task in the future and revised as necessary. Continual review, feedback, and revision of the checklists will make them more effective tools in the effort to manage stormwater.

Inspection Timing: Specific elements of the stormwater facilities are assigned to be inspected annually or seasonally. W = winter, Sp = Spring, Su = Summer and F = Fall. **At least one inspection per year should occur during a storm event.**

Manufactured treatment structures will have maintenance requirements from the manufacturer that are included in the back of this packet.

Maintenance Records: Maintenance records must be kept on all stormwater facilities, an example maintenance record is provided in this packet. Record the date and description of repairs and maintenance activities. Invoices and work orders for supplies and hiring contractors to complete work should be kept on file. The property owner/owners shall keep records of facility system inspections and maintenance for five years from the date of each inspection. Records shall be made available to jurisdictional authority upon request, at no cost.

Herbicides and Pesticides: Utilize integrated pest management and avoid the use of herbicides and pesticides as much as possible due to the potential to contaminate downstream waters. If pesticides or herbicides must be used, a licensed applicator should be hired.

Fertilizers: Avoid the use of fertilizers in stormwater treatment and detention facilities. Instead, mulch plants with shredded wood chips or coarse compost. Mulch shall be either shredded wood chips or coarse compost. Mulch must be dye, pesticide and weed free.

Pollution Prevention: Best Management Practices must be implemented on all sites to prevent stormwater contamination. Spills should be cleaned up following best management practices and should never be washed into a stormwater treatment facility. Report spills into the stormwater facility by calling the local jurisdiction.

Maintenance Action Checklist		Pervious Pavement
Inspection Timing	**Conditions to Check For**	**Suggested Action**
Sp, F	Erosion from landscape areas	Implement erosion prevention and sediment control and replant per the approved landscape plan.
F, W, Sp	Trash and Leaves	Pick up trash, blow or sweep leaves. Remove and dispose of waste properly.
F, Sp	Weed and moss growth over 10% of area or more	Mechanically remove during the dry season. Avoid mossicides and herbicides.
Su, F	Sediment/debris accumulation	• Dry sweep • Vacuum-sweep at least twice a year. • Or, pressure wash at a right angle to the pavement. • Sediment should be disposed of properly at a landfill or approved facility.
Annual	Unraveling or settled pavement	Repair per manufacturer specification. Do not apply sealants to pervious pavement.
Annual	Aggregate loss	**Do not** seal coat. Replace with aggregate per original design. 50sf or less of damage may be patched with conventional asphalt, up to 10% of the entire porous surface.
W, Sp	Reduced infiltration	If storms are not infiltrating, contact the jurisdiction.
W, Sp, Su, F	Landscape Contractors stockpiles/ blown debris	Ensure landscape contractors understand that the surface is permeable. Inform them that they cannot stage material on the surface or blow grass/leaves/etc. onto the surface.
Annual	Settling of pavers or loss of paver filling.	Reset pavers and replace missing fill material per original design.
Annual	Signage describing Pervious Pavement in Place	Ensure sign is visible and legible
W	Snow Removal	Use salt-free deicers only. Do not apply to concrete <1 year old. Plow with the blade one inch above the surface.

Maintenance Action Checklist		Vegetated Facilities*
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, Su, F	**Trash and debris**.	Remove and dispose of waste in regular trash.
Annual	**Sediment or debris accumulation in facility** exceeding 2 inches.	Remove with appropriate equipment to limit compaction or damage to plants and infiltration media. Record amount of sediment collected. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Clogged inlets, outlets, pipes**	Remove sediment and debris. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Damaged inlets or outlets, cracked pipe**	Repair or seal cracks, replace when needed.
Annual	**Scouring under Inlet to Facility**	Replace rock or gravel in energy dissipator according to design specifications. Remove blockage manually or with appropriate equipment.
Annual	**Perforated Liner.**	Repair or replace as necessary per manufacturer specification.
Annual	**Erosion within facility**. Check inlets, slopes, energy dissipators and facility bottom.	Determine cause of erosion and eliminate. Apply appropriate temporary erosion control best management practices. Evaluate options for permanent solution.
Annual	**Poorly draining facility**.	If facility does not drain in 48 hours after a storm, scrape 1 inch of soil out of the facility and scarify to 3 inches. If infiltration does not improve, contact the jurisdictional authority. Consider installation of sediment trap.
W, Sp, Su, F	**Odor, sludge, or color**. Presence of any chemical pollutants.	Notify appropriate jurisdiction to investigate and determine chemical type. Remove contaminant by appropriate methods and dispose of as directed by hazardous waste protocols. Provide sign or stencil as necessary.
Sp, F	**Hydraulic performance**. Flow has become channelized and does not spread over bottom of swale.	Recontour and replant vegetated facility bottom following approved landscape plan; consider installing a flow spreader device. Contact the stormwater jurisdiction for advice on flow spreader installation.
Sp	**Check Dams Functioning**	Maintain design number, spacing and elevation, of check dams.
Sp, F	**Vegetation covers < 90% of facility bottom or is unhealthy looking.**	Determine cause of poor growth. Revegetate following approved landscape plan to achieve 95% coverage. Avoid use of fertilizers.
Sp, Su, F	**Vegetation is overgrown. Weeds. Vegetation poses potential health hazard** (poison oak, stinging nettles, tansy).	• Prune vegetation that blocks sight lines, inlets, outlets, or is a health hazard and remove cuttings. Do not string trim grasses, sedges or rushes. Remove weeds mechanically, avoid pesticides and herbicides. • Facilities seeded with low-mow or no-mow seed mix, should be mown a maximum of three to four times a year for aesthetics and to reduce fire risk. If possible, utilize a weed whacker rather than a mower to reduce • compaction of the facilities soils.
Sp, Su	**Irrigation system functioning properly.**	• Irrigation will be needed frequently during first 3 years, once plants mature frequency of watering can decrease unless >90 F.

* Vegetated Facilities include rain gardens, water quality swales, planters, and vegetated filter strips.

Maintenance Action Checklist		Detention Ponds*
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, Su, F	**Trash and debris**.	Remove and dispose of waste properly.
Annual	**Sediment accumulations** exceeding 20 percent of the forebay depth or 4 inches, whichever is less.	Evaluate whether cleaning can be performed with an eductor, backhoe, or excavator. Perform work or contract out. Record amount of waste collected. Reshape and reseed as necessary. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Clogging of check dam** between forebay and detention area with sediment or debris.	Manually remove sediment or use mechanical equipment as described for sediment removal.
Annual	**Inspect facility geometry for erosion and settlement to ensure inlets and outlets are functioning as intended.**	Determine cause of erosion and eliminate it. Repair and revegetate as per the approved designs.
	Odor, sludge, or unusual color. Presence of any chemical pollutants.	Notify appropriate jurisdiction to investigate. Remove contaminant by appropriate methods and dispose of as directed by hazardous waste protocols.
Sp, Su, F	**Vegetation is overgrown.**	• Prune vegetation that blocks inlets, outlets and remove cuttings. Do not string trim ornamental grasses, sedges or rushes. Remove weeds mechanically, avoid use of pesticides and herbicides. • Facilities seeded with low-mow or no-mow seed mix, should be mown a maximum of three to four times a year for aesthetics and to reduce fire risk. If possible, utilize a weed whacker rather than a mower to reduce compaction of the facilities soils.
Sp, F	**Facility vegetated < 90% of original plan.**	Determine cause of poor growth. Revegetate following approved landscape plan. Avoid use of fertilizers.

Maintenance Action Checklist		Underground Detention Structures
Inspection Timing	**Conditions to Check For**	**Action**
Annual	**Sediment and debris** exceeding 15% of the structure height or 6" in depth, whichever is less.	Sediment should be disposed of properly at a landfill or approved facility. Contract for cleaning if necessary.
Annual	**Plugged or blocked air vents.** Accumulations of debris or sediment exceed one-half of the vent end area.	Remove and dispose of waste in regular trash.
Every 5-yrs	**Cracks** in joints between tank or pipe sections that leak soil into the facility.	Manually seal all cracks with appropriate grout material.
Every 5-yrs	**Underground facility structurally deficient or restricting flow.**	Repair or replace structure to design.
W, Sp, F	**Clogged inlets, manholes, catch basins or silt traps**	Remove blockages.
W, SP, Su, F	**Missing or open manhole cover.** Locking mechanism difficult to open or lacking more than 1/2 inch of thread; cover difficult to remove.	Replace cover or repair and reinstall. Cover should operate properly and be removed easily by one maintenance person.
Su	**Cleanout shear gate damaged**, rusted, leaking* or missing. Gate cannot be adjusted by one person. Chain or rod missing or damaged	Repair or replace to meet design standards. Repair, lubricate, or replace gate as necessary. Repair or replace chain or rod as necessary.
W, SP, Su, F	**Odor, sludge, or unusual color**. Presence of any chemical pollutants.	Notify appropriate jurisdiction to investigate and determine chemical type. Remove contaminant by appropriate methods and dispose of as directed by hazardous waste protocols.

*Leaking is permissible provided it is less than 2 gallons per hour.

Maintenance Action Checklist		Catch Basins and Inlets
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, Su, F	**Trash, debris, and sediment on grating.** More than 1/2 cu ft in front of or on grating, blocking capacity by more than 10%	Remove and dispose of waste in regular trash. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Sediment or debris in sump**. Depth exceeds 1/2 the distance between the bottom of basin and the invert of lowest pipe into or out of the basin.	Evaluate whether cleaning can be performed manually or mechanically. Perform work or contract out. Record amount of sediment collected at each basin.

Catch Basin/Area Drain: A structure, typically concrete, into which stormwater flows to be conveyed downstream.

Stormwater Inlet /Curb Inlet: A pipe or opening in a curb that conveys runoff into a stormwater facility.

Maintenance Action Checklist		Outlet Control Structures/Flow Restrictors
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, F	**Sediment, debris, or trash** is blocking or sump is less than 50% from restrictor/orifice plate	Remove and dispose of waste in regular trash. Sediment should be disposed of properly at a landfill or approved facility. Contract for cleaning if necessary.
Annual	**Structural integrity**. Tee-type flow restrictor is not securely attached to manhole wall and outlet pipe. Weir or baffle flow restrictor not securely attached to manhole. Flow restrictor is not plumb within 10% Connections to outlet pipe are leaking and show signs of rust Holes in plates, baffles, elbows, etc.	Determine best method for anchoring flow restrictor based on materials and severity of situation. Consult supervisor if necessary. Replumb and realign restrictor, securing as necessary. Repair or replace as necessary to eliminate leakage. Plug or patch holes if structural integrity is not affected. Replace part if possible, replace entire structure if severely failing.
Sp, F	**Trash, sediment, or debris** blocking overflow pipe.	Remove material manually or with mechanical equipment. Contract for cleaning if necessary.

Outlet Control Structure: Located at the downstream end of a stormwater facility, it controls the rate at which stormwater can flow out through the use of a flow restrictor or orifice.

Flow Restrictor (Orifice): A hole cut into the outlet control structure that is specifically sized to control stormwater outflow.

Maintenance Action Checklist		Culverts/Pipes
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, F	**Trash, debris, or sediment** restricting pipe flow.	Evaluate whether cleaning can be performed manually or mechanically using an eductor, jet or bucket loader. Perform work or contract out. Record amount of waste collected at each culvert. Sediment should be disposed of properly at a landfill or approved facility.
Su	**Vegetation** that reduces free movement of water through culvert.	Cut vegetation to 6 inches minimum and remove. Take care to limit damage to embankment and side slopes. Prune back woody vegetation without killing and leaving roots in place if possible.
Su	**Damage to pipe** such as rusting through wall of pipe , dents, bent or crushed ends that affects efficient flow.	Repair or replace pipe as necessary.
Annual	**Cracking or buckling of headwall**. Erosion or piping occurring at backside or around ends of headwall.	Determine extent of problem and monitor for changes. Contact appropriate city staff for evaluation. Repair or replace as necessary.
Annual	**Missing rock or riprap** within upstream or downstream apron areas or side slopes. Active erosion within area.	Repair eroded areas as necessary. Determine cause of rock movement and replace with similar size rock or larger as necessary.

Maintenance Action Checklist		Energy Dissipators
Inspection Timing	**Conditions to Check For**	**Suggested Action**
External Energy Dissipator		
Su	**Missing layer of rock**. Exposed soil.	Replace rock of size and at depth specified. Evaluate need to replace with larger rock.
Su	**Broken wires** in gabion structure.	Replace rock as necessary and wire shut. Evaluate need to replace structure.
	Bypassing beneath structure	Backfill with smaller rock to fill the voids.
Dispersing Trench		
Sp, F	**Accumulated sediment** in pipe.	Vacuum or jet clean pipe, catching or collecting sediment for proper disposal. Sediment should be disposed of properly at a landfill or approved facility.
F, W	**Discharge flow is concentrated**, not dispersed, causing erosion.	Regrade trench lip to provide "sheet" flow. Evaluate need to redesign and rebuild.
Su	**Perforated pipe is plugged** for half of openings.	Jet clean, catching sediment for proper disposal. Evaluate need to replace pipe.
F, W	**Stormwater flows out** top of distribution manhole or catch basin.	Check outlet pipe for restrictions and clean if necessary. Confirm design storm parameters. Provide erosion control BMPs. Evaluate need to redesign and reconstruct.
F, W, Sp	**Oversaturated receiving area**, slope failure; potential for landslide.	Divert flow if possible, stabilize bank using appropriate BMPs.
Manhole Chamber		
Su	**Worn or damaged dissipating structure** or walls.	Replace structure to design standards. Evaluate need for alternative design.

Energy Dissipators: Typically located below an inlet to a stormwater facility and made of riprap, concrete, or a proprietary structure. They prevent scouring of the stormwater facility substrate.

Maintenance Action Checklist		Constructed SW Wetlands, Wet Ponds
Inspection Timing	**Conditions to Check For**	**Suggested Action**
W, Sp, Su, F	**Yard waste, trash, and debris** of more than 1 cu ft (1 garbage can)	Remove and dispose of waste. Notify appropriate city staff for potential enforcement or public education.
Annual	**Trash rack or bar screen** missing or more than 25% covered	Remove debris and dispose of waste. Repair or replace rack as necessary.
Su	**Weedy, invasive or poisonous vegetation** such as blackberry, purple loosestrife, tansy ragwort, poison oak, stinging nettles, etc. **Sparse vegetation**, sickly or overgrown.	Ask if there is an O&M plan for the facility or if an evaluation by a wetland ecologist is recommended prior to maintenance. If not, remove manually or use mechanical equipment as necessary; minimize disturbance to other vegetation. Do not spray pesticides without consulting appropriate jurisdiction. Determine cause of poor plant growth; correct problem and replant as specified or directed by appropriate city staff. If vegetation is cut, remove all cuttings and dispose offsite.
W, Sp	**Inlet, outlet, or check dam clogged** with sediment or debris.	Remove blockage manually or with appropriate equipment. Minimize disturbance to surrounding vegetation. Evaluate need for facility modifications to eliminate problem. Sediment should be disposed of properly at a landfill or approved facility.
F, W, Sp	**Sediment accumulation** interfering with treatment function.	Remove sediment using appropriate equipment to restore design contours. Minimize disturbance to surrounding vegetation and replant as necessary using specified vegetation. Sediment should be disposed of properly at a landfill or approved facility.
Annual	**Settlement of structures** dikes, berms, pipes, by 4 inches.	Notify appropriate the stormwater jurisdiction and request an inspection. Stabilize slopes or structures as necessary until final evaluation and specific solution is determined.
W, Sp, Su, F	**Odor, sludge, or unusual color**. Presence of any chemical pollutants.	Notify appropriate jurisdiction to investigate. Remove contaminant by appropriate methods and dispose of as directed by hazardous waste protocols.
Annual	**Overflow berms or spillways exposed** and either actively eroding or vulnerable to erosion.	Replace armoring or replant as specified in design plans and specifications.
Annual	**Erosion** at inlet or on side slopes or scouring of pond bottom of > 6”.	Consult appropriate city staff on cause of erosion. Stabilize eroded areas ASAP using proper erosion control methods.

Maintenance Action Checklist		Access Roads & Easements
Inspection Timing	**Conditions to Check For**	**Suggested Action**
Annual	No access road for maintenance by motorized equipment.	Determine whether an easement to a drainage feature exists. If so, obtain permits and construct gravel (or equivalent) access road. If not, call lack of easement to jurisdiction's attention.
W, Sp, Su, F	Debris blocks access or could damage vehicle tires (glass or metal).	Remove debris and dispose of properly.
Annual	Obstructions reduce clearance above road surface to less than 14 feet.	Clear overhead area to 14 feet high.
Annual	Settlement, potholes, mush spots, or ruts . Surface defect hinders or prevents maintenance access.	Grade road uniformly smooth with no evidence of settlement, potholes, mush spots, or ruts. Apply additional gravel or pit-run rock as needed
Annual	Woody vegetation or excessive weed cover blocks vehicular access.	Remove woody growth; cut back weeds regularly or when they encroach on road surface.
Annual	Erosion damage is within 1 foot of the roadway and is more than 8 inches wide and 6 inches deep.	Place fill material or rock to match the surrounding slope; Revegetate as necessary.

Maintenance Action Checklist		Vegetated Roofs
Inspection Timing	**Conditions to Check For**	**Suggested Action**
F	Leaks in roof	Identify leaks of structural problems and contact manufacturer for repair or replacement.
Wi, Sp	Clogged Drains	Remove sediment and debris.
Sp, F	Stressed or dead vegetation	Remove and replace per approved landscape plan. Irrigate, if planting in the summer.
Sp, F	Excessive weeds	Mechanically remove weeds.
Wi, Sp	Erosion	Fill eroded area with approved soil, plant to prevent erosion.
F	Excessive Vegetation	Prune and remove cut vegetation.
W, Sp	Standing Water	Check for leaks in irrigation, amend soils, clear drains.

Fact Sheet

Portland Harbor: Catch Basins

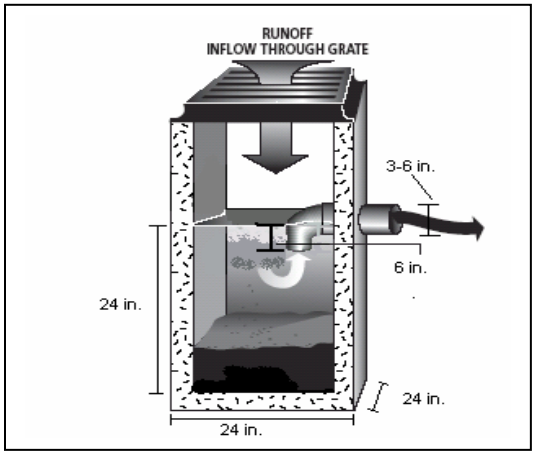
The purpose of this fact sheet is to provide basic information on catch basin design, effectiveness and sediment sampling.

A catch basin is an inlet to a storm drain system that typically includes a grate where stormwater enters, and a sump to capture sediment, debris and associated pollutants.

Catch basins are designed specifically for capturing and conveying stormwater. It is important to note, that although catch basins often have sumps for the collection of sediment, the actual design specifications and placement of catch basins are not based on expected sediment load.

Design

Trapped catch basins, commonly referred to as Lynch-style catch basins, are constructed of concrete, cast iron or steel. According to the 1997 City of Portland Uniform Plumbing Code §1108.0 - .5, catch basins must adhere to the design specifications in the drawing below:



Standard Lynch-style catch basin

Typically, on private commercial or industrial sites, there is no standard for the placement of catch basins. Stormwater drain systems are often installed based on the best professional judgment and experience of the design engineer.

The estimated peak stormwater flow rate dictates the number of catch basins needed on a site. The percent impervious surface, slope, average rainfall and rainfall intensity are all factors in calculating the peak flow rate. Catch basins are designed to hold water below the one-quarter bend outlet pipe or elbow pipe. The pipe is also referred to as a 90 degree invert.
Standing water allows some larger sediments to settle out. Any oil or grease washed into the basin will float to the top of the water level, above the elbow pipe. The catch basin is only effective for oil and grease separation if the water level is maintained above the elbow pipe intake.

Effectiveness

There are several factors that contribute to the capture efficiency of catch basins. These include: catch basin placement, catch basin design; maintenance frequency; flow rate; pollutant loading and particle size.

The sump in a catch basin captures settleable solids under low flow conditions. According to information obtained from EPA, catch basins are typically best at removing particles greater than 0.04 inches (approximately 1millimeter in diameter). They are not designed to remove total suspended solids or soluble pollutants.

There is limited data on the effectiveness of Lynch style standard catch basins to capture Total suspended solids. Several studies indicate total suspended solids may be reduced by about 20 percent in some catch basins.

Re-suspension and discharge of sediments previously collected in a catch basin is a potential problem during large storm events or first flush scenarios.

Catch basin efficiency can be improved by frequent maintenance, implementation of best management practices or with the use of catch basin inserts.

Maintenance

Maintaining catch basins is critical to effectiveness. A catch basin should be cleaned when the amount of sediment is greater than one third the distance between the bottom of the basin and the water line. It is recommended that catch basins draining industrial areas be cleaned once per month or more frequently if sediment accumulates above the one third threshold.

A study of 60 catch basins draining industrial land in Alameda County, California showed that monthly cleaning of catch basins at industrial sites increased the total pounds of collected sediment from 30 pounds when cleaned annually

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State of Oregon
Department of
Environmental
Quality

Northwest Region
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Portland, OR 97232
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Contact: Alex Liverman
www.oregon.gov/DEQ

Last Updated: 7/25/17
By: Alex Liverman

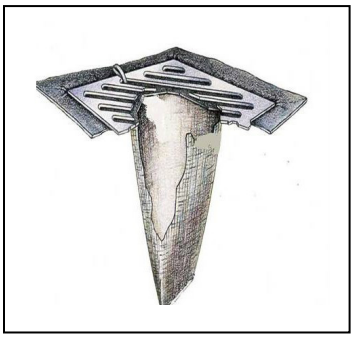
to 180 pounds when cleaned monthly. For more information on catch basin maintenance, see the City of Portland Bureau of Transportation fact sheet titled, "Catch Basin Care" at: www.portlandoregon.gov/transportation/article/319801

Best management practices

Implementation of best management practices, such as frequent sweeping and covering material storage and manufacturing areas help to reduce sediment and pollutants from getting into stormwater conveyance systems. Best management practices recommended by DEQ are available on our website at: http://www.oregon.gov/deq/FilterDocs/IndBMP021413.pdf.

Catch basin inserts

Sediment and pollutant loading can be reduced using a catch basin insert. Many different styles of catch basin inserts are available. Some provide oil absorbent strips while others just provide sediment capture. Generally, the capacity of inserts is much less than that of the actual basin, which means more frequent maintenance is required. The advantage to using an insert is that a greater amount of sediment is expected to be captured. In addition, the maintenance is much simpler since most inserts can be removed and disposed of by hand. It is recommended that inserts without overflow slots be used to provide for maximum efficiency. The method of sediment disposal depends on whether the captured sediment is contaminated. For more information, see DEQ's fact sheet "How to Determine if Your Waste is Hazardous"



Catch Basin Insert

Stormwater Management Manual

All projects within the City of Portland, including industrial sites, developing or redeveloping over 500 square feet of impervious surface, or existing properties proposing new stormwater discharges off site are subject to the requirements of the Bureau of Environmental Services Stormwater Management Manual. The manual requires 70 percent removal of total suspended solids from 90 percent of the average annual runoff. A site may achieve this level of removal by many different means. For more details, please refer to the 2016 Portland Stormwater Manual at: https://www.portlandoregon.gov/bes/64040.

Catch basin sediment sampling

Sampling and analysis of stormwater solids is typically required at Portland Harbor upland sites. This helps to characterize and evaluate the stormwater pathway and to determine if source control measures are required to prevent contaminants from impacting the river and its sediments.

Sampling of catch basin sediments can provide a time-integrated indication of contaminants that may be or may have been transported to the river. Catch basin sample analyses protocols are based on a comprehensive review of potential contaminant sources, available in-water sediment data, and other available data. Sampling should be conducted according to a DEQ approved work plan based on DEQ's Guidance for Evaluating the Stormwater Pathway at Upland Sites.

What to look for when assessing a catch basin:

- The presence and size of the sump;
- The outlet location and type;
- The pollutant loading potential of the area drained;
- The use of catch basin inserts and frequency of replacement;
- The schedule of catch basin maintenance;
- Other implemented best management practices; and
- Available storm water monitoring data and catch basin sediment data.

For more information

If you have questions regarding Portland Harbor stormwater issues, please contact your DEQ Cleanup project manager for more information, or contact Alex Liverman, DEQ's Portland Harbor Stormwater Coordinator at 503-229-5080 or liverman.alex@deq.state.or.us

Alternative formats

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.

APPENDIX D

MONTHLY STORMWATER INSPECTION FORM

MONTHLY STORMWATER INSPECTION FORM

SITE: _____ **INSPECTED BY:** _____
DATE: _____ **WEATHER CONDITIONS:** _____
TIME: _____ **GENERAL COMMENTS:** _____

CONDITIONS INSPECTION

AREA / ITEM	ACCEPTABLE? [1]	IF NOT ACCEPTABLE, DESCRIBE LOCATION AND CONDITION	ACTION NEEDED	COMPLETION DATE
Housekeeping				
Spill Kits Stocked and Accessible				
Oil/Water Separators				
Parking Lots, Roadways				
Runways / Aprons				
Fuel Tanks and Fueling Area				
Oil and Chemical Storage				
Aircraft, Vehicle, and Equipment Storage Areas				
Ditches, Culverts				
Leaks or Spills				
Outfalls				
Use additional sheets if needed				

[1] Consider the following elements during the inspection:

1. If area or item requires cleaning, replacement, maintenance, reconditioning, or repair.
2. If industrial materials, residue, or trash may have or could come into contact with stormwater.
3. If leaks or spills are present from industrial equipment, drums, tanks, and other containers.
4. If there is offsite and internal tracking of industrial or waste materials, or sediment where vehicles enter or exit the site.
5. If there is tracking or blowing of raw, final, or waste materials that results in exposure of stormwater falling on the site.
6. If there is evidence of, or the potential for, pollutants entering the drainage system.
7. If there is evidence of pollutants discharging to receiving waters at the discharge point.
8. If stormwater control measures, including treatment, infiltration devices and mass reduction measures, are functioning properly, and maintained on designed schedules.

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 001									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

OUTFALL NO. 002									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 003									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

OUTFALL NO. 004									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 005									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

OUTFALL NO. 006									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 008					
DATE:		**TIME:**		**FLOW?**	**INSPECTOR:**
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**	
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS		VISIBLE OIL SHEEN			
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)		
ODOR					

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

OUTFALL NO. 009					
DATE:		**TIME:**		**FLOW?**	**INSPECTOR:**
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**	
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS		VISIBLE OIL SHEEN			
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)		
ODOR					

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 010				
DATE:	**TIME:**	**FLOW?**	**INSPECTOR:**	
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.
SUSPENDED SOLIDS		VISIBLE OIL SHEEN		
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)	
ODOR				

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

OUTFALL NO. 011				
DATE:	**TIME:**	**FLOW?**	**INSPECTOR:**	
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.
SUSPENDED SOLIDS		VISIBLE OIL SHEEN		
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)	
ODOR				

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 013					
DATE:		**TIME:**		**FLOW?**	**INSPECTOR:**
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**	
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS		VISIBLE OIL SHEEN			
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)		
ODOR					

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

OUTFALL NO. 014					
DATE:		**TIME:**		**FLOW?**	**INSPECTOR:**
ITEM	**PRESENT?**	**ITEM**	**PRESENT?**	**ACTION**	
FLOATING SOLIDS		FOAM		IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS		VISIBLE OIL SHEEN			
COLOR		ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE	(IF YES, DESCRIBE.)		
ODOR					

OTHER STORMWATER OBSERVATIONS		
ITEM	**OBSERVATION**	**OPTIONAL COMMENTS**
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?		
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?		

STORMWATER DISCHARGE VISUAL OBSERVATION

INSTRUCTIONS: For each monitored outfall, **c**onduct visual observation of a representative grab sample in a clean, colorless glass or plastic container in a well-lit area. The observation is not required to be made outside of regular business hours of operation or if conditions are unsafe. However, the observation must be made and recorded if flow is present, even if the other elements of this inspection have already been completed for the month.

OUTFALL NO. 091									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

OUTFALL NO. 092									
DATE:		**TIME:**		**FLOW?**		**INSPECTOR:**			
ITEM		**PRESENT?**		**ITEM**		**PRESENT?**		**ACTION**	
FLOATING SOLIDS				FOAM				IF ANY OF THESE CONTAMINANTS ARE FOUND PRESENT IN THE FINAL OUTFALL DISCHARGE, INITIATE A TIER I REPORT IMMEDIATELY.	
SUSPENDED SOLIDS				VISIBLE OIL SHEEN					
COLOR				ANY OTHER OBVIOUS INDICATORS OF POLLUTION IN DISCHARGE		(IF YES, DESCRIBE.)			
ODOR									
OTHER STORMWATER OBSERVATIONS									
ITEM				**OBSERVATION**		**OPTIONAL COMMENTS**			
WHAT WAS THE NATURE OF THE DISCHARGE; WAS IT CAUSED BY SNOW OR RAIN?									
WERE ANY PREVIOUSLY UNIDENTIFIED SOURCES OF POLLUTANTS OBSERVED?									

APPENDIX E

TIER 2 CORRECTIVE ACTION, 2016 SWPCP ADDENDUM

ESA VIGIL-AGRIMIS

819 SE Morrison Street
Suite 310
Portland, OR 97214
503.274.2010 phone
503.274.2024 fax

www.vigil-agrimis.com

memorandum

date April 6, 2016

prepared for Precision Approach Engineering and Jackson County Airport Authority (Airport)

prepared by ESA Vigil-Agrimis (ESA VA)

subject Rogue Valley International – Medford Airport (RVIMA)
Addendum to the Storm Water Pollution Control Plan (SWPCP)

The purpose of this memorandum is to provide an addendum to the RVIMA SWPCP in response to an Oregon Department of Environmental Quality (DEQ)-required Tier II Corrective Action procedure. The Tier II Corrective Action response was triggered by zinc concentrations in previous stormwater samples exceeding the benchmark contained in the Airport's National Pollutant Discharge Elimination System (NPDES) 1200-Z permit.

BACKGROUND

As part of the Airport's NPDES 1200-Z permit discharge monitoring requirements, the Airport conducted monitoring at several outfalls in the second year of their permit coverage. At Outfall #2 and Outfall #9 the geometric mean for total zinc concentrations exceeded the permit benchmark for zinc (0.12 mg/L). The exceedance triggered a Tier II Corrective Action procedure, which requires revising the SWPCP. On September 17, 2015 the Airport received a letter from DEQ informing them of the Tier II Corrective Action requirements. The letter stated that the SWPCP must be revised by December 31, 2015. A follow up letter from DEQ was received on October 20, 2015 to clarify that both Outfall #2 and Outfall #9 were the subject of the required corrective action (attached).

The Airport submitted a status update memorandum on December 31, 2015. The status update memorandum described the zinc stormwater investigation that ESA Vigil-Agrimis (ESA VA) was conducting. The memorandum also explained that additional sampling would be necessary to more clearly identify the key sources of zinc.

Based on the initial status update memorandum and a follow-up discussion between Kristy Swell and ESA VA, the response deadline was extended to March 9, 2016. The implementation deadline of June 30, 2017 remains unchanged.

AFFECTED DRAINAGE BASINS

Stormwater runoff at RVIMA drains to 6 different subbasins as shown on **Figure 1** (attached). As part of the NPDES permit-required stormwater monitoring, the Airport collects stormwater samples from 10 locations at RVIMA. Zinc concentrations in stormwater samples collected from Outfall 2 and Outfall 9 have exceeded the permit benchmark. As described below, Outfall 2 drains stormwater runoff from Basin 2 and Outfall 9 drains stormwater runoff from Basin 3.

Basin 2/Outfall 2

As shown in **Figure 2**, the area of Basin 2 that drains to Outfall 2 includes the terminal building, terminal parking lot, FedEx building, Fire Station, various minor parking lots, and several other small buildings. The runoff is collected in a series of underground pipes that drain to a flow diversion structure at the southwestern boundary of Basin 2. Normal flows discharge from the flow control structure to Lone Pine Creek through an oil-water separator. High flows are diverted into an adjacent grass detention pond during heavy rain events. The outfall that discharges to Lone Pine Creek is the Outfall 2 compliance point. The existing stormwater infrastructure is well documented in Basin 2 due to the recent improvement projects within the basin.

Basin 3/Outfall 9

As shown in **Figure 3**, the area of Basin 3 that drains to Outfall 9 includes a portion of the former cross-wind runway, the Erickson Aviation building, the building parking lot, and a large paved area between the building and runway that is currently used to store metal mechanical equipment. There is an historic plane adjacent to the building with walkways and stairs that allow permanent access into the plane. These areas are not collected into the stormwater system but infiltrate in the adjacent grass area. Runoff is collected in a series of underground pipes, and due to a lack of as-built information the system is not well understood. It is likely that the southern half of the Erickson building, including the adjacent pavement, drains south to an oversized catch basin structure. This catch basin structure also collects runoff from the former cross-wind runway. The outlet pipe from the structure likely heads west across both Milligan Way and Biddle Road to a manhole located in a driveway. It is not clear where the manhole leads or what other areas might drain to it. The northern half of the Erickson building, including the adjacent pavement, drains to an outfall just south of the intersection between Cirrus Drive and Milligan Way. This outfall is the Outfall 9 compliance point and drains the site stormwater to the manhole in the driveway across Biddle Road.

ZINC STORMWATER INVESTIGATION

As the Airport's on-call engineering consultant, Precision Approach Engineering contracted ESA Vigil-Agrimis to investigate potential sources of zinc in stormwater runoff from Basins 2 and 3. On November 6, 2015 the team conducted a reconnaissance site visit to visually inspect for potential sources of zinc (for example, galvanized metal surfaces) and to identify stormwater sample locations for the stormwater investigation. The following is a summary of the site reconnaissance findings:

Basin 2

1. Fed-Ex Building – The roofing material is a possible zinc source.
2. Terminal Building – The mechanical equipment on roof is a possible zinc source.
3. Terminal parking lot – The galvanized steel catch basin grates are possible zinc sources.
4. Oil-water separator – This structure is difficult to maintain due to the flange type access points that require the removal of many bolts. The buildup of sediment within the structure could make it a source of zinc.

Basin 3

1. Erickson Aviation Building – The roofing material is a possible zinc source.
2. Mechanical equipment storage area– The mechanical equipment is a possible zinc source.

The Stormwater Monitoring Plan details the visually identified galvanized surfaces and the stormwater investigation sample points. The stormwater plan specifies collecting samples during four rain events at the identified locations.

STORMWATER INVESTIGATION RESULTS

The stormwater investigation identified one major source of zinc in each basin.

- Basin 2 – Fed-Ex Building Roof
- Basin 3 – Erickson Aviation Building Roof

Table 1 is a summary of the key zinc stormwater investigation results.

Table 1 - Key Zinc Stormwater Investigation Results				
Sampling Location		**Event 1 Total Zinc Conc. (mg/L)**	**Event 2 Total Zinc Conc. (mg/L)**	**Event 3 Total Zinc Conc. (mg/L)**
Basin 2	Downspout on SE Corner of FedEx Building	2.80	3.78	4.58
	Outfall 2 Compliance Point	0.06	0.17	0.08
Basin 3	Downspout on East Side of Erickson Aviation Building	0.91	0.22	0.42
	Outfall 9 Compliance Point	0.07	0.21	0.13

TREATMENT MEASURES

The proposed treatment measures will include source removal through replacing or applying a durable coating to the Fed-Ex and Erickson building roofs and water quality treatment with MetalZorb media.

Source Removal

The Airport will work with the building owners of the Fed-Ex building and the Erickson Aviation Building to reconfigure the roofs to prevent rainfall and stormwater runoff from contacting galvanized roofing materials. It is likely the roofing material will be painted or otherwise coated with a durable material, which is common industry approach. Alternatively, the building owner could choose to completely replace the existing roof material if it is degraded and nearing the end of the material's design life. The roof would be replaced with a non-galvanized roofing material.

Table 2 shows our projected reduction of zinc concentrations at the compliance points for Basin 2 and Basin 3. The analysis assumes complete removal of zinc from the two buildings. The projected reduction was estimated by calculating the mass of zinc in the runoff during the Pollution Control Design Storm (1 inch in 24 hours) assuming an average concentration which was calculated using the investigation sampling results.

Table 2 – Projected Reduction of Zinc Concentrations		
Basin Number	**Percent Reduction**	**Projected Zinc Concentration at the Compliance Point (mg/L)**
Basin 2	28 %	0.07
Basin 3	26 %	0.09

*Permit Benchmark = 0.12 mg/L

As shown in Table 2, the projected zinc concentrations after source removal are below the permit benchmark of 0.12 mg/L.

Water Quality Treatment

The Airport will also install two five-foot long mesh bags filled with MetalZorb heavy metal absorption media.

In Basin 2 the sock will be installed in the pipe shown on Figure 2. This location was chosen to provide a balance between targeted water quality treatment of the most significant source of zinc and limiting the volume of water to be managed by the MetalZorb in this relatively large basin.

In Basin 3 the sock will be installed in the pipe shown on Figure 3. This location was chosen to provide an easily accessible location for maintenance, and it is feasible to treat the entire basin draining to the compliance point due to the relatively small size of Basin 3.

The removal efficiency of MetalZorb is difficult to estimate for this installation due to variable runoff flow rates and variable zinc concentrations. However, as shown above, source removal is estimated to reduce zinc concentrations below the benchmark. The MetalZorb installation will reduce zinc concentrations even further below benchmark.

The MetalZorb sock will cost approximately $1,100 per year to install and maintain.

Maintenance

The MetalZorb will be visually checked at the beginning of the rainy season to make sure it is installed correctly. The media will be replaced yearly, as generally recommended for the relative pollutant loading on this site. If subsequent monitoring indicates the media is spent, then the replacement schedule will be reevaluated.

IMPLEMENTATION SCHEDULE

The Airport is currently discussing the need to address the roofs with each building owner. As described above, the work will likely consist of applying a durable coating to the existing roofing material or replacing the existing roof with new non-galvanized roofing material. Over the next several months the Airport and building owners will determine the preferred approach. The roof work will be completed by the NPDES 1200-Z permit implementation deadline of June 30, 2017.

The MetalZorb socks were installed on April 6, 2016.

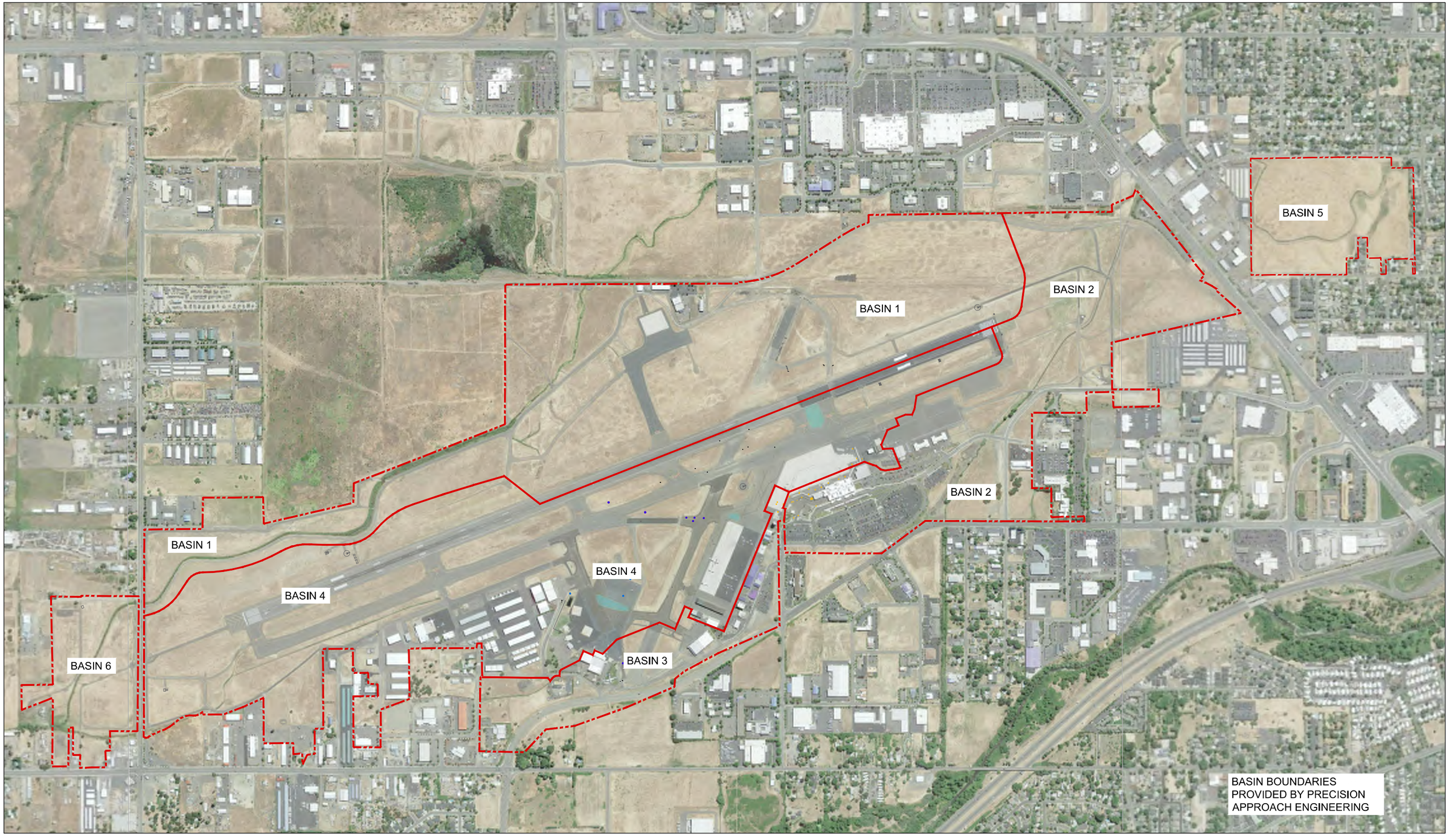


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Figure 1
Ba□in O□er□iew
Rogue Valley International - Medford Airport Tier II Correcti□e Action Support Ser□ice□
Medford, Oregon

ESA VIGIL-AGRIMIS

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DATE: Mar 18, 2016 11:18am XREFS:MFR-Alignments MFR-Basins MFR-Pavement Markings MFR-Roads and Buildings MFR-Storm Pipes MFR-Utilities MFR-Surface MFR-Electrical MFR-Shoulder Surface TB_Figure_11x17-MFR ESA Base

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Figure 2
Ba□in 2 - Outfall 2
Rogue Valley International - Medford Airport Tier II Correcti□e Action Support Ser□ice□
Medford, Oregon

ESA VIGIL-AGRIMIS

E□ISTING STORMWATER SYSTEM LINE WORK S□OWN IS APPRO□IMATE/INCOMPLETE AND BASED ON GIS INFORMATION, FIELD ST□DIES, AND AS-B□ILT DOC□MENTATION

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Figure □
Ba□in □- Outfall □9
Rogue Valley International - Medford Airport Tier II Correcti□e Action Support Ser□ice□
Medford, Oregon

ESA VIGIL-AGRIMIS

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DATE: Apr 06, 2016 9:46pm XREFS:MFR-Alignments MFR-Basins MFR-Pavement Markings MFR-Roads and Buildings MFR-Storm Pipes MFR-Utilities MFR-Surface MFR-Electrical MFR-Shoulder Surface TB_Figure_11x17-MFR ESA Base

Oregon
Kate Brown, Governor

Department of Environmental Quality
Western Region Eugene Office
165 East Seventh Ave., Suite 100
Eugene, OR 97401
541-686-7838
Fax 541-686-7551
TTY 711

October 20, 2015

Mr. Bern E. Case
Airport Director
Rogue Valley International – Medford Airport
1000 Terminal Loop Parkway, Suite 201
Medford, OR 97504 .

RE: **Tier II Corrective Action Required**
NPDES 1200-Z Industrial Stormwater Discharge Permit
Common Name: RVIMA
File Number: 100901, Jackson County

Dear Mr. Case:

You are receiving this letter because the facility named above has triggered Tier II Corrective Action requirements and must submit information to the DEQ by **December 31, 2015**.

After reviewing this facility's Discharge Monitoring Report (DMR), which reported the sampling results collected during the 2nd year of permit coverage, DEQ determined the geometric mean of the results for the following outfall(s) exceeds the statewide benchmark for the following parameter(s):

Outfall(s)	Parameter(s)
Outfall #2	Total Zinc
Outfall #9	Total Zinc

According to the NPDES 1200-Z Industrial Stormwater Discharge Permit, you must now select additional stormwater treatment measures, which may include a combination of source control and stormwater treatment measures, with the goal of achieving the statewide benchmark(s) in future stormwater discharges. The Stormwater Pollution Control Plan (SWPCP) must be revised to include the selected control measures, including the projected reduction of pollutant concentrations, and an implementation schedule. This portion of your SWPCP must be certified by a licensed Professional Engineer or Certified Engineering Geologist, and submitted to DEQ, along with the enclosed Tier II Revised SWPCP Checklist, no later than **December 31, 2015**. The treatment system and/or control measures must be installed no later than June 30, 2017.

If you are seeking a Tier II Waiver per Schedule A.12.d, the Waiver Report, along with the enclosed Waiver Report Checklist, must be submitted to DEQ no later than December 31, 2015.

Please carefully review the enclosed Tier II FAQ Sheet, as well as the enclosed Schedule A.12 of your permit for all of the requirements and options for your facility. If you have any questions, please contact me at 541-687-7343 or by email at riedel.mark@deq.state.or.us.

Sincerely,

Mark Riedel-Bash, RG
Stormwater Specialist

Enclosures: Schedule A.12 Tier II Excerpt from 1200-Z Industrial Discharge Permit
Tier II Revised SWPCP/Waiver Report Checklist
Tier II Fact Sheet

The Jackson County Expo

Stormwater Management Program Document

Physical Address:

1 Peninger Road
Central Point, Oregon 97502

Mailing Address:

P.O. Box 3635
Central Point, Oregon 97502

Telephone:

541-774-8270

Document Prepared:

February 24, 2022

TABLE OF CONTENTS

1.0 Introduction.

The Jackson County Expo (The Expo) is a venue owned and operated by Jackson County, Oregon (or County) as a large event center. It is physically located in Central Point, Oregon along the east side of Interstate 5. The Expo hosts the Jackson County Fair and other events, and site features include pavilions, an amphitheater, arenas, barns, wildlife viewing areas, the Family Fun Center, and vehicle parking for patrons.

The Expo is comprised of approximately 212 acres and is sited on relatively level terrain. Stormwater runoff flows in all directions, but all runoff ultimately discharges into Bear Creek either at The Expo or to the north of The Expo before Bear Creek discharges into the Rogue River. Bear Creek flows through the middle of The Expo in a generally south to north direction. Most of the developed portion of The Expo property lies on the west side of Bear Creek, with undeveloped property being located on the east side of Bear Creek. The Expo site layout, including stormwater features and receiving waters for stormwater, is depicted on Figure 1, Facilities and Stormwater Map, which is included as Appendix 1 located in the Stormwater Plan Resources section of this document (Section 5).

The Expo maintains this Stormwater Management Program Document (referred to hereinafter as the Stormwater Plan), to describe in detail how it complies with the required control measures included in National Pollutant Discharge Elimination System (NPDES) Phase II General Permit (Permit) for Municipal Separate Storm Sewer Systems (MS4). [1] The Permit is issued to The Expo by the Oregon Department of Environmental Quality (DEQ) and The Expo submits required documents and reports to DEQ as described in the Permit.

2.0 Stormwater Plan Administration.

As part of Jackson County, Oregon, the Jackson County Fair Board is a statutory body charged with management and oversight of the Jackson County Fairgrounds, also known as The Expo. Jackson County is in turn one of several Co-Implementers of the Permit, which is held in primacy by Rogue Valley Sewer Services (RVSS). [2] This arrangement places The Expo in the category of Existing Registrants. In addition, RVSS and the Co-Implementers are categorized as "large communities" for stormwater planning purposes as documented in DEQ's Permit Evaluation Letter dated March 12, 2021. [3]

This Stormwater Plan must be reviewed at least annually and updated at least annually, if needed. The Stormwater Plan must also describe The Expo's schedule for implementation of any control measure components to be developed during the term of the Permit.

The Expo must annually submit relevant information, including this Stormwater Plan if modified, to Jackson County Administration and RVSS (serving as the Permit Registrant) developed under this Stormwater Plan so that RVSS may submit it to DEQ as part of its Annual Report. [4] Submittals to DEQ are made in concert with RVSS, serving as the Primary Permit Registrant. In addition, the Stormwater Plan must be made available to the public through The Expo's publicly accessible website. [5]

The Expo must maintain a method of gathering, tracking, and using Stormwater Management Program (SWMP) information to set priorities and assess its compliance with the Permit. The Expo must track relevant activities and document program outcomes to illustrate progress on the SWMP control measures (for example, the number of inspections, official enforcement actions, and/or types of public education actions, etc.), and cite relevant information and metrics, reflecting the specific reporting period, in each annual report.

The Expo must provide resources, including finances, staff, equipment and/or other support methods, to implement the control measures and other requirements outlined in the Permit.

The control measures and implementation deadlines are presented in Table 1, SWMP Control Measures and Implementation Deadlines. The Expo's particular deadlines are indicated in the column of Existing Registrants.

Table 1. SWMP Control Measures and Implementation Deadlines.

SWMP Control Measures	Implementation Deadline	
	Existing Registrants	New Registrants
Public Education and Outreach	February 28, 2020	September 1, 2023
Public Involvement and Participation	February 28, 2020	September 1, 2023
Illicit Discharge Detection and Elimination	February 28, 2022	September 1, 2023
Construction Site Runoff Control	February 28, 2023	September 1, 2023
Post-Construction Site Runoff for New Development and Redevelopment	February 28, 2023	September 1, 2023
Pollution Prevention and Good Housekeeping for Municipal Operations	February 28, 2022	September 1, 2023

Source: NPDES Phase II General Permit for Municipal Separate Storm Sewer Systems (MS4). [1]

3.0 Stormwater Management Program Control Measures.

This Stormwater Plan describes the administrative, structural and procedural best management practices (BMPs) necessary to protect stormwater quality relevant to The Expo's operations. These are known as Stormwater Management Program Control Measures and are presented in the following six subsections:

- Public Education and Outreach;
- Public Involvement and Participation;
- Illicit Discharge Detection and Elimination;
- Construction Site Runoff Control;
- Post-Construction Site Runoff for New Development; and
- Pollution Prevention and Good Housekeeping for Municipal Operations.

3.1 Public Education and Outreach

The Expo's public education and outreach program targets three audiences: (1) the general public, homeowners, homeowner associations, schoolchildren, and businesses (including home-based and mobile business), (2) local elected officials, land use planners and engineers, and (3) construction site operators. The educational efforts are to reduce behaviors and practices that cause or contribute to adverse stormwater impacts on receiving waters. The program should promote specific actions to increase audience understanding of how to reduce pollutant discharges in stormwater runoff and prevent illicit discharge from entering the MS4 and impacting receiving waters. The public education and outreach program must include the activities detailed in the BMPs listed below. The effective date for this program is February 28, 2020.

3.1.1 Public Education and Outreach Administration. BMP PEO 01. For public education and outreach, the permit describes the target audiences and topics, required frequencies of efforts, a focus on construction-related issues, along with a tracking and assessment methodology. Because these efforts are of a global nature, The Expo recognizes the County and RVSS act as the primary leads in this area. To ensure compliance with this requirement, The Expo will meet with the County and RVSS at least once per year to ensure these requirements are met and to identify any new, specific contributions The Expo can make to further the overall effort. Minutes of these meetings, along with any follow-up actions for The Expo, will be documented and retained by The Expo. These requirements are listed in BMP PEO 01.

BMP PEO 01	ACTION	FREQUENCY
1.	Meet with primary agencies (the County and RVSS) to determine if the administrative requirements for public education and outreach are being met.	Annually
2.	Determine if any specific actions are needed to be undertaken by The Expo to meet these requirements. Document and follow-up as needed.	Annually

3.2 Public Involvement and Participation

The Expo implements a public involvement and participation program that provides opportunities for the public to effectively participate in the development of the SWMP. Because these efforts are of a global nature, The Expo recognizes the County and RVSS act as the primary leads in this area. The effective date for this program is February 28, 2020.

3.2.1 Public Involvement and Participation Administration. BMP PIP 01. To ensure compliance with this requirement, The Expo will meet with the County and RVSS at least once per year to ensure these requirements are met and to identify any new, specific contributions The Expo can make to further the overall effort. Minutes of these meetings, along with any follow-up actions for The Expo, will be documented and retained by The Expo.

BMP PIP 01	ACTION	FREQUENCY
1.	Meet with primary agencies (the County and RVSS) to determine if the requirements for public involvement and participation are being met.	Annually
2.	Determine if any specific actions are needed to be undertaken by The Expo to meet these administrative requirements. Document and follow-up as needed.	Annually

3.3.2 Publicly Accessible Website. BMP PIP 02. The Expo maintains and promotes its publicly accessible website with information on its SWMP implementation, this Stormwater Plan, contact information, and educational materials. [5] The website is maintained with current information and is updated at least annually. The website incorporates this Stormwater Plan and supporting information for its key elements. In addition, the website includes The Expo's contact information for relevant staff, including phone numbers, mailing addresses, and email addresses. This information is presented in BMP PIP 02.

BMP PIP 02	ACTION	FREQUENCY
1.	Ensure The Expo public website includes the Stormwater Plan and supporting documents, along with current contact information. The Expo may choose to direct website viewers to the relevant section of RVSS's public website to meet this requirement.	Annually

3.3 Illicit Discharge Detection and Elimination

The Expo implements and enforces a program to detect and eliminate illicit discharges into the Municipal Separate Storm Sewer System (MS4). An illicit discharge is any discharge to an MS4 that is not composed entirely of stormwater. Conditional exceptions (i.e., allowable non-stormwater discharges) are identified in the Permit in Schedule A.1.d. Efforts to accomplish the efforts to detect and eliminate illicit discharges include understanding site stormwater features through mapping and inventorying. This effort also includes creating and enforcing relevant ordinances as needed. In addition, complaints and reports of illicit discharges are required to be managed and incidents are to be investigated and corrective actions tracked as warranted. The effective date for this program is February 28, 2022.

3.3.1 MS4 Mapping and Digital Inventory. BMP IDD 01. The Expo has created an MS4 map and digital inventory which includes the location of outfalls and an outfall inventory, the stormwater conveyance system and structural stormwater control locations, and chronic illicit discharges. The map appears in the Stormwater Plan Resources and is titled Figure 1, Facilities and Stormwater Map (see Appendix 1 in Section 5). The map must include delineation of the MS4 by storm sewer drainage basin(s), as appropriate, and identify the location and characteristics of any ongoing dry weather flows. The map is to be reviewed at least annually and updated as needed.

The digital inventory includes all the known outfall locations, owned or operated by The Expo. The outfall location must include a unique identifier (for example, 001, 002, etc.), geographic information (such as global positioning coordinates or nearby landmarks) necessary to locate these outfalls in the field, and the name(s) of the receiving water(s). In addition, the digital inventory includes the names and locations of the conveyance systems and any structural stormwater controls. Finally, the digital inventory includes names and locations of any chronic illicit discharges if they exist. BMP IDD 01 ensures mapping and the digital inventory remain current.

BMP IDD 01	ACTION	FREQUENCY
1.	Ensure Figure 1. Facilities and Stormwater Map and the companion digital inventory (Appendix 2 – Digital Inventory of Stormwater Structural Improvements) is reviewed and updated to reflect changes in outfalls, conveyance systems, structural stormwater controls, and chronic illicit discharges.	Annually
2.	Ensure Appendix 2 – Digital Inventory is populated with all significant structural stormwater conveyances and features.	Annually

3.3.2 Enforcement to Eliminate Illicit Discharges. BMP IDD 02. As the Permit Registrant, RVSS has implemented Ordinance 4.05.100.3, which addresses water quality in storm sewers. [6] Per RVSS' current Stormwater Management Program Document, RVSS is now in the process of updating the code to meet the revised list of prohibited discharges, with revisions to RVSS' code to be brought to its board for adoption prior to February 28, 2022.

Additionally, RVSS reviewed its existing Code Enforcement Policy and updated it in FY21 to meet the Permit requirements or enforcement of the ordinance. The board adopted the revised Code Enforcement Policy in May 2021. [6] BMP IDD 02 addresses The Expo's role in this ordinance and enforcement.

BMP IDD 02	ACTION	FREQUENCY
1.	Review RVSS Ordinance 4.05.100.3 and relevant sections of RVSS' Code Enforcement Policy to ensure The Expo's continued familiarity and understanding of these requirements.	Annually
2.	Train employees on relevant key elements of illicit discharges, including enforcement aspects.	Annually

3.3.3 Managing Complaints and Reports of Illicit Discharges. BMP IDD 03. The Expo is required to receive and respond to complaints and reports of illicit discharges. Key requirements include the implementation and promotion of a system to receive such information during business and non-business hours. The Expo must respond to all such complaints and reports as soon as possible, but at least within an average two working days. For discharges or spills of a significant nature which could constitute a threat to human health, welfare, or the environment, The Expo must respond to the source of the report within 24 hours of gaining knowledge of the complaint or report. The Expo must also determine if the nature of the release requires notification to the Oregon Emergency Response System and/or agencies and proceed accordingly. BMP 003 details these requirements.

BMP IDD 03	ACTION	FREQUENCY
1.	Establish and maintain system to respond to complaints and reports of illicit discharges. Confirm the complaint management system continues to be functional and effective.	Annually
2.	Respond in a timely manner to all complaints and reports of illicit discharges. Investigate and document such occurrences as indicated in BMP IDD 04.	As needed
3.	For illicit discharges originating offsite, notify source of discharge within 5 working days of knowledge.	As needed
4.	Ensure instructions on reporting releases to required agencies is easily accessible to staff. Ensure staff is properly trained to handle complaints and reports appropriately.	Annually

3.3.4 Investigating Complaints and Reports of Illicit Discharges. BMP IDD 03. Complaints and reports of illicit discharges are to be investigated and those that are found to be valid are to be investigated, documented, and followed-up with corrective actions as warranted by the incident or condition. BMP IDD 04 details these requirements.

BMP IDD 04	ACTION	FREQUENCY
1.	Upon undertaking the communication response actions described in BMP IDD 03, investigate and document the discharge or spill.	As needed
2.	Investigate and document the discharge or spill as follows: 1. Date the complaint was received 2. If available, the complainant's name and contact information 3. Name of staff responding to the complaint 4. Date the investigation was initiated 5. The outcome of the staff investigation 6. Corrective action(s) taken to eliminate the illicit discharge 7. The responsible party for the corrective action(s) 8. The status of enforcement procedure(s), when necessary 9. The date the corrective action(s) was completed 10. Staff that evaluated final compliance 11. Other information if needed	As needed
3.	Ensure staff is properly trained to investigate complaints and reports appropriately.	Annually

3.3.5 Dry Weather Screening Program. BMP IDD 05. As a department of Jackson County, a Co-Implementer of the Permit, The Expo is required to conduct dry weather screening at annual frequencies for a specified percentage of MS4 outfalls as presented in the Permit. These percentages and times are presented in the BMP table below. Once 100 percent of the MS4 have undergone dry weather screening, The Expo is to designate its primary outfall locations using the criteria presented in the Permit, Schedule A.3.c.vi.(C).

Dry-weather field screening activities must occur after an antecedent dry period of at least 72-hours. The dry-weather field screening activities must be documented and include the information described below in BMP IDD 05.

BMP IDD 05	ACTION	FREQUENCY
1.	Conduct dry weather screening at a minimum 40 percent of outfalls.	Once, by 2/28/2022
2.	Conduct dry weather screening at a minimum 60 percent of outfalls.	Once, by 2/28/2023
3.	Conduct dry weather screening at a minimum 80 percent of outfalls.	Once, by 2/28/2024
4.	Conduct dry weather screening at 100 percent of outfalls.	Once, by 2/28/2025
5.	Designate primary outfall locations using the criteria presented in the Permit, Schedule A.3.c.vi.(C).	Once, coincident with Item 4. above
6.	Conduct dry weather screening at designated primary outfall locations. The four stepwise, dry weather screening procedures include: General Observations; Field Screening and Analysis; Pollutant Parameter Action; and Laboratory Analysis. Detailed descriptions of each of these procedures are found in the Permit, Schedule A.3.c.vi.(D) through (G), respectively.	Annually, starting 3/1/2025

3.3.6 Illicit Discharge Detection and Elimination Training and Education. BMP IDD 06.
Training requirements for staff involved with illicit discharge and elimination efforts are described above in BMPs IDD 02, 03, and 04. These requirements are repeated here in BMP IDD 06 to ensure timely completion.

BMP IDD 06	ACTION	FREQUENCY
1.	Ensure initial training is completed for staff engaged in illicit discharge and elimination efforts in a timely manner.	Once, within 30 days of individual's assignment
2.	Conduct refresher training for staff engaged in illicit discharge and elimination efforts.	Annually

3.4 Construction Site Runoff Control

The Expo must implement and enforce a construction site runoff control program to reduce discharges of pollutants from construction sites in its coverage area. The Expo must implement

all the relevant required components of its construction runoff control program, as described in Permit Schedule A.3.d.ii – ix, by February 28, 2023.

3.4.1 Construction Site Runoff Control Administration. BMP CRC 01. Key elements of the construction site runoff control efforts include the following six items: (1) Existence of ordinances and/or other regulatory mechanisms; (2) Erosion and sediment control plans (ESCPs); (3) Review of ESCPs; (4) Construction site inspections (including minimum triggers for inspections, minimum inspection documentation requirements, and specific inspection requirements for existing large communities); (5) Enforcement procedures; and (6) Tracking and assessment of these controls.

Because many of these efforts are of a global nature, The Expo recognizes Jackson County and RVSS act as the primary leads in elements (1), (5), and (6) as described above. To ensure compliance with this requirement, The Expo will meet with the County and RVSS at least once per year to ensure these requirements are met and to identify any new, specific contributions The Expo can make to further the overall effort. Minutes of these meetings, along with any follow-up actions for The Expo, will be documented and retained by The Expo. These requirements are listed in BMP CRC 01.

BMP CRC 01	ACTION	FREQUENCY
1.	Meet with primary agencies (Jackson County and RVSS) to determine if the administrative requirements (elements (1), (5), and (6) as described in the narrative above) for the construction site runoff controls are being met.	Annually
2.	Determine if any specific actions are needed to be undertaken by The Expo to meet these administrative requirements. Document and follow-up as needed.	Annually

3.4.2 Erosion and Sediment Control Plans. BMP CRC 02. The Expo must provide construction site operators who work in its coverage area with an Erosion and Sediment Control Plan (ESCP) template prior to commencement of construction/land disturbance. See BMP CRC 02 for detailed requirements.

BMP CRC 02	ACTION	FREQUENCY
1.	Provide construction site operators with an ESCP template or similar document for work that disturbs more than 7,000 square feet.	Once per project
2.	Require the construction site operator to complete a site-specific ESCP prior to commencement of construction/land disturbance.	Once per project
3.	Ensure the ESCP documents at a minimum: sizing criteria, performance criteria, design specifications, and guidance on selection and placement of controls, and specifications for long term operation and maintenance, including appropriate inspection interval and self-inspection checklists for use by the construction site operator.	Once per project
4.	Require the construction site operator to maintain and update the ESCP as site conditions change, or as needed.	As needed during project
5.	Require the construction site operator to keep the ESCP on site and to make it available for review by The Expo, DEQ, other administrating entities.	As needed during project

3.4.3 Review of Erosion and Sediment Control Plans. BMP CRC 03. As a delegated agent by DEQ to administer NPDES 1200-C and 1200-CN permits, RVSS is authorized to review and approve ESCPs developed for projects at The Expo that require ESCPs. BMP CRC 03 formalized this procedure.

BMP CRC 03	ACTION	FREQUENCY
1.	Ensure RVSS is provided with ESCPs submitted by construction site operators for review and approval prior to physical work beginning.	Once per project

3.4.4 Construction Site Inspections. BMP CRC 04. Construction site inspections are required to be conducted and documented based upon circumstances during the construction period. BMP CRC 04 describes the circumstances that trigger the need for inspections and the actions required.

BMP CRC 04	ACTION	FREQUENCY
1.	The Expo must conduct site stormwater inspections if: (1) the construction activity 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); (2) sediment is visible or reported in stormwater discharge or dewatering activities from the construction site; or (3) a complaint or report is received. Additionally, at a minimum, The Expo must respond to the initial complaint if more than one report or complaint is received.	At least once during the permit term
2.	The inspection must include at a minimum: (1) A review and evaluation of the ESCP to determine if the described control measures were installed, implemented and maintained properly; (2) An assessment of the project's compliance with The Expo's ordinances or requirements, including the implementation and maintenance of required control measures; (3) Visual observations and documentation of any existing or potential non-stormwater discharges, illicit connections, and/or discharge of pollutants from the site. The Expo must provide documentation of recommendations to the construction site operator for follow-up; (4) If necessary, education or instruction provided to the construction site operator related to additional stormwater pollution prevention practices to comply with the approved ESCP; and (5) A written or electronic inspection report, including documentation of all necessary follow-up actions (e.g., re-inspection, enforcement) to ensure compliance with applicable requirements.	At least once during the permit term

3.5 Post-Construction Site Runoff for New Development and Redevelopment

The Expo must continue to implement its post-construction stormwater pollutant control program as it develops new programs to reduce discharges of pollutants and address stormwater runoff from new development and redevelopment project sites in its coverage area. These requirements are presented in Permit Schedule A.3.e. and are to be implemented by February 28, 2023.

3.5.1 Post-Construction Site Runoff for New Development and Redevelopment Administration. BMP PCR 01. Key elements of the construction site runoff control efforts include the following seven items: (1) Existence of ordinances and/or other regulatory mechanisms; (2) Removing barriers to low impact development; (3) Implement post-construction stormwater management requirements (including a site performance standard, a treatment standard, offsite mitigation alternative compliance, and offsite stormwater mitigation options); (4) Post-construction site runoff plan reviews; (5) Long-term operation and maintenance (O&M); (6) Training and education; and (7) Tracking and assessment.

Because many of these efforts are of a global nature, The Expo allows the County and RVSS to act as the primary lead in elements (1), (2), (3) and (4) as described above. To ensure compliance with this requirement, The Expo will meet with the County and RVSS at least once per year to ensure these requirements are met and to identify any new, specific contributions The Expo can make to further the overall effort. Minutes of these meetings, along with any follow-up actions for The Expo, will be documented and retained by The Expo. These requirements are listed in BMP PCR 01.

BMP PCR 01	ACTION	FREQUENCY
1.	Meet with primary agencies (the County and RVSS) to determine if the administrative requirements (elements (1), (2), (3) and (4) as described in the narrative above) for the post-construction site runoff controls for new development and redevelopment are being met.	Annually
2.	Determine if any specific actions are needed to be undertaken by The Expo to meet these administrative requirements. Document and follow-up as needed.	Annually

3.5.2 Long-term operation and maintenance (O&M). **BMP PCR 02.** The Expo must maintain an inventory and implement a strategy to ensure that all structural stormwater controls installed in compliance with this permit are operated and maintained to meet the site performance standard in Permit Schedule A.3.e.iv. (These site performance standards are developed by RVSS and briefly described as item (3) in the narrative of 3.5.1 presented above.) The minimum requirements of the strategy are listed in BMP PCR 02.

BMP PCR 02	ACTION	FREQUENCY
1.	Develop and maintain the "digital inventory" of structural stormwater controls as described in BMP IDD 01. In addition, maintain the MS4 map (Figure 1. Facilities and Stormwater Map) to ensure it remains current.	Annually
2.	For any structural controls owned by other entities but with the potential to impact The Expo's stormwater discharge quality, document efforts to obtain legal authority to allow The Expo to inspect and require effective operation and maintenance of privately owned and operated structural stormwater controls that discharge to the MS4, to the extent allowable under state and federal law.	Once for each such structural stormwater control
3.	Develop and review inspection procedures and an inspection schedule to ensure compliance with the O&M requirements of each structural stormwater control	Annually
4.	Develop and maintain instructions for the safe, proper operation of each of these controls along with minimum maintenance requirements and frequencies.	Annually

3.5.3 Training and education. **BMP PCR 03.** The Expo must ensure its assigned staff are properly trained to work with all structural stormwater controls. BMP PCR 03 describes these requirements.

BMP PCR 03	ACTION	FREQUENCY
1.	Ensure all staff assigned to relevant tasks are properly trained to inspect, operate, maintain, and assess the structural stormwater controls.	Once per permit term
2.	New staff shall be trained within 30 days of their assignment to this program.	Within 30 days of assignment

3.5.4 Tracking and assessment. **BMP PCR 04.** The Expo must maintain records for activities conducted to meet the requirements of the Post-Construction Site Runoff program and include a descriptive summary of their activities in support of preparation of the Annual Report. See BMP PCR 04 for required tasks.

BMP PCR 04	ACTION	FREQUENCY
1.	Collect and compile post-construction data throughout the year as needed to assess performance.	Annually
2.	Provide summary to the County and RVSS to assist in completing the Annual Report to be submitted to DEQ.	Annually

3.6 Pollution Prevention and Good Housekeeping for Municipal Operations

The Expo must 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. Because The Expo does not operate under a Standard Industrial Classification (SIC) code that requires it to hold a DEQ-issued NPDES Industrial Stormwater General Permit, the requirements of Permit Schedule A.3.f.v are not in force. The other eight requirements listed under Permit Schedule A.3.f. are addressed by BMPs numbered BMP PPH 01 – 08 presented below. These BMPs are to be implemented by February 28, 2022.

3.6.1 Operation and Maintenance Strategy for Existing Structural Stormwater Controls.
BMP PPH 01. For existing structural stormwater controls installed or permitted by The Expo prior to the effective date of the Permit, The Expo must develop and implement an operation and maintenance strategy for both the controls it owns, and the controls owned and operated by other non-MS4 entities discharging to the Permit Registrant's MS4. The Operations and Maintenance (O&M) strategy for existing structural stormwater controls must meet the long-term O&M requirements in Permit Schedule A.3.e.vi but not the site performance standards outlined in Permit Schedule A.3.e.iv. BMP PPH 01 details specific actions and frequencies needed to satisfy this requirement.

BMP PPH 01	ACTION	FREQUENCY
1.	For existing structural stormwater controls, develop and maintain the "digital inventory" as described in BMP IDD 01. In addition, maintain the MS4 map (Figure 1. Facilities and Stormwater Map) to ensure it remains current.	Annually
2.	For any structural controls owned by other entities but with the potential to impact The Expo's stormwater discharge quality, document efforts to obtain legal authority to allow The Expo to inspect and require effective operation and maintenance of privately owned and operated structural stormwater controls that discharge to the MS4, to the extent allowable under state and federal law.	Once for each such structural stormwater control
3.	Develop and review inspection procedures and an inspection schedule to ensure compliance with the O&M requirements of each structural stormwater control	Annually
4.	Develop and maintain instructions for the safe, proper operation of each of these controls along with minimum maintenance requirements and frequencies.	Annually

3.6.2 Inspection and Cleaning of Catch Basins. **BMP PPH 02.** The Permit requires The Expo to inspect at least 50 percent of the catch basins and inlets it owns or operates within the MS4 at least once every five years. However, the County has implemented a more proactive standard of inspecting 30 percent of catch basins each year. [7] The Expo must also take all appropriate maintenance or cleaning action based on those inspections to ensure the catch basins and inlets continue to function as designed. The Expo may establish a catch basin inspection prioritization system, and establish alternate inspection frequency, provided the Permit Registrant describes all relevant factors it uses to target its inspections to specific areas of its MS4 in this Stormwater Plan. See BMP PPH 02 for specific details and timing.

BMP PPH 02	ACTION	FREQUENCY
1.	Determine whether to implement a unique, site-specific catch basin inspection and cleaning priority approach or the approach described in item (2) below.	Annually
2.	If not using a unique, site-specific approach, inspect and clean as needed at least 30 percent of the catch basins within the MS4.	Annually
3.	If using a unique, site-specific approach, inspect and clean catch basins according to that BMP and describe the rationale for selecting that alternative in this Stormwater Plan.	Annually, or as dictated by schedule to be determined

3.6.3 Pollution Prevention in Facilities and Operations. **BMP PPH 03A through BMP PPH 03N.** The Expo must conduct its municipal O&M activities in a manner that reduces the discharge of pollutants through the MS4 to protect water quality. The Permit lists 14 specific O&M activities in this category of pollution prevention initiatives for which the Expo must develop, review, and if necessary, update BMPs for inspection and maintenance schedules. These BMPs are to ensure pollution prevention and good housekeeping practices are conducted for the following activities. See the following 14 BMPS indexed by the Permit as A through L and numbered as BMP PPH 03A through BMP PPH 03N presented below for details.

CROSS-INDEX OF POLLUTION PREVENTION IN FACILITIES AND OPERATIONS AS SHOWN IN PERMIT

(A) Pipe cleaning for stormwater and wastewater conveyance systems. BMP PPH 03A.

(B) Cleaning of culverts conveying stormwater in roadside ditches. BMP PPH 03B.

(C) Ditch maintenance. BMP PPH 03C.

(D) Road and bridge maintenance. BMP PPH 03D.

(E) Road repair and resurfacing including pavement grinding. BMP PPH 03E.

(F) Dust control for roads and municipal construction sites. BMP PPH 03F.

(G) Winter road maintenance, including salt or de-icing storage areas. BMP PPH 03G.

(H) Fleet maintenance and vehicle washing. BMP PPH 03H.

(I) Building and sidewalk maintenance including washing. BMP PPH 03I.

(J) Solid waste transfer and disposal areas. BMP PPH 03J.

(K) Municipal landscape maintenance. BMP PPH 03K.

(L) Material storage and transfer areas, including fertilizer and pesticides, Hazardous materials, used oil storage, and fuel. BMP PPH 03L.

(M) Firefighting training activities. There is no associated BMP for this activity.

(N) Maintenance of municipal facilities including public parks and open space, golf courses, airports, parking lots, swimming pools, marinas, etc. BMP PPH 03N.

3.6.3.A Pipe cleaning for stormwater and wastewater conveyance systems. **BMP PPH 03A.**

BMP PPH 03A	ACTION	FREQUENCY
1.	Visually inspect each stormwater and wastewater conveyance (pipe, channel, ditch, etc.) as possible for accumulation of debris (sediment, vegetation, litter, etc.) that could impair the flow of stormwater through the conveyance and determine the need for cleaning.	Annually
2.	If accumulation of debris is problematic, develop a strategy for removal, such as hydrojet pressure cleaning, Vactor truck, or hand removal.	Annually
3.	In addition, inspect conveyances for evidence of leaking, damage, or other significant structural problems. If there is indication of a problem that cannot be fully assessed, consider additional methods of evaluation (camera, smoke testing, dye testing, etc.).	Annually
4.	If needed, develop a plan to correct identified structural issues.	Annually
5.	Depending on circumstances, it may be useful to inspect as described in tasks (1) and (3) during both high- and low-flow periods.	--

3.6.3.B Cleaning of culverts conveying stormwater in roadside ditches. **BMP PPH 03B.** For additional information, see the reference: Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Activities 120 and 121/626. [8] In addition, see BMP PPH 03B, below.

BMP PPH 03B	ACTION	FREQUENCY
1.	Visually inspect each reach of the roadside stormwater ditches and associated culverts to determine if cleaning is needed.	Annually
2.	If cleaning is needed, determine which regulations, if any, may apply to the work. Consider in-water work permits (United States Army Corps of Engineers (USACE) / Oregon Department of State Lands (DSL) joint permit; Oregon State Office of Historic Preservation (SOHP); a waste determination (as hazardous or non-hazardous) and any specific waste disposal requirements; other regulations as needed.	For each cleaning event
3.	Select work method(s) that minimize disruption of the ditch area as much as feasible.	For each cleaning event
4.	Perform ditch work in optimum weather (when the ditch is dry but there is still sufficient soil moisture to prevent dust and the movement of small particulates) to minimize environmental impacts where feasible.	For each cleaning event
5.	Place clean dredge spoils in upland areas that will not drain into stormwater conveyance.	For each cleaning event
6.	Use adaptive management to modify work as needed to protect stormwater quality.	For each cleaning event

3.6.3.C Ditch maintenance. **BMP PPH 03C.** For additional information, see the reference: Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Activity 124. [9] In addition, see BMP PPH 03C, below.

BMP PPH 03C	ACTION	FREQUENCY
1.	Visually inspect each reach of the stormwater ditches and determine if maintenance is needed.	Annually
2.	If maintenance is needed, complete tasks (2) through (6) of BMP PPH 03B as appropriate.	For each maintenance event
3.	In addition, select maintenance and/or repair designs, materials, and work methods to ensure long term durability of the maintenance action taken. For example, if needed use appropriate rock sources to maximize safety, operation, and habitat function.	For each maintenance event

3.6.3.D Road and bridge maintenance. **BMP PPH 03D.** The Permit requires The Expo to maintain its roads and bridges to protect stormwater quality. The Expo has no on-site bridges, therefore BMP PPH 03D is limited to road maintenance activities. Pavement work, also known as surface work, is described in BMP PPH 03E. For additional information, see the reference: Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Activity 112. [10] In addition, see BMP PPH 03D, below.

BMP PPH 03D	ACTION	FREQUENCY
1.	Visually inspect roadways, parking lots, and other similar vehicle passageways to determine condition. If maintenance is required, complete the following tasks as needed.	Annually
2.	Select a weather season for work that will not unduly impact stormwater quality.	For each maintenance event
3.	Select a design that will effectively repair the subsurface, shoulders, and erosion problems that will minimize impacts to stormwater.	For each maintenance event
4.	Select contractor(s) with safety, environmental, and quality performance that match requirements of The Expo.	For each maintenance event
5.	Ensure contractor(s) are prepared to respond to any spills of fuels, oils, or materials, including having spill response kits available.	For each maintenance event

3.6.3.E Road repair and resurfacing including pavement grinding. **BMP PPH 03E.** The Permit requires The Expo to maintain its roads and road surfaces to protect stormwater quality. This is also known as surface work. For additional information, see the reference: Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Activities 100 – 110. [11] In addition, see BMP PPH 03E, below.

BMP PPH 03E	ACTION	FREQUENCY
1.	Visually inspect roadways, parking lots, and other similar paved areas (asphalt or concrete) to determine their surface condition. If maintenance is required, complete the following tasks as needed.	Annually
2.	Select a weather season for work that will not unduly impact stormwater quality.	For each maintenance event
3.	Avoid siting batch plants (asphalt or concrete) with their inherent risks and instead import pre-made surface materials from local sources.	For each maintenance event
4.	Select contractor(s) with safety, environmental, and quality performance that match requirements of The Expo.	For each maintenance event
5.	Ensure contractor(s) are prepared to respond to any spills of fuels, oils, or materials, including having spill response kits available.	For each maintenance event

3.6.3.F Dust control for roads and municipal construction sites. **BMP PPH 03F**. The Expo is required by the Permit to control dust from roads and construction activities. RVSS has taken the lead in developing BMPs for dust control. See the reference: Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Appendix C, Standard Operating Procedures and Best Management Practices for Pollution Prevention and Good Housekeeping. [12] See BMP PPH 03F below for key tasks associated with dust control.

BMP PPH 03F	ACTION	FREQUENCY
1.	Inspect surfaces for generation of fugitive dust during dry weather periods.	As needed
2.	If needed, consider applying liquid dust control agents (palliatives) such as water, magnesium acetate, or others.	As needed
3.	Apply dust control agents in accordance with the manufacturers' recommendations.	Whenever used
4.	Apply dust control agents in a manner that is not detrimental to either water or vegetation.	Whenever used
5.	Apply dust control agents at a rate low enough to prevent runoff of dust suppressant product into roadside ditches.	Whenever used

3.6.3.G Winter road maintenance, including salt or de-icing storage areas. **BMP PPH 03G.** The Expo is required to implement BMPs for winter road maintenance if it conducts wintertime activities of plowing or chemical de-icing. For additional information, see the reference: Activities 177, Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Activity 177, Page 51. [13] In addition, see BMP PPH 03E, below.

BMP PPH 03G	ACTION	FREQUENCY
1.	Visually inspect roadways and parking lots when icy or covered with snow to determine if winter road maintenance is needed.	As needed
2.	If snow plowing is to be conducted, prior to commencing work determine methods of protecting nearby improvements and the location where the removed snow will be placed.	As needed
3.	If de-icing agents are to be used, review the BMPs in the reference noted above and follow as applicable.	As needed

3.6.3.H Fleet maintenance and vehicle washing. **BMP PPH 03H.** The Permit requires The Expo to develop and implement BMPs for its fleet maintenance and vehicle washing activities. BMPs for both activities are described in BMP PPH 03H below.

BMP PPH 03H	ACTION	FREQUENCY
1.	Vehicle and mobile equipment maintenance that must be conducted on-site shall be completed indoors, under a cover, or with sufficient containment beneath the vehicle so that runoff of vehicle-related chemical products will not flow onto paved or earthen surfaces.	Whenever fleet maintenance occurs
2.	Spill control and cleanup materials shall be kept in the vicinity of vehicle maintenance activities.	Whenever fleet maintenance occurs
3.	Vehicle and mobile equipment washing that must be conducted on-site shall be completed in such a way that wash water impacted with soap, detergents, vehicle oils, or other deleterious compounds does not infiltrate into pervious surfaces or runoff into stormwater conveyances.	Whenever fleet washing occurs

3.6.3.I Building and sidewalk maintenance including washing. **BMP PPH 03I.** The Expo is required by permit to develop and implement BMPs to conduct building and sidewalk maintenance, including washing. RVSS has taken the lead in developing BMPs for this work. For detailed information see the reference: Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Appendix C, Standard Operating Procedures and Best Management Practices for Pollution Prevention and Good Housekeeping, Page 11. [14] See BMP PPH 03F below for key tasks associated with building and sidewalk maintenance and washing.

BMP PPH 03I	ACTION	FREQUENCY
1.	Prior to washing parking lots, sidewalks or driveways, use dry cleanup methods first, such as sweeping, blowing, or vacuuming.	As needed
2.	If wash or rinse water could reach storm drains, protect them with filtering BMPs or impervious BMPs such as drain covers or mats prior to any maintenance activity. Wood chip bio-bags are not appropriate protection for washing and painting.	As needed
3.	Washwater is not permitted to flow into the stormwater system. When maintenance operations produce washwater, the washwater must be collected and disposed of in the sanitary sewer system or directed to a location where it can infiltrate into soil.	As needed
4.	Use only biodegradable soaps and cold water.	As needed
5.	Follow EPA lead paint guidelines if pre-1978 era paint is involved.	As needed
6.	Immediately clean-up spills of any pollutants, such as lubrication oil and fuels, with absorbent materials.	As needed
7.	Properly dispose of all debris generated.	As needed

3.6.3.J Solid waste transfer and disposal areas. **BMP PPH 03J.** The Expo is required to properly manage its solid waste streams to protect stormwater quality and to comply with other relevant requirements. It is important to note that solid waste refers to wastes regardless of physical state and may be solid, liquid, or gaseous. Solid waste is generated from many activities, including food service, cleaning, maintenance, improper disposal by others, etc. Proper management includes storage, handling, labeling, transportation, and disposal. See BMP PPH 03J below for details.

BMP PPH 03J	ACTION	FREQUENCY
1.	For each solid waste generated a waste determination must be documented as to whether the solid waste is hazardous or non-hazardous. Special management requirements apply if the waste is determined to be hazardous. See the DEQ website for more information. [15]	Once for each waste generated
2.	Solid waste must be covered or otherwise contained so that it is not contacted by stormwater.	Continuously
3.	Solid wastes must be handled and transported to prevent spillage.	Continuously
4.	Solid waste containers and stockpiles must be clearly labeled as to their contents.	Continuously
5.	Solid wastes must be properly disposed of in a timely manner in accordance with all regulations and the receiving landfill or disposal site.	Continuously

3.6.3.K Municipal landscape maintenance. **BMP PPH 03K.** RVSS has taken the lead in developing BMPs for conducting municipal landscape maintenance. See the reference: Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Appendix C, Standard Operating Procedures and Best Management Practices for Pollution Prevention and Good Housekeeping, Page 16. [16] See BMP PPH 03K for additional information.

BMP PPH 03K	ACTION	FREQUENCY
1.	Review Reference Endnote No. 16 described in the narrative above and follow the BMPs there.	Each time landscape maintenance is conducted

3.6.3.L Material storage and transfer areas, including fertilizer and pesticides, hazardous materials, used oil storage, and fuel. **BMP PPH 03L.** The Expo is required to store its fertilizer, pesticides, hazardous materials, hazardous wastes, used oil, paints, fuels and other chemical products in a manner that prevents them from impacting stormwater. BMPs for storing and transferring these compounds are presented below in BMP PPH 03L.

BMP PPH 03L	ACTION	FREQUENCY
1.	Chemical products that may be toxic, flammable, reactive, or otherwise deleterious to stormwater must be stored in a manner that protects them from accidental release.	Continuously
2.	Storage areas should be physically protected from impact such as from vehicles or equipment.	Continuously
3.	Flammable compounds should be stored in flameproof cabinets.	Continuously
4.	Storage and transfer areas should be properly signed to make staff aware of relevant hazards and precautions needed.	Continuously
5.	Liquid chemical products should be stored that spillage or leakage does not enter stormwater conveyances.	Continuously

3.6.3.M Firefighting training activities. The Expo does not conduct firefighting training activities and is therefore not required to implement a BMP for this activity. For more information see page 20, Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services.

3.6.3.N Maintenance of municipal facilities including public parks and open space, golf courses, airports, parking lots, swimming pools, marinas, etc. BMP PPH 03N. Among the facilities listed under this section, The Expo maintains public parks, open spaces, and parking lots. Of these, maintenance of parking lots is addressed by BMP PPH 03D and BMP PPH 03E, and maintenance of open spaces is addressed by BMP PPH 03K. Maintenance of public park areas not covered by other BMPs in Section 3.6 include the maintenance of public restrooms and portable restrooms. BMPs for these operations are presented below in BMP PPH 03N.

BMP PPH 03N	ACTION	FREQUENCY
1.	Develop a schedule of inspection and cleaning for periods of public attendance and usage of restrooms at the facility.	As needed
2.	Include inspection of plumbing condition, especially for leakage.	As needed
3.	Repair any instances of leakage and cleanup associated spillage.	As needed

3.6.4 Requirements for Pesticide and Fertilizer Applications. **BMP PPH 04**. RVSS has taken the lead in developing BMPs for usage and application of pesticide and fertilizer products. See the reference: Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Appendix C, Standard Operating Procedures and Best Management Practices for Pollution Prevention and Good Housekeeping, Page 16. [16]

BMP PPH 04	ACTION	FREQUENCY
1.	Review Reference Endnote No. 16 described in the narrative above and follow the BMPs listed in the reference.	Each time a pesticide or fertilizer is stored or used

3.6.5 Litter Control. **BMP PPH 05.** The Expo is required by the Permit to control litter and prevent it from entering stormwater conveyances. See BMP PPH 05 for specific details.

BMP PPH 05	ACTION	FREQUENCY
1.	The grounds must be inspected at regular intervals to determine if litter collection and homeless camp removal is required.	Monthly, or more often if needed
2.	Litter must be picked-up, stored, and disposed at varying intervals to prevent accumulation and migration.	As needed
3.	If needed, homeless camp removal can be coordinated with the County.	As needed

3.6.6 Materials Disposal. **BMP PPH 06.** The Expo is required to properly dispose of waste materials to protect stormwater quality. BMP PPH 06 below provides the tasks necessary to ensure proper disposal.

BMP PPH 06	ACTION	FREQUENCY
1.	For each solid waste generated a waste determination must be documented as to whether the solid waste is hazardous or non-hazardous. Special management requirements apply if the waste is determined to be hazardous. See the DEQ website for more information. [15]	Once for each waste generated
2.	Solid wastes must be covered or otherwise contained so that it is not contacted by stormwater.	Continuously
3.	Solid wastes must be handled and transported to prevent spillage.	Continuously
4.	Solid waste containers and stockpiles must be clearly labeled as to their contents.	Continuously
5.	Solid wastes must be properly disposed of in a timely manner in accordance with all regulations and the receiving landfill or disposal site.	Continuously

3.6.7 Stormwater Infrastructure Staff Training. **BMP PPH 07.** The Expo is required by the Permit to ensure compliance with its stormwater requirements through proper training of staff both as new hires and through continuing training throughout the course of their employment. See BMP PPH 07 for details.

BMP PPH 07	ACTION	FREQUENCY
1.	For staff members who are assigned duties that include any or all the BMPs in this Stormwater Plan, ensure they are fully trained and documented in the performance of the relevant BMPs.	Within 30 days of being assigned to perform BMPs
2.	For employees who continue to perform work in support of stormwater BMPs, ensure they receive refresher training.	Annually
3.	Employees will need specific, interim training should procedures or equipment change prior to the annual training event.	As needed
4.	Records of training curriculum and materials along with staff training attendance are to be kept and archived.	Ongoing

3.6.8 Tracking and Assessment. **BMP PPH 08.** The Expo is required to document BMP activities and evaluate their effectiveness.

BMP PPH 08	ACTION	FREQUENCY
1.	Document all BMP inspections and activities as they are completed. Compile into a format that allows for evaluation.	Ongoing
2.	Assess the compiled BMP data collected in Task (1) in order to evaluate the overall stormwater protection program.	Annually
3.	Modify the stormwater protection program as necessary to ensure continual improvement.	Annually

4.0 Monitoring and Reporting Requirements.

As noted in the Section 2.0 Stormwater Plan Administration of this Stormwater Plan, RVSS serves as the Permit Registrant. In that role RVSS has the lead for any stormwater quality monitoring and reporting that may be required by the Permit. In addition, as the Permit Registrant RVSS also prepares and submits the Annual Report to DEQ for each stormwater reporting year (July 1 – June 30) by November 30 of the following reporting year. As a Co-Implementer of the Permit, Jackson County provides stormwater information to support RVSS in its preparation of the Annual Report. The Expo provides stormwater information to the County for ultimate use by RVSS.

5.0 Stormwater Plan Appendices.

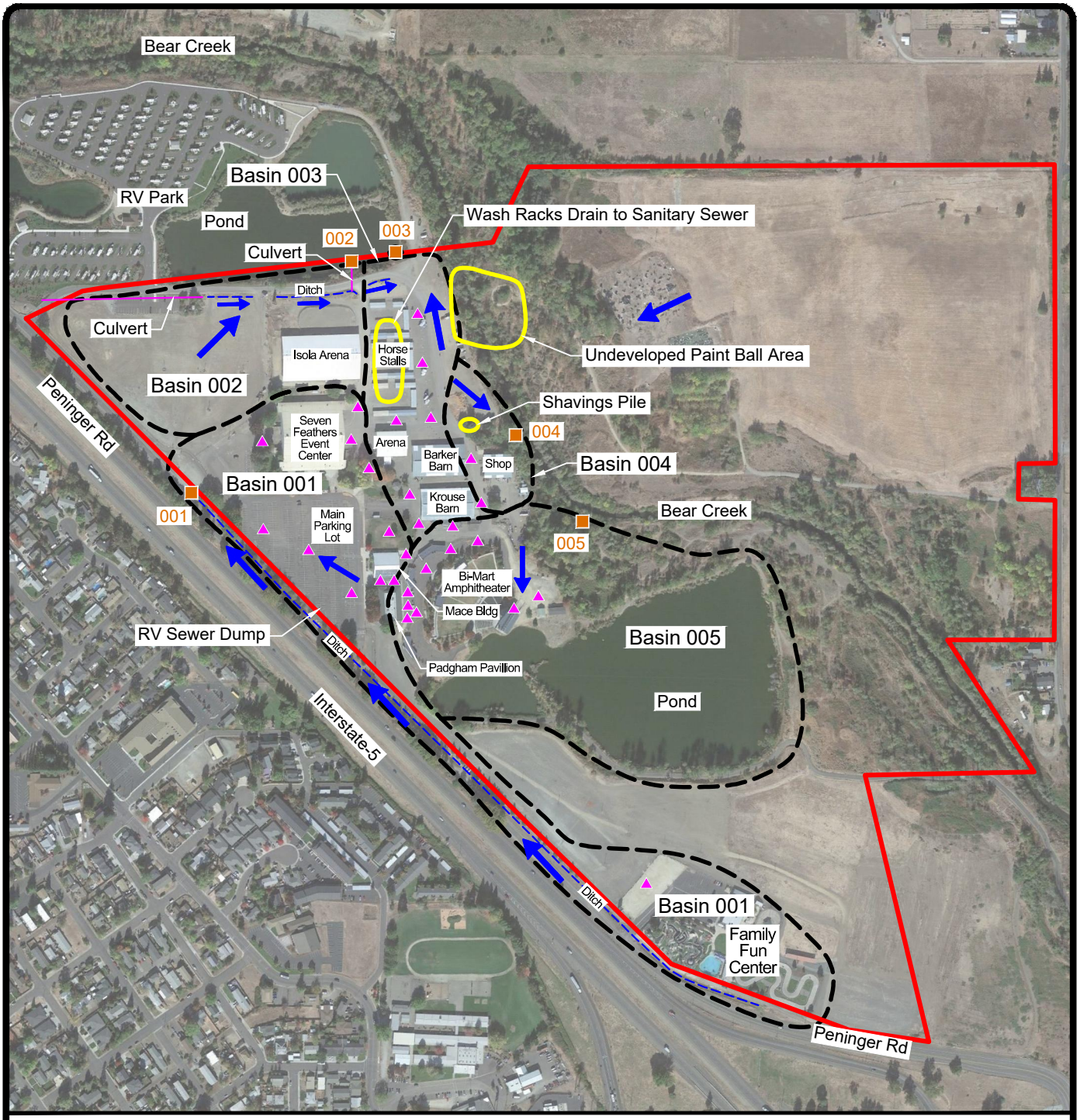
Appendix 1 – Figure 1, Facilities and Stormwater Map

Appendix 2 – Digital Inventory of Stormwater Structural Improvements

Appendix 3 – Annual BMP Tracking Table

Appendix 4 – Document Endnotes

Appendix 1
Figure 1, Facilities and Stormwater Map



SOURCE: GOOGLE EARTH (2020)

N
W E
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SCALE FEET
0 600 1,200

LEGEND

- Approximate Subject Property Boundary
- Storm Drain Location, Approximate
- 001 Outfall Location with Identifier, Approximate
- Sheet Flow Direction, Approximate
- Approximate Drainage Basin Area

JACKSON COUNTY Oregon

DATE: 2/23/22 DRAWN BY: SRM

Figure 1
Facilities and Stormwater Map
Jackson County Expo
Central Point, Oregon

Appendix 2
Digital Inventory of Stormwater Structural Improvements

The Expo's inventory of stormwater structural improvements is limited to its outfall discharge locations listed here and on the legend in Appendix 1, Facilities and Stormwater Map. The geographic longitude and latitude for each location is presented on the Map as well.

Inventory

- Outfall 001 – 42deg, 23min, 08.46sec North, 122deg, 54min, 46.29sec West
- Outfall 002 – 42deg, 23min, 17.29sec North, 122 deg, 54min, 38.47sec West
- Outfall 003 – 42deg, 23min, 17.98sec North, 122deg, 54min, 35.96sec West
- Outfall 004 – 42deg, 23min, 10.08sec North, 122deg, 54min, 29.01sec West
- Outfall 005 – 42deg, 23min, 07.91sec North, 122deg, 54min, 25.41sec West

Appendix 3
Annual BMP Tracking Table

The Expo

ANNUAL STORMWATER BMP TRACKING TABLE

Monitoring Year: July Once – June 30, _____

BMP NO.	MINIMUM ANNUAL FREQUENCY	COMPLETION DATE(S)				* NOTES
		FIRST	SECOND	THIRD	FOURTH	
PEO 01	Once					
PIP 01	Once					
PIP 02	Once					
IDD 01	Once					
IDD 02	Once					
IDD 03	Once					Frequency determined by incident; Training is annual
IDD 04	Once					Frequency determined by incident; Training is annual
IDD 05	Varies *					See BMP IDD 05 for frequencies and deadlines
IDD 06	Varies *					See BMP IDD 06 for frequencies and deadlines
CRC 01	Once					
CRC 02	Varies *					Once per project and other specific items as needed
CRC 03	Varies *					Once per qualifying project

The Expo

ANNUAL STORMWATER BMP TRACKING TABLE

Monitoring Year: July Once – June 30, _____

BMP NO.	MINIMUM ANNUAL FREQUENCY	COMPLETION DATE(S)				* NOTES
		FIRST	SECOND	THIRD	FOURTH	
CRC 04	Varies *					At least once per qualifying project
PCR 01	Once					
PCR 02	Once *					Update throughout the year as significant changes are made
PCR 03	Varies *					At least once during the Permit term; Within 30 days for newly assigned staff members; As needed for new equipment or change procedures
PCR 04	Once *					Collect data throughout the year
PPH 01	Once					
PPH02	Once *					Frequency may be varied depending on schedule selected. Currently it has been set by the County as a minimum of 30 percent of catch basins annually
PPH 03A	Once *					May need to inspect during both high- and low-flow events
PPH 03B	Once					
PPH 03C	Once					
PPH 03D	Once					

The Expo

ANNUAL STORMWATER BMP TRACKING TABLE

Monitoring Year: July Once – June 30, _____

BMP NO.	MINIMUM ANNUAL FREQUENCY	COMPLETION DATE(S)				* NOTES
		FIRST	SECOND	THIRD	FOURTH	
PPH 03E	Once					
PPH 03F	Varies					
PPH 03G	Varies					
PPH 03H	Varies *					Whenever fleet maintenance or vehicle washing occurs
PPH 03I	Varies *					Whenever maintaining buildings or sidewalks
PPH 03J	Ongoing *					Proper solid waste management is continuous
PPH 03K	Varies *					Whenever landscape management is conducted
PPH 03L	Ongoing *					Proper chemical product management is continuous
PPH 03M	N/A					
PPH 03N	Varies *					Required when public is in attendance at facility
PPH 04	Varies *					Each time a pesticide or fertilizer is stored or used
PPH 05	Monthly *					Or more frequent if needed

The Expo

ANNUAL STORMWATER BMP TRACKING TABLE

Monitoring Year: July Once – June 30, _____

BMP NO.	MINIMUM ANNUAL FREQUENCY	COMPLETION DATE(S)				* NOTES
		FIRST	SECOND	THIRD	FOURTH	
PPH 06	Ongoing *					Proper solid waste management is continuous
PPH 07	Varies *					Within 30 days for newly assigned staff; Annually for others
PPH 08	Varies *					BMP Data collection is ongoing throughout the year; Program assessment and modification if necessary is annual

Appendix 4

The Expo

Stormwater Plan

Document Endnotes

February 28, 2022

NO.	REFERENCE DOCUMENT, PAGE(S)	NOTES / LINKS
1	National Pollutant Discharge Elimination System (NPDES) Phase II General Permit (Permit) for Municipal Separate Storm Sewer Systems, Modified March 12, 2021	ms4P2PermitMod.pdf (oregon.gov)
2	Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Page 1	SWMP Draft Education and Public Involvement Components (rvss.us)
3	DEQ Permit Evaluation Letter, March 12, 2021, Page 31	Microsoft Word - MS4_PhaseII_Permit_Mod_Public_Comment_Edits_PER_Document_Final.docx (oregon.gov)
4	DEQ Annual Report for MS4 Phase II Permits	MS4 Phase II Annual Report (oregon.gov)

5	The Expo Public Website	The Expo - Jackson County - Oregon (attheexpo.com)
6	Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Page 8	SWMP Draft Education and Public Involvement Components (rvss.us)
7	Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Page 18	SWMP Draft Education and Public Involvement Components (rvss.us)
8	Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Page 30	blue_book.pdf (oregon.gov)
9	Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Activity 124, Page 22	blue_book.pdf (oregon.gov)
10	Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Activity 112, Page 22	blue_book.pdf (oregon.gov)
11	Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Activities 100-110 Page 20	blue_book.pdf (oregon.gov)
12	See the reference: Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Appendix C, Standard Operating Procedures and Best Management Practices for Pollution Prevention and Good Housekeeping, Page 11	SWMP Draft Education and Public Involvement Components (rvss.us)
13	Oregon Department of Transportation, Routine Road Maintenance | Water Quality and Habitat Guide Best Management Practices, Revised 2020, Activities 100-110 Page 20	blue_book.pdf (oregon.gov)
14	See the reference: Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Appendix C, Standard Operating Procedures and Best Management Practices for Pollution Prevention and Good Housekeeping, Page 11	SWMP Draft Education and Public Involvement Components (rvss.us)
15	DEQ Hazardous Waste Website	Department of Environmental Quality : Hazardous Waste Home : Hazardous Waste : State of Oregon
16	Stormwater Management Program (SWMP) Document, October 2021, Rogue Valley Sewer Services, Appendix C, Standard Operating Procedures and Best Management Practices for Pollution Prevention and Good Housekeeping, Page 16	SWMP Draft Education and Public Involvement Components (rvss.us)

February 2022

JACKSON COUNTY ROADS and PARKS

STORMWATER OPERATIONS AND MAINTENANCE GUIDE

Table of Contents

PURPOSE

Water quality standards are continuing to increase on several fronts. These standards are enforced on Jackson County by an assortment of requirements, which include, but are not limited to: our Stormwater Phase II areas (MS4), Bear Creek Total Maximum Daily (pollutant) Load (TMDL), Applegate TMDL, and Rogue TMDL. Jackson County Roads and Parks needs to create uniform expectations and guidelines for our Roads and Parks Maintenance personnel to ensure compliance with the various regulatory requirements.

Jackson County has adopted the Oregon Department of Transportation Routine Road Maintenance Guide (the Blue Book) as our maintenance practices for water quality. However, not every element or best management practice in the Blue Book can or should be implemented by Jackson County. This Stormwater Operations and Maintenance Guide serves to emphasize, and clarify, Jackson County expectations related to the Blue Book. Jackson County Roads and Parks Maintenance personnel are required to comply with these expectations.

WATER QUALITY GOAL

The goal of this program is to prevent contamination due to our maintenance operations from leaving the County right-of-way or County owned Bear Creek Greenway property, thus preventing contamination from entering the waters of the state. This goal is summarized as follows:

> **Turbidity resulting from maintenance operations should be prevented from leaving County right-of-way or County owned Bear Creek Greenway property.**

This Stormwater Operations and Maintenance Guide provides tools and guidance on how Roads and Parks Maintenance personnel are to achieve this goal. The preferred method to prevent turbidity from leaving the County right-of-way or County owned Bear Creek Greenway property is to not create conditions which provide turbidity. If turbidity is being created by our operations and is leaving the County right-of-way or County owned Bear Creek Greenway property, you are to take immediate action to reduce or eliminate the turbidity and inform your supervisor at the earliest practical moment. It is acknowledged that 100% achievement of this goal is unlikely, but violations should be rare, due to circumstances beyond your reasonable control, and always be reported to your supervisor. If turbid water is entering the County right-of-way or County owned Bear Creek Greenway property, our goal is to have the water leave the County right-of-way or County owned Bear Creek Greenway property no more turbid than when it entered.

MAINTENANCE GUIDANCE

Several of our maintenance activities, if performed at inappropriate times and/or without appropriate precautions have the potential to create turbidity, which can then leave the County right-of-way or County owned Bear Creek Greenway property. Guidance for these activities follow, identified by our activity number and descriptions, with the corresponding Blue Book activity number in parenthesis. The guidance provided are the most important points to follow in Jackson County for these activities, but does not include all guidance from the Blue Book, which should be referenced for complete guidance. Our strategy is first to avoid performing work when it will cause turbidity; if we must perform the work, minimize the turbidity and mitigate it by use of erosion control measures.

ROADWAY/GREENWAY SURFACE MAINTENANCE

Description: Activity includes repairs of roadway/greenway bases, surfaces, and shoulder irregularities. Work could include activities performed on asphalt, chip seal, and gravel surfaces. Activities also include fog sealing, crack sealing, and sweeping.

LR0100, Grading (No ODOT #)

1. Grade when it is not raining or when raining so lightly that there is no runoff, but while moisture is still present in aggregate (to minimize dust and maximize compaction), where possible. This is a rigid requirement when the roadway/greenway is adjacent to a creek.
2. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles in roadside/greenway ditches or an aggregate berm along the roadside/greenway. Water should not be flowing over the erosion control measures during grading operations.
3. If turbidity is leaving the work area, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.

LR0200, Graveling (No ODOT #)

1. Grade when it is not raining or when raining so lightly that there is no runoff, but while moisture is still present in aggregate (to minimize dust and maximize compaction), where possible. This is a rigid requirement when the road/greenway is adjacent to a creek.
2. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles in roadside/greenway ditches or an aggregate berm along the

roadside/greenway. Water should not be flowing over the erosion control measures during grading operations.

3. If turbidity is leaving the work area, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.

LR0300, Crack Sealing (No ODOT #)

1. Cover all storm drains within the work area and immediately downstream.
2. When possible, use a vacuum sweeper to prepare the site instead of flushing with water.
3. Perform surface work in dry weather where possible to minimize any runoff of potentially hazardous material.
4. Crack sealing operations that require water for cooling should not use the flusher, use hand spray containers, or backpack water tanks to avoid runoff.

LR0400, Shouldering (ODOT 112)

1. Blade when it is not raining or when raining so lightly that there is no runoff, while moisture is still present in soil and aggregate (to minimize dust), where possible. This is a rigid requirement when the shoulder is adjacent to a creek.
2. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles in roadside/greenway ditches. Water should not be flowing over the check dam or waddle during shouldering operations.
3. If turbidity is leaving the work area, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.

LR0500, Sweeping (ODOT 116 & 117)

1. Schedule sweeping during damp weather (to minimize dust production) when feasible. If sweeping cannot be done during damp weather use water (as needed) to reduce dust.
2. If roadway/greenway is parallel to a waterbody, slow the sweeper and broom speed and change angle of the broom to prevent sweepings from leaving the improved roadway/greenway shoulders and entering the waterbody.
3. Store and dispose of collected materials at appropriate sites.
4. Complete bridge sweeping activities prior to cleaning scuppers when feasible.

LR0600, Cold Mix Patching (No ODOT #)

1. Cold mix may be applied in wet weather.
2. Collect and remove broken asphalt from site and dispose of properly.

LR0800, Blade Patching (No ODOT #)

1. Cover all storm drains within the work area and immediately downstream.
2. When possible, use a vacuum sweeper to prepare the site instead of flushing with water.
3. Use water, as needed, to reduce dust during sweeping.
4. Avoid paving or asphalt patching applications during wet weather.
5. Collect and remove broken asphalt from site and dispose of properly.
6. Do not use diesel fuel as a releasing agent. Use environmentally sensitive releasing agents such as plant based release agents.
7. Capture and recycle or dispose of release agents and materials as directed by as Safety Data Sheet or as directed by the manufacturer.
8. After the activity is complete:
    a. Sweep up and remove excess material from the roadway/greenway surface.
    b. Remove material accumulated in front of inlets.
    c. Properly dispose of excess material.
    d. Remove any inlet protections and properly dispose

LR0900, Grind and Inlay (No ODOT #)

1. Cover all storm drains within the work area and immediately downstream.
2. When possible, use a vacuum sweeper to prepare the site instead of flushing with water.
3. Use water, as needed, to reduce dust during sweeping.
4. Avoid paving or asphalt patching applications during wet weather.
5. Collect and remove broken asphalt from site and dispose of properly.
6. Do not use diesel fuel as a releasing agent. Use environmentally sensitive releasing agents such as plant based release agents.
7. Capture and recycle or dispose of release agents and materials as directed by as Safety Data Sheet or as directed by the manufacturer.
8. After the activity is complete:
    a. Sweep up and remove excess material from the roadway/greenway surface.
    b. Remove material accumulated in front of inlets.
    c. Properly dispose of excess material.
    d. Remove any inlet protections and properly dispose

LR1000, Chip Sealing (No ODOT #)

1. Cover all storm drains within the work area and immediately downstream.
2. When possible, use a vacuum sweeper to prepare the site instead of flushing with water.

3. Use water, as needed, to reduce dust during sweeping.
4. Collect and remove broken asphalt from site and dispose of properly.
5. Do not use diesel fuel as a releasing agent. Use environmentally sensitive releasing agents such as plant based release agents.
6. Capture and recycle or dispose of release agents and materials as directed by as Safety Data Sheet or as directed by the manufacturer.
7. After the activity is complete:
    a. Sweep up and remove excess material from the roadway/greenway surface.
    b. Remove material accumulated in front of inlets.
    c. Properly dispose of excess material.
    d. Remove any inlet protections and properly dispose

LR1050, Fog Sealing (NO ODOT #)

1. Cover all storm drains within the work area and immediately downstream.
2. When possible, use a vacuum sweeper to prepare the site instead of flushing with water.
3. Use water, as needed, to reduce dust during sweeping.
4. Do not use diesel fuel as a releasing agent. Use environmentally sensitive releasing agents such as plant based release agents.
5. Capture and recycle or dispose of release agents and materials as directed by as Safety Data Sheet or as directed by the manufacturer.

LR1100, Other Roadway/Greenway Surface Maintenance (No ODOT #)

1. Cover all storm drains within the work area and immediately downstream.
2. When possible, use a vacuum sweeper to prepare the site instead of flushing with water.
3. Use water, as needed, to reduce dust during sweeping.
4. Avoid paving or asphalt patching applications during wet weather.
5. Collect and remove broken asphalt from site and dispose of properly.
6. Do not use diesel fuel as a releasing agent. Use environmentally sensitive releasing agents such as plant based release agents.
7. Capture and recycle or dispose of release agents and materials as directed by as Safety Data Sheet or as directed by the manufacturer.
8. After the activity is complete:
    a. Sweep up and remove excess material from the roadway/greenway surface.
    b. Remove material accumulated in front of inlets.
    c. Properly dispose of excess material.
    d. Remove any inlet protections and properly dispose

DRAINAGE MAINTENANCE

Description: Activity includes use of equipment for cleaning and reshaping of ditches, replacement and repair of drainage structures, and culvert cleaning. Work could include loading, hauling, and disposing of excess material.

LR2000, Grader Ditching (ODOT 120)

1. Perform ditch work in optimum weather (when the ditch is dry but there is still sufficient soil moisture to prevent dust and the movement of small particulates) to minimize environmental impacts where feasible.
2. Do not over excavate ditches; clean them to the desired flow line only.
3. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles in the ditches at a location below the work area. Water should not be flowing over the check dam or waddle during ditching operations.
4. Dispose of excess material at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway property. Install erosion control measures where appropriate if rain is anticipated before the pile is removed, such as a silt fence, straw bales or aggregate berm around the dump area.
5. If turbidity is leaving the work area or dump site, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.
6. See the section below on Permanent Check Dams regarding ditch maintenance near the check dams.
7. See the section below on Emergency Maintenance if you are responding to an emergency situation.

LR2100, Gradall Ditching (ODOT 120)

1. Perform ditch work in optimum weather (when the ditch is dry but there is still sufficient soil moisture to prevent dust and the movement of small particulates) to minimize environmental impacts where feasible.
2. Do not over excavate ditches; clean them to the desired flow line only.
3. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles in the ditches at a location below the work area. Water should not be flowing over the check dam or waddle during ditching operations.
4. Dispose of excess material at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway

property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway property. Install erosion control measures where appropriate if rain is anticipated before the pile is removed, such as a silt fence, straw bales or aggregate berm around the dump area.

5. If turbidity is leaving the work area or dump site, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.
6. See the section below on Permanent Check Dams regarding ditch maintenance near the check dams.
7. See the section below on Emergency Maintenance if you are responding to an emergency situation.

LR2200, Mechanical Culvert Cleaning (ODOT 121)

1. Clean when it is not raining or when raining so lightly that there is no runoff, and when there is no flowing water (water may be standing in structures or low spots).
2. If water is flowing, divert or block flow if possible.
3. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles at pipe ends or in the ditches below the work area, or biobags in the pipe. Water should not be flowing over the erosion control measures during cleaning operations.
4. Dispose of excess material at the Vaccon dump location, at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or Bear Creek Greenway property. Install erosion control measures where appropriate if rain is anticipated before the pile is removed, such as silt fence, straw bales or aggregate berm around the dump area.
5. If turbidity is leaving the work area or dump site, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.
6. See the section below on Emergency Maintenance if you are responding to an emergency situation.

LR2300, Manual Culvert Cleaning (ODOT 121)

1. Clean when it is not raining or when raining so lightly that there is no runoff, and when there is no flowing water (water may be standing in structures or low spots).
2. If water is flowing, divert or block flow if possible.

3. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles at pipe ends or in the ditches below the work area, or biobags in the pipe. Water should not be flowing over the erosion control measures during cleaning operations.
4. Dispose of excess material at the Vaccon dump location, at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the right-of-way. Install erosion control measures where appropriate if rain is anticipated before the pile is removed, such as silt fence, straw bales or aggregate berm around the dump area.
5. If turbidity is leaving the work area or dump site, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.
6. See the section below on Emergency Maintenance if you are responding to an emergency situation.

LR2500, Installing Culverts (ODOT 123)

1. Install or repair culverts when it is not raining or when raining so lightly that there is no runoff, and when there is no flowing water (water may be standing in structures or low spots).
2. If water is flowing, divert or block flow if possible.
3. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles at pipe ends or in the ditches below the work area, or biobags in the pipe. Water should not be flowing over the erosion control measures during operations.
4. Dispose of excess material at the Vaccon dump location, at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway. Install erosion control measures where appropriate if rain is anticipated before the pile is removed, such as silt fence, straw bales or aggregate berm around the dump area.
5. If turbidity is leaving the work area or dump site, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.
6. See the section below on Emergency Maintenance if you are responding to an emergency situation.

LR2700, Other Drainage Maintenance (ODOT 123)

1. Consult with Engineering Division to determine if permits or other special measures are required.
2. Work when it is not raining or when raining so lightly that there is no runoff, and when there is no flowing water (water may be standing in structures or low spots).
3. If water is flowing, divert or block flow if possible.
4. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles at pipe ends or in the ditches below the work area, or biobags in pipe or structures. Water should not be flowing over the erosion control measures during operations.
5. Dispose of excess material at the Vaccon dump location, at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway property. Install erosion control measures where appropriate if rain is anticipated before the pile is removed, such as a silt fence, straw bales or aggregate berm around the dump area.
6. If turbidity is leaving the work area or dump site, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.
7. See the section below on Emergency Maintenance if you are responding to an emergency situation.

LR2900, Loader Ditching (ODOT 120)

1. Perform ditch work in optimum weather (when the ditch is dry but there is still sufficient soil moisture to prevent dust and the movement of small particulates) to minimize environmental impacts where feasible.
2. Do not over excavate ditches; clean them to the desired flow line only.
3. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles in the ditches at a location below the work area. Water should not be flowing over the check dam or waddle during ditching operations.
4. Dispose of excess material at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway property. Install erosion control measures where

appropriate if rain is anticipated before the pile is removed, such as a silt fence, straw bales or aggregate berm around the dump area.

5. If turbidity is leaving the work area or dump site, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.
6. See the section below on Permanent Check Dams regarding ditch maintenance near the check dams.
7. See the section below on Emergency Maintenance if you are responding to an emergency situation.

VEGETATION CONTROL

Description: Activities are designed to restore sight distance; minimize or remove shading that may cause icy roadway/greenway conditions; control unwanted vegetation; control noxious weeds, reduce fire danger; to maintain a clear zone along the roadway/greenway; spraying herbicide to control the growth and spread of noxious weeds and other vegetation. These activities may include the use of equipment operating off pavement to collect and process material.

LR3000, Manual Brush Cutting (ODOT 133)

1. Do not performed during fire restriction season.
2. Dispose of excess material at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway property.

LR3100, Mechanical Brush Cutting (ODOT 132)

1. Do not performed during fire restriction season.
2. Dispose of excess material at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway property.

LR3200, Pre-Emergent Roadside/Greenway Herbicide Spraying (ODOT 131)

1. Prior to application, check local weather to ensure there is a low likelihood of windy conditions or a rainfall event occurring in the 12 to 24 hours following application.

    a. Do not apply product in windy conditions, or if rain is predicted within the next 24 hours.
2. Follow label directions when applying, storing, handling, mixing, recycling, and disposing of chemicals and empty containers. Never perform these activities near stormwater inlets.
3. Have spill cleanup materials available in case of a spill.
4. Application equipment should be check periodically to ensure material is being applied at prescribed rate.
5. Chemicals should be stored inside when not in use.

LR3300, Noxious Weed Control (ODOT 131)

1. Prior to application, check local weather to ensure there is a low likelihood of windy conditions or a rainfall event occurring in the 12 to 24 hours following application.
    a. Do not apply product in windy conditions, or if rain is predicted within the next 24 hours.
2. Follow label directions when applying, storing, handling, mixing, recycling, and disposing of chemicals and empty containers. Never perform these activities near stormwater inlets.
3. Have spill cleanup materials available in case of a spill.
4. Application equipment should be check periodically to ensure material is being applied at prescribed rate.
5. Chemicals should be stored inside when not in use.

LR3600, Drainage Vegetation Control (No ODOT #)

1. Do not performed during fire restriction season.
2. Dispose of excess material at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway property.

LR3700, Spot and Brush Roadside/Greenway Spraying (No ODOT #)

1. Prior to application, check local weather to ensure there is a low likelihood of windy conditions or a rainfall event occurring in the 12 to 24 hours following application.
    a. Do not apply product in windy conditions, or if rain is predicted within the next 24 hours.

2. Follow label directions when applying, storing, handling, mixing, recycling, and disposing of chemicals and empty containers. Never perform these activities near stormwater inlets.
3. Have spill cleanup materials available in case of a spill.
4. Application equipment should be check periodically to ensure material is being applied at prescribed rate.
5. Chemicals should be stored inside when not in use.

TRAFFIC CONTROL

Description: Activity includes painting traffic lines, arrows, bike lanes, crosswalks, etc. These activities are done as needed on the road/greenway and are done during dry weather conditions.

LR4000, Striping (ODOT 140)

1. Use only federally approved, low volatile organic compound (VOC) paint.
2. Clean up spills on-site with absorbents, shovels, and buckets, dispose of properly.
3. Store materials appropriately.

LR4100, Symbol Marking (ODOT 141)

1. Use only federally approved, low volatile organic compound (VOC) paint.
2. Clean up spills on-site with absorbents, shovels, and buckets, dispose of properly.
3. Store materials appropriately.

BRIDGE MAINTENANCE

Description: Activity includes maintenance and replacement of structures. Work could include washing, painting, scraping and patching of curbs, rails, deck joints, on wood, concrete and steel bridge components. Activities also include drift removal.

LR5100, Corrective Bridge Repairs (ODOT 160, 162, 169)

1. Consult with Engineering Division to determine if permits or other special measures are required.
2. Work when it is not raining or when raining so lightly that there is no runoff, and when there is no flowing water (water may be standing in structures or low spots).
3. If water is flowing, divert or block flow if possible.
4. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles at pipe ends or in the ditches below the work area, or biobags

in pipe or structures. Water should not be flowing over the erosion control measures during operations.

5. Dispose of excess material at the Vaccon dump location, at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway property. Install erosion control measures where appropriate if rain is anticipated before the pile is removed, such as a silt fence, straw bales or aggregate berm around the dump area.
6. If turbidity is leaving the work area or dump site, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.
7. See the section below on Emergency Maintenance if you are responding to an emergency situation.

LR5300, Routine Bridge Maintenance (ODOT 160, 162, 169)

1. Consult with Engineering Division to determine if permits or other special measures are required.
2. Work when it is not raining or when raining so lightly that there is no runoff, and when there is no flowing water (water may be standing in structures or low spots).
3. If water is flowing, divert or block flow if possible.
4. Install erosion control measures when turbidity is occurring or is expected to occur, such as check dams or waddles at pipe ends or in the ditches below the work area, or biobags in pipe or structures. Water should not be flowing over the erosion control measures during operations.
5. Dispose of excess material at the Vaccon dump location, at an approved private dump site, at a County dump site, or where room permits, in the County right-of-way or County owned Bear Creek Greenway property. Material deposited in the County right-of-way or County owned Bear Creek Greenway property shall not be allowed to leave the County right-of-way or County owned Bear Creek Greenway property. Install erosion control measures where appropriate if rain is anticipated before the pile is removed, such as a silt fence, straw bales or aggregate berm around the dump area.
6. If turbidity is leaving the work area or dump site, cease operations, control turbidity to the maximum extent practical, and contact your supervisor. Do not resume activity unless and until directed to do so by your supervisor.
7. See the section below on Emergency Maintenance if you are responding to an emergency situation.

SNOW AND ICE CONTROL

Description: Activity includes removal of snow, ice, and slush from roadways/greenway and shoulders. Activity also includes applying abrasive material to roadway/greenway surfaces to assist with traction.

LR6000, Snow Plowing (ODOT 177)

1. Reduce plowing speeds in sensitive areas.
2. Minimize blowing into sensitive areas, where appropriate and if feasible and safe.

LR6100, Sanding (ODOT 177)

1. Reduce speed when applying abrasives to minimize bounce and scatter.
2. Keep accurate application records including when, where, and quantity of sanding material.
3. Clean inlets at the end of winter or prior to first rain as feasible.

MISCELLANEOUS ACTIVITIES

Description: Activity includes stockpiling materials (such as rock, sanding material, etc.) to be used for future maintenance activities or projects. Also includes installing permanent check dams in drainage ditches before the ditches discharge into streams, creeks or rivers at crossing points in the County right-of-way or County owned Bear Creek Greenway property (typically these will be installed near bridges and box culverts).

LR7100, Rock Transfer/Stockpiling (ODOT 081)

1. Locate piles away from storm drains and waterbodies.
2. Install protection around any downstream inlets.

(No County Activity) Install Permanent Check Dams (No ODOT #)

1. In locations where adequate grade exists, two check dams shall be installed in ditches before the ditch discharges into a stream, creek or river.
2. Typically, the check dams will be located 75-feet and 125-feet from the water body.
3. These dimensions may be adjusted by your supervisor or the Engineering Division to fit terrain or other constraints.
4. Install in locations where the grade is so flat such that two check dams will back up water for more than 50-feet, an amended ditch shall be installed.
5. Depending upon terrain, there may be as many as four sets of check dams at a water crossing.

6. Check dams may be appropriate at other locations as directed by the Engineering Division.
7. When ditching around check dams and amended ditches:
    a. Do clean silt and debris from above the check dams or amended ditch.
    b. Do not remove or alter a check dam or amended ditch unless directed to do so by your supervisor.
    c. Do not clean the ditch below the lower check dam or the amended ditch at any location unless directed to do so by your supervisor.
    d. Ditch cleaning below a lower check dam or amended ditch will likely require special procedures, which will be provided on a case by case basis. Follow these procedures when provided.

EMERGENCY ACTIVITIES

Description: Activity includes fixing damage to roadway/greenway, drainage facilities and structures (bridges, culverts, etc.) caused by storm, flood, slides, earthquake or other events. Failure to perform repairs may result in immediate threat to life, limb, road or structure. For emergency procedures to apply, you must be informed it is an emergency by your supervisor, or another Jackson County Roads and Parks manager.

(No County Activity #) Emergency Maintenance (180)

1. Assess the situation. If the work can be safely performed following standard procedures and erosion control, do so.
2. If standard procedures and erosion control cannot be used, determine what measures can safely be implemented to minimize the addition of turbidity to the stormwater. Implement and maintain the measures during the work.
3. In the event no erosion control measures can safely be implemented, proceed to affect the repair in a safe manner.
4. As soon as practical, inform your supervisor of the circumstances of the repair.

APPENDIX G: Section 4.0 Monitoring

Question 144. RVSS Outfall Monitoring Data

Monitoring Location Sample Data

SITE DESCRIPTION (Location)	LATITUDE (decimal degrees)	LONGITUDE (decimal degrees)	*LAT/LONG SOURCE*	StationID	StartDate	StartTime	SampleDepth	TEMP_RESULT	TEMP_DUP	pH_RESULT	pH_DUP	TDS_RESULT
Bear Creek	42.28866	-122.8251	WGS84	BE06	7/18/2019		OF	20.7		7		333.0
Bear Creek	42.27246	-122.8128	WGS84	BE12	8/8/2019		OF	18.0		7.01		391.0
Bear Creek	42.37648	-122.897	WGS84	BE03	8/15/2019	11:33	OF	20.4		7.61		305.0
Bear Creek	**42.21519**	**-122.7118**	WGS84	BE14	8/15/2019		OF					
Bear Creek	**42.21256**	**-122.7079**	WGS84	BE16	8/15/2019		OF	17.8		6.71		351.0
Bear Creek	**42.23809**	**-122.7707**	WGS84	BE23	8/29/2019		OF					
Bear Creek	42.23809	-122.771	WGS84	BE50	9/5/2019	12:05	OF					
Bear Creek	42.21319	-122.709	WGS84	BE51	9/5/2019	12:20	OF					
Bear Creek	**42.24548**	**-122.7766**	WGS84	BE23	9/9/2019		OF	19.8				
Wagner Cr	42.241727	-122.78289	WGS84	BE27	9/26/2019		OF					
Bear Creek	42.37648	-122.897	WGS84	BE35	9/26/2019		OF					
Bear Creek	42.23402	-122.7636	WGS84	WA08	07/09/20	11:25	OF	19.8	18.9	8.33	8.3	
Wagner Cr	42.24375	-122.7816	WGS84	WA10	07/09/20	11:05	OF	23.0		8.11		
Bear Creek	42.28673	-122.8225	WGS84	BE03	07/16/20	8:20	OF					
Bear Creek	42.38214	-122.900	WGS84	BE06	07/16/20	9:06	OF	16.5		7.31		
Bear Creek	**42.24858**	**-122.7843**	WGS84	BE12	07/16/20	10:00	OF					
Bear Creek	**42.21528**	**-122.7114**	WGS84	BE14	07/16/20	10:43	OF					
Bear Creek	**42.24858**	**-122.7843**	WGS84	BE16	07/16/20	10:59	OF					
Wagner Cr	42.22688	-122.79315	WGS84	BE23	07/16/20	11:16	OF					
Wagner Cr	42.243427	-122.78273	WGS84	BE27	07/23/20	11:30	OF					
Bear Creek	42.28866	-122.825	WGS84	BE35	07/23/20	11:10	OF					
Bear Creek	42.24548	-122.777	WGS84	BE50	07/23/20	10:00	OF					
Bear Creek	42.21256	-122.708	WGS84	BE51	07/23/20	10:30	OF					
Bear Creek	**42.24858**	**-122.7843**	WGS84	BE12	7/15/2021	9:40	OF	19.6		7.76		281.0
Bear Creek	**42.21319**	**-122.7088**	WGS84	BE14	7/15/2021	11:34	OF					
Bear Creek	**42.24858**	**-122.7843**	WGS84	BE16	7/29/2021	12:08	OF					
Wagner Cr	42.231433	-122.79276	WGS84	BE23	8/5/2021	11:25	OF					
Bear Creek	42.27966	-122.819	WGS84	BE35	8/26/2021	9:15	OF					
Wagner Cr	42.24375	-122.7816	WGS85	WA08	9/9/2021	11:12	OF					

Monitoring Location Sample Data

SITE DESCRIPTION (Location)	LATITUDE (decimal degrees)	LONGITUDE (decimal degrees)	*LAT/LONG SOURCE*	StationID	StartDate	StartTime	SampleDepth	TEMP_RESULT	TEMP_DUP	pH_RESULT	pH_DUP	TDS_RESULT
Wagner Cr	42.24343	-122.7827	WGS84	WA10	9/9/2021	12:00	OF	22.1		8.2		

StationID	SPCOND_RESULT	SPCOND_DUP	TURB_RESULT	TURB_DUP	BACTERIA_RESULT	BACTERIA_DUP	TP_RESULT	DO_RESULT mg/l	DO_RESULT %	DO_DUP	SITE COMMENTS	SAMPLE COLLECTOR(S)
BE06	473				193.5	172.2						Jennie Mor
BE12	550				12.1	16.0						Jennie Mor
BE03	430				2.0	<1						Jennie Mor
BE14					<1	1.0						Jennie Mor
BE16	494				17.1	13.4						Jennie Mor
BE23					46.5	48.0						Jennie Mor
BE50					19.7	13.4						Frances Oy
BE51					328.2	344.1						Frances Oy
BE23					146.7	105.4						Jennie Mor
BE27					99.0	80.9						Frances Oy
BE35					142.1	165.8						Frances Oy
WA08	463.5	471	2.43	2	36.4	15.5	0.0854	8.89	102.9	8.98	this may be	Jennie Mor
WA10	570		2.37		18.7	35.5	0.0988	8.23	101.8			Jennie Mor
BE03					43.5	48.0						Jennie Mor
BE06	457				83.7	60.5						Jennie Mor
BE12					>2419.5	>2419.5						Jennie Mor
BE14					131.4	248.9						Jennie Mor
BE16					<1							Jennie Mor
BE23					38.4	52.9						Frances Oy
BE27					1.0	1.0						Frances Oy
BE35					123.4	108.6						Frances Oy
BE50					3.1	6.3						Frances Oy
BE51					344.1	436.0						Frances Oy
BE12	396.5				209.8	488.4					data sheet	Jennie Mor
BE14					73.3	99.0						Jennie Mor
BE16					113.0	166.4						Jennie Mor
BE23					>2419.6	1553.1						Frances Oy
BE35					<1	<1						Frances Oy
WA08					<1							Oyung

StationID	SPCOND_RESULT	SPCOND_DUP	TURB_RESULT	TURB_DUP	BACTERIA_RESULT	BACTERIA_DUP	TP_RESULT	DO_RESULT mg/l	DO_RESULT %	DO_DUP	SITE COMMENTS	SAMPLE COLLECTOR(S)
WA10	514		1.31		178.9	201.4	0.0924	8.28	100.8			Jennie Mor