STORMWATER MANAGEMENT PROGRAM (SWMP) Document

in Compliance with the Municipal Separate Storm Sewer System (MS4) Phase 2 Permit

Permit Registrant: Rogue Valley Sewer Services

ROGUE VALLEY
SEWER SERVICES
CLEAN WATER - HEALTHY COMMUNITIES

Co-Implementers:

CITY OF PHOENIX
O•R•E•G•O•N

TALENT - OREGON
1911

JACKSON COUNTY
Oregon

Adopted by the RVSS Board October 2021

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INTRODUCTION

Rogue Valley Sewer Services (RVSS) has held a National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase 2 permit, hereafter referred to as the Phase 2 permit, since its first issuance in 2007. RVSS is the permit Registrant, the legally responsible entity for permit compliance, on behalf of its co-implementers, Jackson County, City of Phoenix and City of Talent. A service map showing RVSS' MS4 program boundary is available on our website. Intergovernmental Agreements (IGAs) have been entered into with each of the co-implementers to outline responsibilities for permit compliance. A new MS4 Phase 2 permit was issued by DEQ that went into effect March 1st, 2019. In June 2019, IGAs with the cities of Talent and Phoenix were updated to reflect changes in the MS4 permit. RVSS and Jackson County are currently in the process of updating their IGA to reflect the same changes.

The Phase 2 permit contains six control measures: Public Education and Outreach; Public Involvement and Participation; Illicit Discharge Detection and Elimination; Construction Site Stormwater Runoff Control; Post-Construction Stormwater Management; and Pollution Prevention in Municipal Operations. Specific requirements for program development and implementation of each of the key measures are included in the permit. One of the permit requirements is that the Registrant maintain a written Stormwater Management Program Document (SWMP Document) that describes in detail how the permit requirements will be met. Timelines for implementation of any requirements not yet implemented must be included in the SWMP Document. Table 1 includes the permit specified implementation dates for each of the six control measures. The SWMP Document must be reviewed annually and updated as necessary.

The permit Registrant must develop and implement mechanisms to track and document compliance with the permit requirements, this documentation must be provided in annual reports to DEQ. This SWMP Document outlines the Phase 2 permit requirements, RVSS' strategy to meet them, and timelines for implementing requirements not yet in place.

Table 1. SWMP Control Measures Implementation Schedule

SWMP Control Measures	Implementation Deadline
Public Education and Outreach	February 28, 2020
Public Involvement and Participation	February 28, 2020
Illicit Discharge Detection and Elimination	February 28, 2022
Construction Site Runoff Control	February 28, 2023
Post-Construction Site Runoff for New Development and Redevelopment	February 28, 2023
Pollution Prevention and Good Housekeeping for Municipal Operations	February 28, 2022

SWMP DOCUMENT DEVELOPMENT

The public education and outreach and Public Involvement and Participation portions of the SWMP were required to be implemented by February 28th, 2020. Prior to that date, RVSS developed those portions of the SWMP Document, put them out for public comment and had a final version adopted by the RVSS Board. In September 2021, RVSS developed the remaining portions of the SMWP Document and sent them out for public comment. They were adopted by the RVSS Board in October 2021.

PUBLIC EDUCATION & OUTREACH

Description: RVSS has a long-standing and robust public education and outreach program and will continue to implement this program to inform the public about the impacts of stormwater discharges on waterbodies and the steps that people can take to reduce pollutants in stormwater runoff. This section of the Stormwater Management Program (SWMP) outlines the education and outreach strategies that RVSS will implement to satisfy the conditions of the Phase 2 permit.

Requirements:
Distribute or offer at least two educational messages or activities per year to reduce the behaviors and practices that cause or contribute to adverse stormwater impacts on receiving waters, (Schedule A.3.a.iii). Conduct education and outreach to each of the target audiences listed below at least once during the permit term, construction site operators must be targeted at least twice, (Schedule A.3.a.iv).

Target Audiences:

1. General Public, homeowners, homeowner association, schoolchildren, and businesses (including home based and mobile businesses).
2. Local elected officials, land use planners and engineers.
3. Construction site operators

Stormwater Education & Outreach Strategy: The objective of the RVSS education and outreach program is to engage customers, residents, and business owners and their employees within the RVSS jurisdictional boundary, to increase their awareness of human impacts on stormwater quality and influence their behavior to reduce actions that have negative impacts on water quality.

All Public Education and Outreach activities will be tracked and reported quarterly to our partners and annually to DEQ. The Annual Report will assess the program's implementation progress including the number of events, type of event, message delivered, number of people and type of audience reached. At least one education and outreach activity taking place during the reporting timeframe will be evaluated using a pre and post poll, survey, test, or other method to quantify the effectiveness of the message delivery (Schedule A.3.a.vi).

In addition to the specific audiences and messages identified below, RVSS will create materials and content for electronic and physical distribution through both the RVSS and Stream Smart websites and social media channels and events to include:

a. RVSS annual newsletter in English & Spanish (print & electronic)
b. Monthly posts to RVSS and Stream Smart social media (electronic only)
c. Annually update RVSS website Stormwater pages (electronic only)

Through the audiences and modes of contact identified below, RVSS has set the following annual (fiscal year) goals:

a. Number of direct contacts by RVSS staff: 500
b. Number of engagements with RVSS electronic content: 200

RVSS will distribute the following educational messages to the specified audiences:

General Public:

Specific Audience #1: Homeowners and landscape contractors:

Specific topic/message #1: Best management practices should be followed for proper use, application and storage of pesticides and fertilizers to reduce negative impacts on stormwater quality.

Methods/means of contact:

- Presentations and participation in events and trainings on Integrated Pest Management and other best management practices for proper use, application and storage of pesticides and fertilizers.
- Creation, distribution, and display of printed and electronic materials related to Integrated Pest Management and other BMPs related to use of yard chemicals.

Specific Audience #2: Auto shop owners:

Specific topic/message #2: practice pollution prevention BMPs to reduce negative impacts on stormwater quality.

Methods/means of contact:

- Promote and administer EcoBiz certification of shops in RVSS jurisdiction.

Specific Audience #3: Dog/pet owners:

Specific topic/message #3: pick up pet waste to reduce negative impacts on stormwater quality.

Methods/means of contact:

- Sponsorship of pet waste stations with signage at local dog walking locations.
- Creation, distribution, and display of printed and electronic materials related to proper disposal of pet waste.

Specific Audience #4: School-age children:

Specific topic/message #4: nothing but rain into storm drain inlets and grates to reduce negative impacts on stormwater quality.

Methods/means of contact:

- In-class presentations and site tours.
- Teach Salmon Watch station.

Local Elected Officials, Land Use Planners and Engineers:

Specific topic/message: Describe the purpose and benefit of the RVSS Stormwater Program and how others can be involved in implementing or supporting the SWMP or how their activities or business can engage with the Stormwater Program.

Methods/means of contact:

- Request an opportunity to present to city councils, county commissioners in RVSS jurisdiction once/year.
- Continue to contribute and promote quarterly Stormwater Advisory Team (SWAT) meetings and invite interested individuals and groups to provide feedback on and participate in the development and implementation of the SWMP.

Construction Site Operators, (Schedule A.3.a.v):

Specific topic/message: how to design, install and maintain erosion prevention and sediment control BMPs at construction sites.

Methods/means of contact:

- Offer Erosion Prevention and Sediment Control Inspector Certification Class and Inspector Certification Renewal class at least once/year. The EPSC class is targeted to construction site operators and design engineers. Topics include appropriate selection, design, installation, use and maintenance of erosion prevention and sediment control measures and inspection frequency and documentation requirements.

PUBLIC INVOLVEMENT & PARTICIPATION

Description

The RVSS public involvement and participation program provides opportunities for the public to participate in the development of the SWMP control measures. When implementing a public involvement participation process, RVSS will comply with public notice requirements. RVSS will track public involvement and participation activities and assess progress towards implementation of the program in its Annual Report (Schedule A.3.b.iv).

Stormwater Advisory Team (SWAT)

As a part of Public Involvement and Participation, the SWAT will continue to meet quarterly and RVSS will actively invite participation from entities and individuals who may have interest in stormwater pollution prevention in the region. The goal of inviting non-permitted entities to the SWAT meetings is to increase public involvement in developing, reviewing, and implementing the SWMP, the Rogue Valley Stormwater Design Manual, and other related SWAT activities and work products.

Publically Accessible Website (Schedule A.3.b.ii)

RVSS will maintain and promote its own stormwater related content on the RVSS website and will contribute to the Stream Smart website. The RVSS website will continue to include information on the RVSS SWMP and its implementation, including the SWMP Document, contact information, and educational materials. The RVSS website will be maintained with current information and be updated at least annually. The website will include the following:

- How to file an Illicit Discharge Complaint or Report
- Draft documents issued for public comment, and final reports, plans and other official SWMP policy documents.
- 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.
- RVSS's contact information for relevant staff, including phone numbers, mailing addresses, and email addresses.

Stewardship Opportunities (Schedule A.3.b.iii)

RVSS will develop and implement, either individually or in partnership, one stewardship opportunity each year that may include:

- Stream clean-up
- Storm drain marking
- Riparian planting
- Stormwater management facility enhancement or maintenance

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

Description: The IDDE program is developed and implemented to detect and eliminate illicit discharges into the MS4, to the extent allowable by state laws. An illicit discharge to the MS4 is defined in the MS4 permit as any substance not listed under "Allowable Non-Stormwater discharges", Schedule A.1.d.

Six best management practices (BMPs) are outlined in the Phase II permit for IDDE and will be developed and implemented by RVSS, Table 2.

Table 2. IDDE BMPs

BMP #	BMP Name	Permit Section	Implementation Deadline
IDDE 1	Digital MS4 Map	Schedule A.3.c.ii	February 28, 2022
IDDE 2	Ordinance Prohibiting IDDE	Schedule A.3.c.iii	February 28, 2022
IDDE 3	Enforcement Procedures	Schedule A.3.c.iv	February 28, 2022
IDDE 4	Complaint Response	Schedule A.3.c.v	February 28, 2022
IDDE 5	Dry Weather Screening	Schedule A.3.c.vi	February 28, 2022
IDDE 6	IDDE Staff Training	Schedule A.3.c.vii	February 28, 2022

IDDE 1: Digital MS4 Map

Requirements

1. Maintain a digital map of the conveyance system, and assign unique identifiers as needed, to all known:
    a. conveyances,
    b. manholes,
    c. inlets
    d. stormwater management facilities, and
    e. outfalls
2. Delineate the MS4 by drainage basin
3. Map chronic illicit discharges
4. Map outfalls with regular flow during dry season

Strategy

RVSS has existing digital MS4 maps that were assembled from a combination of on-the-ground and as-built surveys during the first Phase 2 permit term. Beginning in 2018, RVSS undertook to re-survey the MS4 and update the digital mapping to include all required items. As re-surveying is completed, RVSS will be assigning unique identifiers to outfalls, stormwater nodes and stormwater management facilities. Once re-surveying of a stream basin is complete, drainage basins will be delineated.

Digital maps are updated on an on-going basis as new projects are completed. The locations of stormwater management facilities are GPS'd in the field and new conveyance systems are added to the GIS maps from CAD drawings of the as-built survey.

Mapping and Data Standards

RVSS utilizes Environmental Systems Research Institute (ESRI) Geographic Information System (GIS)
Horizontal Datum: NAD83 (North American Datum of 1983 - CORS96)
Projection System: Lambert Conformal Conic
Coordinate System: State Plane Oregon South FIPS 3602
Coordinate Units: "foot",0.3048
Accuracy Standard: EPSG Accuracy Standard:

IDDE 2: Ordinance Prohibiting IDDE

Requirements

An ordinance prohibiting non-stormwater discharge, except those items listed in Schedule A.1.d, into the MS4 must be adopted. The ordinance must specifically prohibit items listed in A.3.c.iii. from discharge into the MS4.

Strategy

RVSS adopted an ordinance prohibiting illicit discharges into the MS4 under the first Phase 2 permit term, 4.05.100.3, and is now in the process of updating the code to meet the revised list of prohibited discharges.

Timeline

Revisions to RVSS' code will be brought to the board for adoption prior to February 28th, 2022.

IDDE 3: Enforcement Procedures

Requirement

A written escalating enforcement procedure for illicit discharges to the MS4 must be developed and implemented. The procedure must address repeat violations through progressively stricter responses to achieve compliance. Timelines for compliance must be included and responses to discharge must consider the amount and type of pollutant discharged, and whether the discharge was accidental or intentional.

Strategy

RVSS reviewed its existing Code Enforcement Policy and updated it in FY21 to meet the requirements of IDDE 3, Appendix A. Resolution 21-06 adopted the revised Code Enforcement Policy in May 2021.

IDDE 4: Complaint Response

Requirements

Publicize a phone number, webpage or communication channel to allow the public to report illicit discharges. Develop and implement a complaint response program to respond to complaints within the permit specified timelines.

Strategy

RVSS will continue to implement its existing IDDE program, which utilizes a combination of our Code Enforcement Policy, Standard Operating Procedure 14.12 Spill Response/Hotline Calls, and an Access database for complaint tracking. Our website homepage publicizes the phone number to call to report spills. Response timelines will adhere to those specified in the Phase 2 permit. In 2020, RVSS updated its complaints tracking database to include the required minimum documentation specified in the Phase 2 permit. The Code Enforcement policy and SOP 14.12 are included in Appendix A.

Timeline

2019- Forward	Continue implementing the IDDE program
Annual	Summary of complaints in the annual report

IDDE 5: Dry Weather Screening

Requirements

1. RVSS must conduct dry weather screening of at least 40% of its outfalls by February 28, 2022 and 20% every year thereafter.
2. Annual field screening of priority locations
3. Establish Pollutant Parameter Action Levels

Strategy

RVSS established a dry weather field screening program under the first Phase 2 permit and has screened outfalls every year for the past nine years. Screening follows procedures outlined in the Center for Watershed Protection's 2014 manual. Since RVSS had already screened all outfalls prior to the 2019 effective date of the current permit, RVSS will continue to screen 20% of its outfalls each year.

Priority locations must be located downstream of any source of suspected illegal or illicit activity, or at a location identified by the permit registrants. Through previous outfall screening work, RVSS has identified and eliminated sanitary sewer cross connections and those directly connected to swimming pools. At this time, there are no known priority locations. Should priority locations be established in the future, they will be screened annually. Before beginning dry weather field screening, the complaint database will be reviewed to determine whether there are locations that should be followed up on.

Outfalls with sufficient flow are sampled and analyzed in the lab in accordance with RVSS' Quality Assurance Program Plan (QAPP) that was most recently approved by DEQ in 2018, Appendix A. Pollutant Parameter Action Levels were developed by RVSS prior to the FY22 dry weather screening, Appendix A. An Access database has been used to track dry weather screening data since 2005 and includes notes from each time an outfall is screened.

Timeline

FY2022	Submit Pollutant Parameter Action Levels to DEQ

Annual	Review complaint database to determine any priority sampling locations
Annual	Conduct dry weather screening at 20% of outfalls and any priority locations
Annual	Track and report dry weather screening results

IDDE 6: IDDE Staff Training

Requirements

1. Train new staff implementing IDDE programs within 30 days of their assignment to the program.
2. Train all staff on IDDE at least once during the permit term.
3. Provide follow-up training as procedures or technology changes.

Strategy

All RVSS field staff will receive orientation to identifying illicit discharges and how to submit a complaint for follow-up. Staff conducting dry weather screening will be properly trained by the Stormwater Program Manager prior to conducting the work. Follow-up training will be provided as needed.

CONSTRUCTION SITE RUNOFF CONTROL

Table 3. Construction Site Runoff Control BMPs

BMP #	BMP Name	Permit Section	Implementation Deadline
CS 1	Ordinance or Regulatory Mechanism	Schedule A.d.ii	February 28, 2023
CS 2	1200-C/CN information requirement	Schedule A.d.iii	February 28, 2023
CS 3	Erosion and sediment control plan Specifications	Schedule A.d.iv	February 28, 2023
CS 4	Erosion and Sediment Control Plan Review	Schedule A.d.v	February 28, 2023
CS 5	Construction Site Inspections and Documentation	Schedule A.d.vi	February 28, 2023
CS 6	Enforcement Procedures	Schedule A.d.vii	February 28, 2023
CS 7	Construction Runoff Control Training and Education	Schedule A.d.vii	February 28, 2023

CS 1. Ordinance or Regulatory Mechanism

Requirements

An ordinance must be in place that requires erosion, sediment and waste management controls from the initiation of construction through final stabilization on all qualifying construction projects and must require implementation of an Erosion and Sediment Control Plan (ESCP) for construction project sites that disturb a minimum of 7,000 square feet.

Strategy

RVSS will review its ordinance and update as needed prior to the February 28, 2023 implementation deadline.

Timeline

By FY23, review and update ordinance.

CS 2. 1200-C/CN Information Requirement

Requirement

Refer projects disturbing one or more acres, or that disturb less than one acre, but are part of a common plan of development disturbing one or more acres, to DEQ or the appropriate DEQ agent to obtain a 1200-C/CN permit.

Strategy

RVSS is an Agent of DEQ for issuance of the 1200-C permit and also administers the 1200-CN permit. Developers of projects disturbing one or more acres will be referred by the city and county planning departments to RVSS to obtain permit coverage prior to receiving building permits.

CS 3. Erosion and Sediment Control Plans for site disturbing 7,000sf or more

Requirements

Maintain written specifications addressing the proper installation and maintenance of controls during all phases of construction activity occurring in their coverage area. At a minimum, through ordinance or other regulatory mechanism, the permit registrant must:

1. Provide the construction site operator an ESCP plan, template, worksheet or similar document for construction site operators to document erosion, sediment and water management at the project site.
2. Require construction site operator to complete a site-specific ESCP prior to commencement of construction/land disturbance;
3. Require the ESCP be maintained and updated as site conditions change, or as needed; and
4. Require ESCPs to be kept on site and made available for review by the permit registrant, DEQ, or another administrating entity.

Strategy

RVSS worked with ACWA in 2013 to produce the ACWA Construction Site Stormwater Guide for construction site BMPs. This guide is distributed to all individuals taking RVSS' Certified Erosion and Sediment control Inspector course. We will work to update the RVSS code to require a site specific ESCP for projects disturbing 7,000sf or more that must be maintained as site conditions change and kept onsite during active construction.

Timeline

By FY23	Develop ESCP template worksheet or similar document
By FY23	Review and update ordinance.

CS 4. Erosion and Sediment Control Plan Review

Requirement

At a minimum, review ESCPs from construction projects that will disturb one or more acres of land, or that disturb less than one acre but are part of a larger common plan of development disturbing one or more acres.

Strategy

RVSS is an Agent of DEQ on the 1200-C permit and administers the 1200-CN permit, as such RVSS already reviews all ESCPs for projects disturbing one or more acres. By February 2023, projects disturbing 7,000sf or more will be required to have site specific erosion and sediment control plans that will be reviewed as part of the stormwater management plan review process.

CS 5. Construction Site Inspections and Documentation

Requirements

At a minimum, inspect:

1. Each site that disturbs one or more acres, at least once during the permit term.
2. Sites with visible or reported sediment in stormwater runoff
3. Every site for which a complaint is received
4. At least, 25% of sites disturbing less than one acre, at least once during the permit term.

Inspections must be documented with written reports covering proper installation and maintenance of BMPs depicted in the ESCP plans, compliance with ordinances, and existing or potential discharge issues.

Strategy

RVSS will continue to follow existing SOP 9.06 that stipulates minimum inspection times for 1200-C and CN permitted sites, Appendix B. RVSS will develop and implement an SOP for inspecting sites disturbing less than one acre.

Timeline

By FY23: Develop SOP for inspection frequency and documentation of sites disturbing less than one acre.

CS 6. Enforcement Procedures

Requirement

Develop, implement and maintain a written escalating enforcement and response procedure for construction sites.

Strategy

The RVSS Board adopted an escalating enforcement procedure with resolution 21-06 in FY21, which RVSS will continue to enforce, see Appendix A.

CS7. Construction Runoff Control Training and Education

Requirements

1. Ensure all staff responsible for ESCP review, site inspections and enforcement are trained to conduct such activities within 30 days of their assignment to these duties.
2. All staff must receive training at least once during the permit term.

3. Provide follow-up training as procedures and technology in this program change.

Strategy

RVSS conducts Designated Certified Erosion and Sediment Control Inspector training twice per year. This training is listed as an approved certification course in the DEQ NPDES 1200-C permit. All RVSS field staff conducting potentially erosion generating activities, or inspecting sites disturbing less than one acre in area will be required to take the training. RVSS inspectors for sites disturbing one or more acres will also take a two-day erosion prevention and sediment control training.

POST-CONSTRUCTION SITE RUNOFF FOR NEW DEVELOPMENT AND REDEVELOPMENT

Table 4. Post-Construction Site Requirements

BMP #	BMP Name	Permit Section	Implementation Deadline
PC 1	ORDINANCE OR REGULATORY MECHANISM	Schedule A.3.e.ii	Feb. 28, 2023
PC 2	REMOVING BARRIERS TO LOW IMPACT DEVELOMENT	Schedule A.3.e.iii	Feb. 28, 2023
PC 3	POST-CONSTRUCTION STORMWATER MANAGEMENT REQUIREMENTS	Schedule A.3.e.iv	Feb. 28, 2023
PC4	POST CONSTRUCTION SITE RUNOFF PLAN REVIEW	Schedule A.3.e.v	Feb. 28, 2023
PC5	LONG-TERM OPERATION AND MAINTENANCE	Schedule A.3.e.vi	Feb. 28, 2023
PC 6	TRAINING AND EDUCATION	Schedule A.3.e.vii	Feb. 28, 2023

PC 1. Ordinance or Regulatory Mechanism

Requirements

Through ordinance, require projects developing or redeveloping 5,000sf of impervious surface to manage stormwater using an approach that targets natural surface or predevelopment hydrological function through the installation and long-term operation and maintenance of structural stormwater controls. The ordinance must include procedures for review and approval of structural stormwater control plans as well as authority to conduct inspections of installed structural stormwater controls.

Strategy and Timeline

RVSS will review and update its ordinance as needed by February 28th, 2023.

PC2. Removing Barriers to Low Impact Development

Requirements

Identify, minimize or eliminate ordinance, code and/or development standard barriers that inhibit design and implementation techniques, such as Low Impact Development and Green Infrastructure. Any barrier identified must be modified within three years.

Strategy and Timeline

RVSS will review its own code, as well as those of the cities of Talent and Phoenix and Jackson County by Sept. 1, 2023. Any barriers identified will be modified within three years of identification.

PC 3. Post- Construction Stormwater Management Requirements

Requirements

Develop post-construction stormwater management requirements that include the technical standards provided in Schedule A.3.e.iv of the Phase 2 permit.

Strategy

RVSS is working at a regional level to revise the Rogue Valley Stormwater Design Manual to meet the requirements of the Phase 2 permit reissued in 2021.

Timeline

A revised Rogue Valley Stormwater Design Manual will be adopted by Feb. 28th, 2023.

PC 4. Post-Construction Site Runoff Plan Review

Requirements

Review and approve plans for structural stormwater control of sites that develop or redevelop 5,000sf or more of impervious surface.

Strategy: RVSS will continue to review and approve all projects requiring compliance with the Rogue Valley Stormwater Design Manual.

PC5. Long Term Operation and Maintenance

Requirements

Maintain an inventory and implement a strategy to ensure all structural stormwater controls installed in compliance with the Phase 2 permit are operated and maintained to meet the site performance standard in schedule A.3.e.iv.

Strategy

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 inspects 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.

PC 6. Training and Education

Requirements

1. Ensure all staff responsible for performing post-construction runoff site plan review, field inspections or administrating the post-construction program requirements are trained to conduct such activities within 30 days of their assignment to these duties.

2. All staff must receive training at least once during the permit term.
3. Provide follow-up training as procedures and technology in this program change.

Strategy

All RVSS staff reviewing plans and conducting field inspections are qualified and trained to do so, any new staff will be trained prior to conducing the activity.

POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Table 5. Good Housekeeping BMPs

BMP #	BMP Name	Permit Section	Implementation Deadline
MPP 1	Operation and Maintenance Strategy for Existing Structural SW Controls	Schedule A.3.f.ii	Feb 28, 2022
MPP 2	Inspection and Cleaning of Catch Basins	Schedule A.3.f.iii	Feb 28, 2022
MPP 3	Pollution Prevention in Facilities and Operations	Schedule A.3.f.iv	Feb 28, 2022
MPP 4	Registrant-owned NPDES Industrial SW Permit Facilities	Schedule A.3.f.v	Feb 28, 2022
MPP 5	Requirements for Pesticide and Fertilizer Applications	Schedule A.3.f.vi	Feb 28, 2022
MPP 6	Litter Control	Schedule A.3.f.vii	Feb 28, 2022
MPP 7	Materials Disposal	Schedule A.3.f.viii	Feb 28, 2022
MPP 8	Stormwater Infrastructure Staff Training	Schedule A.3.f.ix	Feb 28, 2022

MPP 1 Operation and Maintenance Strategy for Existing Structural SW Controls

Requirements

For existing structural stormwater controls installed prior to the March 2019, develop and implement an operation and maintenance strategy for both permit registrant owned controls and controls owned and operated by non-MS4 entities. This must meet the long-term operation and maintenance requirements outlined in the post-construction stormwater management section.

Strategy

RVSS' Standard Operating Procedure (SOP), 14.10 Manufactured SW Quality Feature Inspection & Maintenance, stipulates frequency of inspection and maintenance for SW structural controls maintained by RVSS, which covers all manufactured devices within the MS4, Appendix C. Vegetated structural stormwater controls within the MS4, including those owned and operated by co-permittees, as well as those privately owned and operated, are inspected through RVSS' Post-Construction Long-Term Operation and Maintenance program. RVSS' goal is to annually inspect 1/5 of facilities owned and operated privately or by co-permittees. Following inspection, RVSS communicates with the owner/operator regarding any maintenance needs and follows-up to ensure the work is completed.

Jackson County: The County will establish an inspection schedule for stormwater controls and will have them in place by Feb. 28th, 2022.

MPP 2 Inspection and Cleaning of Catch Basins

Requirements

1. Must inspect at least 50% of the permit owned or operated inlets at least once every five years.
2. Complete all maintenance and repairs identified during inspections.

Strategy

Jackson County: The County will inspect 30% of its catch basins annually and maintain those requiring it within the year.

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.

MPP 3 Pollution Prevention in Facilities and Operations

Requirements

The permit registrant must develop, review and update procedures for inspection and maintenance schedules to ensure pollution prevention and good housekeeping are conducted for the following activities:

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

Strategy

Jackson County: Utilizes the Oregon Department of Transportation (ODOT) Blue Book as its guide to best management practices for municipal operations. Several items required by the MS4 permit are not covered by the Blue Book, the County will develop its own SOPs for these areas and have them in place by Feb. 28th, 2022.

Phoenix, RVSS, and Talent: Have each adopted a *Standard Operating Procedure and BMP manual for Pollution Prevention and Good Housekeeping*. The manuals cover all the required items outlined above under their jurisdiction and are included in Appendix C.

Note that fire-fighting training activities are conducted by fire districts, which are special districts and not under the jurisdiction of the city, county or RVSS.

MPP 4 Registrant-owned NPDES Industrial SW Permit Facilities (1200-Z)

As of September 2022, RVSS and its co-permittees do not own or operate any NPDES Industrial SW permitted facilities.

MPP 5 Requirements for Pesticide and Fertilizer Application

Requirement

Must implement practices to reduce the discharge of pollutants to the MS4 associated with the application and storage or pesticides and fertilizers.

Strategy

RVSS: Has participated in the Middle Rogue Pesticide Stewardship Partnership (PSP) on behalf of itself and the co-permittees since 2014. The PSP developed a strategic plan in 2019 that aims to reduce the concentration and prevalence of pesticides of concern and local problem pesticides through monitoring, working with land managers and education.

The SOP manuals developed for MPP3 include BMPs for fertilizer usage.

Talent: Adopted an Integrated Pest Management (IPM) plan in 2018 that governs pesticide usage within the city and is included in Appendix C

MPP 6 Litter Control

Requirements

The permit registrant must implement methods to reduce litter within its jurisdiction.

Strategy

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.

Phoenix: The City of Phoenix is divided into three zones, East Side, West Side, and Old Town with each zone swept once every three weeks. The City sweeps one zone every week usually on Fridays, it takes about seven hours to complete sweeping for one zone.

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

Talent: The City of Talent is divided into 2 zones with each zone being swept every other week. The Northern Zone is generally Colver Rd. to Rapp Rd. and the Southern Zone is everything South of Rapp Rd.

MPP 7 Materials Disposal

Requirement

Material or pollutants collected or removed as part of maintenance must be managed and disposed of in a manner to prevent pollutants from entering waters of the state.

Strategy

The City of Phoenix, City of Talent, and RVSS' SOPs manuals developed for MPP3 cover BMPs for material disposal.

Jackson County: Jackson County will develop SOPs to address this and will have them in place by Feb. 28th, 2022.

MPP 8 SW Infrastructure Staff Training

Requirements

1. Ensure staff responsible for overseeing or implementing O and M practices are trained or qualified to conduct such activities.
2. Training must be provided within 30 days of assignment to an area covered under MPPs 1-7.
3. Training must be provided at least once during the permit term.
4. Training must be provided as procedures and/or technology change.

Strategy

Jackson County: The County will develop a training schedule that will be in place by Feb. 28th, 2022.

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. Phoenix will also have RVSS SW staff conduct training of their employees at least once per permit term.

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: All staff will be required to read the finalized SOP manual. Additional training will be sought out as needed.

RVSS SWMP List of Appendices

A ILLICIT DISCHARGE DETECTION AND ELIMINATION

IDDE 3. *Code Enforcement Policy*

IDDE 4. *SOP 14.12 Spill Response/Hotline Calls*

IDDE 5. *Quality Assurance Program Plan (QAPP)*

IDDE 5. *Pollutant Parameter Action Levels*

B CONSTRUCTION SITE RUNOFF

CS 5. *SOP 9.06*

C MUNICIPAL POLLUTION PREVENTION AND GOOD HOUSEKEEPING

MPP1. *SOP 14.10 Manufactured SW Quality Feature Inspection and Maintenance*

MPP3.:

SOP and BMP Manual for Pollution Prevention and Good Housekeeping for RVSS

SOP and BMP Manual for Pollution Prevention and Good Housekeeping for Phoenix

SOP and BMP Manual for Pollution Prevention and Good Housekeeping for Talent

MPP5. *Talent Integrated Pest Management Plan*

Appendix A

Illicit Discharge Detection and Elimination

IDDE 3. *Code Enforcement Policy*

IDDE 4. *SOP 14.12 Spill Response/Hotline Calls*

IDDE 5. *Quality Assurance Program Plan (QAPP)*

IDDE 5. *Pollutant Parameter Action Levels*

Code Enforcement Policy

Subject:	**Code Enforcement**
Approved by:	**Resolution 21-06**

Rogue Valley Sewer Services has adopted a Code to regulate certain activities related to sanitary sewer and stormwater. Enforcement of these code provisions is generally done through the provisions of Section 8.50.050 which authorizes the assessment of a civil fine not to exceed $2,000 for each code violation.

Enforcement of certain stormwater violations is addressed in Section 4.05.110 3).

Enforcement of FOG regulations is defined by Resolution 17-19. The penalty for violation includes a monthly surcharge set each year with the annual rate resolution.

Penalties for making sewer connections without a permit are defined in Code Section 9.10.045.

The purpose of this policy is to establish a framework to assess and collect civil penalties within the limits established by Sections 4.05.110 and 8.50.050 of the RVSS Code.

Policy Goals: The goals of this enforcement policy are to:

- Protect public health and the environment
- Obtain and maintain compliance with applicable code provisions
- Deter future violations
- Ensure consistent and predictable enforcement actions

Progressive Enforcement: RVSS may undertake informal communications to obtain compliance without resorting to formal enforcement action. Such communications are not required nor are they considered part of the progressive enforcement plan. Depending on the immediacy and severity of the violation, RVSS may skip steps 1 and 2 and move directly to step 3 of the enforcement plan.

1. Warning: A Warning is a written notice of violation. This can be in the form of a hand written Brown Tag, email or actual letter. The Warning will identify:
    a. the nature of the violation,
    b. actions needed to correct the violation
    c. time period in which corrections must be made.

2. Notice of Violation: If compliance is not attained from a Warning, RVSS will issue a Notice of Violation. The Notice will include the following:
    a. a citation of the ordinance, rule or order involved;
    b. a description of the violation;
    c. steps needed to correct the violation;
    d. a time frame to complete all corrective action;
    e. the penalty that will be levied if the violation is not corrected.
3. Notice of Civil Penalty: If the deadlines identified in the Notice of Violation are not met, or, if the severity of the violation is such that no warnings are deemed necessary, RVSS will issue a Notice of Civil Penalty. This notice will include the following:
    a. all of the information included in the Notice of Violation
    b. the amount of the penalty assessed
    c. a time frame to complete all corrective action
    d. a time frame to pay the penalty.
    e. a statement of the right to request a hearing before the RVSS Board of Directors.
4. Additional penalty: Failure to complete corrective action or pay the civil penalty imposed within the allotted time frame will result in an additional civil penalty equal to the initial penalty.

Remedies for Non-Compliance: At any point deemed necessary by RVSS, RVSS may take any or all of the following actions:

1. Undertake corrective actions using RVSS resources . In this case the violator will be billed for all costs incurred by RVSS in addition to any civil penalty.
2. Report the violation to Oregon DEQ or other government agency with jurisdiction for further enforcement.
3. File suit in Jackson County Circuit Court for collection of unpaid civil penalties.

Classification of Violation: Code violations are separated into three classifications, with three levels of magnitude, broadly defined in Table 1.

Any repeat of a minor or moderate level violation within a two year time span will move the violation to the next highest magnitude.

Civil Penalty: The amount of the civil penalty will be based on the Class and magnitude of the violation, in accordance with Table 2. Each day a violation continues shall be considered a separate violation.

Table 1. Violation class and magnitude matrix with example violations.

	Class 1 *Actions that result in discharge of pollutants*	Class 2 *Actions that impact RVSS infrastructure and/or non-compliance with permit and agreement requirements*	Class 3 *Failure to comply with administrative provisions of permits and agreements*
Major	Release of pollutants into waters of the state		
Moderate	Release of pollutants that are contained before reaching waters of the state	Any unpermitted work on, or damage to, public sewer or stormwater facilities, or work in conflict with agreements	
Minor	Release of pollutants that are contained on property where the release originated	Failure to install or maintain stormwater controls; failure to allow proper inspection of sewer or stormwater facilities.	Failure to comply with administrative provisions of permits and agreements

Table 2. Civil penalty value based on class and magnitude.*

	Class 1	Class 2	Class 3
Major	$2,000	$1,000	$500
Moderate	$1,000	$750	$500
Minor	$500	$500	$250

*In addition to these civil penalties, RVSS will recover any costs incurred to correct or mitigate the violation.

Title: **14.12 Spill Response/ Hotline Calls**

Department: **Stormwater**

Approved by: **Carl Tappert, Manager** 9/19/2019

Responsible Person: Stormwater Program Manager

Participants: **All Staff**

General:
The following procedure describes how to respond when a call is received regarding a spill into the stormwater system. This procedure is to be used in conjunction with SOP 10.12 – Spill Response.

Procedure:

1. Initial Report: The person receiving a call reporting a spill into the stormwater system will forward the call to the O&M Department. If no one is available in the O&M department the person receiving the call will proceed to step 2.

2. Complaint Form: Complete a complaint form with as much relevant information as possible. In particular be sure to get the following information:
   a. Location of the spill (street and cross street)
      i. Verify that the spill is located within RVSS' MS4 boundary by going to the RVSS website, SW maps page.
   b. Source of spill (i.e. coming from a manhole, coming from the ground, vehicle accident, etc.)
   c. Destination of spill (i.e. flowing into gutter, flowing into creek)
   d. Material that was spilled, if known.
   e. Name and call-back number of person reporting spill

3. Notify Complaint Investigator: The person who completes the complaint form will notify the employee charged with investigating the complaint. The complaint investigator is identified on the employee board in the front office. If the complaint investigator cannot be contacted, proceed down the Spill Notification List until a person responds. The complaint investigator should notify the appropriate RVSS inspector.

4. Initial Assessment: The person responding to the spill will proceed to the site and verify the spill. If no spill is found, call back the person who initially reported the spill to be sure you are at the proper location.

   Once the spill has been verified, attempt to identify:
   a. the cause of the spill (i.e. broken pipe, blockage)
   b. what has spilled

c. responsible party for the spill

Notify the Spill Administrator of the nature of the spill. If there is no threat to the stormwater system or surface waters RVSS will not respond. Inform the complainant that they need to call OERS and of what RVSS has done.

5. Mobilize Forces:

A. If the responsible party for the spill is known, the Spill Administrator will direct them to perform clean-up or to hire a private contractor.

i. Thermo Fluids in White City 1-800-350-7565
ii. First Response in Roseburg 1-800-909-5592.
iii. Western States Environmental Services 541- 770-2482

b. Complaint Investigator/Spill Administrator will inspect to ensure adequate clean-up is provided.

If the responsible party is unknown or unwilling to manage the spill, RVSS will manage the spill. The person responding will determine what resources are needed for RVSS to manage the spill. Actions needed, in order of priority, are:

c. Protect the Public: Ensure that there are adequate barriers, markers, and traffic control to prevent members of the public from coming into contact with raw sewage or potentially hazardous materials.

d. Contain the spill: If the substance spilled is unknown and the responsible party is unknown, call 911 and request HAZMAT to contain the spill. If the spilled substance is known to be non-hazardous, install sandbags, earth berms, or other devices as needed to keep the spill contained in a manageable area.

e. Reroute the spill: If the spill cannot be contained, reroute the spill to minimize the possibility of public contact with raw sewage or potentially hazardous materials. Rerouting should be done in the following priority:

i. Into a downstream sewer.
ii. Into a storm drain or ditch
iii. Onto vacant land.

f. Remove the spill: If the spill is less than five gallons, RVSS will use its own equipment to remove the spilled material. If the spill is greater than five gallons, RVSS will contact Thermo Fluids and request clean up services.

g. Clean and Disinfect: Remove all raw sewage from the ground surface. Flush all storm drain pipes that received raw sewage in a manner that prevents the flushed material from reaching a stream or other receiving water. Disinfect all contaminated ground with sodium hypochlorite or lime.

6. Notification: Any area that has been contaminated with raw sewage or hazardous materials will be enclosed with tape and barricades. The area will be posted with warning signs in English and Spanish stating:

Warning!
Hazardous Material
Avoid Contact

Advertencia!
Material Peligroso
Evitar el contacto

These warnings will remain in place until the site has been decontaminated.

If the responsible party is unknown, or unwilling to manage the spill, the Spill Administrator will notify the following entities as soon as practical after responding to the spill.

a. Oregon Emergency Response System (1-800-452-0311) for:
   i. Any amount of sewage
   ii. Any amount of oil entering a waterway
   iii. Oil spills on land greater than 42 gallons
   iv. Any quantity of a potentially hazardous substance
b. Nearby Residents
c. Public works departments with jurisdiction over the affected area.

7. Reporting:
   a. If a sanitary sewer overflow occurred, the sanitary Spill Administrator will complete the DEQ Sanitary Sewer Overflow report form and will submit the form to DEQ within 5 days of the spill. The form will be signed by the General Manager or designee.
   b. If a non-sanitary sewer discharge into the stormwater system occurred, the storm Spill Administrator will complete the Spill Release Report.

8. Tracking:
   The Spill Administrator will enter tracking information into the following spreadsheet:

   K:\DATA\Stormwater Post 2011\Illicit Discharge Detection & Elimination\Hotline Call Tracking Spreadsheet.xls

   Documents and photos from the spill should be saved in the appropriate year folder:

   K:\DATA\Stormwater Post 2011\Illicit Discharge Detection & Elimination

Alternate Procedures: In the event of a spill outside of work hours, the employee assigned on-call duty will assume the role of Spill Administrator and Complaint Investigator. They will inform the Spill Administrator of the events as soon as possible during normal work hours.

Management of a spill presents unique challenges. Employees are specifically authorized to deviate from these procedures when, in their best judgement, such deviation better protects the health and safety of the public.

Spill Notification List

Call order for responding to a sewage spill.

Call Order	Title	Employee	Home/Personal Cell	Work Cell
1.	Complaint Investigator	Paul Christensen	541-531-9101	541-944-2810
2.	Operations Manager	Shane Macuk	541--621-7783	541-621-7771
3.	Sewer Spill Administrator	Tim Hammond	541-890-9842	541-941-1721
4.	Operations Specialist	TJ Weber	541-621-6122	541-601-8990
5.	Construction Specialist	John Perigo	541-831-0117	541-944-8329
6.	Lead Worker	Brent Jones	541-621-0101	541-944-8028
7.	Maintenance Worker	Quintyn Zilembo	541-441-1353	541-944-8329
8.	Maintenance Worker	Matt Pierce	541-531-6679	541-941-6872
9.	FOG Coordinator	Travis Cox	541-727-2113	541-944-8399
10.	General Manager	Carl Tappert	541-941-0849	541-941-6014

Call order for a spill into a storm drain or stream.

Call Order	**Title**	**Employee**	**Home/Personal Cell**	**Work Cell**
1.	Stormwater Spill Administrator	Jennie Morgan	503-806-9712	503-806-9712
2.	Inspector	Bron Johnson	541-941-4581	541-951-9122
3.	Inspector	Dan Hammond	541-840-4524	541-890-0928
4.	District Engineer	Nick Bakke	541-621-3573	541-621-3573

Public Works Department Contacts

Jurisdiction	**Contact**	**Phone #**
Central Point	Matt Samitore	541-664-7602x205
Eagle Point	Robert Miller	541-826-4212x105
Jacksonville	Jeff Alvis	541-899-1231x110
Medford	Pat Percy	541-774-2602
Phoenix	Aaron Prunty	541-535-2226
Talent	Bret Marshall	541-535-3828
Jackson County	Mike Kuntz	541-774-6228
Shady Cove	Tom Corrigan	541-878-3757
Gold Hill	Harry Staven	541-531-3667

DEQ
State of Oregon Department of Environmental Quality

Oregon Department of Environmental Quality

SSO Reporting Form

SSO

This information must be submitted within 5 days of becoming aware of the overflow.
Please complete online and print for signature. Be sure to fill out all fields.

FACILITY/CONTACT INFORMATION		
Name of Permittee:		
Contact Name:		
Phone:	Email:	County:
DEQ Permit # (see permit face page):		DEQ File #:
OERS Incident #:	Date Reported to OERS:	
Date Reported To DEQ:	Today's Date:	
Date SSO Started (if known):	Time Started (if known):	
Date SSO Stopped (if known):	Time Stopped (if known):	
SSO Location:		
SSO Nearest Address:		
City:	Zip Code:	
SSO Latitude (if known):	Longitude (if known):	
Estimate of Quantity Overflowed:	(Gallons) Link to estimation method	
Did the SSO discharge to surface water?		
Name of waterbody:		

PUBLIC NOTIFICATION
Notified downstream drinking water sources (List Below)?
Name of drinking water facility:
Signs Posted?
Media contacted?
Who?
List any other steps taken to notify the public or state/federal agencies:

CAUSES
Cause or suspected cause of the overflow:
If needed, attach additional sheets
Rainfall in the 24 hours prior to SSO (for storm-related overflows): (inches)
Source of rainfall data:
If needed, attach additional sheets
1-in-5 year 24 hour rainfall for the sewerage system area (if known): (in/24hr)

10-WQ-029

A-1

SPILL/RELEASE REPORT

State of Oregon Department of Environmental Quality

1 - GENERAL INFORMATION **OERS No.** _____

a. Company/Individual Name: _____

b. Address: _____

_____ c. Company Contact Person: _____

d. Phone Number(s): _____

e. Report Prepared by: _____ Phone: _____

f. Specific on-site location of the release (and address if different from above):

_____

_____

Please provide a map of the site showing area(s) where the release occurred, any sample collection locations, location of roads/ditches/surface water bodies, etc.

2 - RELEASE INFORMATION

a. Date/Time Release started: _____ Date/Time stopped: _____

b. Release was reported to (specify Date/Time/Name of Person contacted where applicable):

ODEQ _____

OERS _____

NRC _____

Other (describe): _____ c. Person(s) reporting release: _____

d. Name, quantity and physical state (gas, liquid, solid or semi-solid) of material(s) released:

_____

_____

Please attach copies of material safety data sheets (MSDS) or constituent profiles for released material(s).

e. The release affected: ____Air ____Groundwater ____Surface Water ____Soil ____Sediment

f. Name and distance to nearest surface water body(s), even if unaffected (include locations of creeks, streams, rivers and ditches that discharge to surface water on maps):

_____

Has the release reached the surface water identified above?: ____Yes ____No

Could the release potentially reach the surface water identified above? ____Yes ____No

Explain: _____

_____ g. Depth to nearest aquifer/groundwater: _____

Is nearest aquifer/groundwater potable (drinkable)? ____Yes ____No

Has the release reached the nearest aquifer/groundwater? ____Yes ____No

Explain: _____

_____

h. Release or potential release to the air occurred? ____Yes ____No

Explain: _____

_____ i. Was there a threat to public safety? ____Yes ____No

j. Is there potential for future releases? ____Yes ____No

Explain: _____

_____

k. Describe other effects/impacts from release (emergency evacuation, fish kills, etc.):

_____
_____
_____

l. Describe how the release occurred. Include details such as the release source, cause, contributing weather factors, activities occurring prior to or during the release, dates and times of various activities, first responders involved in containment activities, etc.:

_____
_____
_____
_____
_____
_____

3 - SITE INFORMATION

a. Adjacent land uses include (check all that apply and depict on site maps): ____Residential ____Commercial ____Light Industrial ____Heavy Industrial ____Agricultural ____Other (describe):_____

b. What is the population density surrounding the site:_____

c. Is the site and/or release area secured by fencing or other means? ____Yes ____No

d. Soil types (check all that apply): ____alluvial ____ bedrock ____ clay ____sandy ____silt ____ silty loam ____artificial surface (cement/asphalt/etc.)

e. Describe site topography:_____
_____
_____

4 - CLEANUP INFORMATION

a. Was site cleanup performed? ____Yes ____No
If No, explain:_____
_____ b. Who performed the site cleanup?

Company Name: _____
Address: _____

_____ Cleanup Supervisor:
_____

Phone Number(s): _____

c. Has all contamination been removed from the site? ____Yes ____No
If No, explain:_____
_____ d.

Estimated volume of contaminated soil removed:_____

e. Estimated volume of contaminated soil left in place:_____

f. Was a hazardous waste determination made for cleanup materials? ____Yes ____No

g. Based on the determination, are the cleanup materials hazardous wastes?
____Yes ____No If Yes, list all waste codes:_____ h.

h. Was contaminated soil or water disposed of at an off-site location? ____Yes ____No

If yes, attach copies of receipts/manifests/etc., and provide the following information:

Facility Name: _____
Address: _____
_____
Facility Contact: _____
Phone Number(s): _____

i. Is contaminated soil or water being stored and/or treated on-site? ____Yes ____No If yes, please describe the material(s), storage and/or treatment area, and methods utilized (attach additional sheets if necessary):

_____
_____
_____
_____

j. Describe cleanup activities including what actions were taken, dates and times actions were initiated and completed, volumes of contaminated materials that were removed, etc. (attach additional sheets or contractor reports if necessary or more convenient):

_____
_____
_____

5 - SAMPLING INFORMATION

Attach copies of all sample data and indicate locations of sample collection on maps.

a. Were samples of contaminated soil collected? ____Yes ____No ____N/A
b. Were samples of contaminated water collected? ____Yes ____No ____N/A
c. Were samples collected to show that all contamination had been removed? ____Yes ____No ____N/A
d. Describe sampling activities, results and discuss rationale for sampling methods:

_____
_____
_____
_____
_____ **6 -**

ADDITIONAL INFORMATION

a. Provide a description or plan outlining the list of actions to be taken to prevent future releases from occurring.

_____
_____
_____
_____

7 - SPILL REPORT CHECKLIST

To ensure that you have gathered all the information requested by the Department in this Spill/Release Report, please complete the following checklist:

____ Map(s), pre and post cleanup photos of the site showing buildings, roads, surface water bodies, ditches, waterways, point of the release, extent of contamination, areas of excavation and sample collection locations attached.

____ Material Safety Data Sheet (MSDS), or constituent profiles for released material(s) attached. **Note: an MSDS is not required for motor fuels.**

____ Sampling data/analytical results attached.

____ Receipts/manifests (if any) for disposal of cleanup materials attached.

____ Contractor reports (if any) attached.

If you would like to submit your report by e-mail an electronic version can be downloaded on the internet at this link: http://www.oregon.gov/deq/filterdocs/SpillReleaseReportForm.pdf. This form can then be submitted by e-mail to DOSPILLS@deq.state.or.us. Please ensure that emails submitted to DEQ are less than 8 MB each. Multiple emails can be submitted to the DEQ if a report has to be divided into smaller sections for transmittal.

I certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this submittal are true, accurate and complete.

Signature:_____ Date:_____

Quality Assurance Project Plan

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

State of Oregon
Department of Environmental Quality

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

www.rvss.us

Group A: PROJECT MANAGEMENT

A1. Title and Approval Sheet

Jennie Morgan 10.23.18

Jennie Morgan, RVSS / Project Manager — Date

10.23.18

Nick Haxton / DEQ Volunteer Monitoring Specialist — Date

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

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A2. Table of Contents

A3. List of Tables

A4. List of Figures

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

A5. Distribution List

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

A6. Project/Task Organization

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

Table A–1 Key Personnel

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

A7. Purpose Statement/Problem Definition/Background

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

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

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

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

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

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

The specific aims of this SAP/QAPP are:

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

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

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

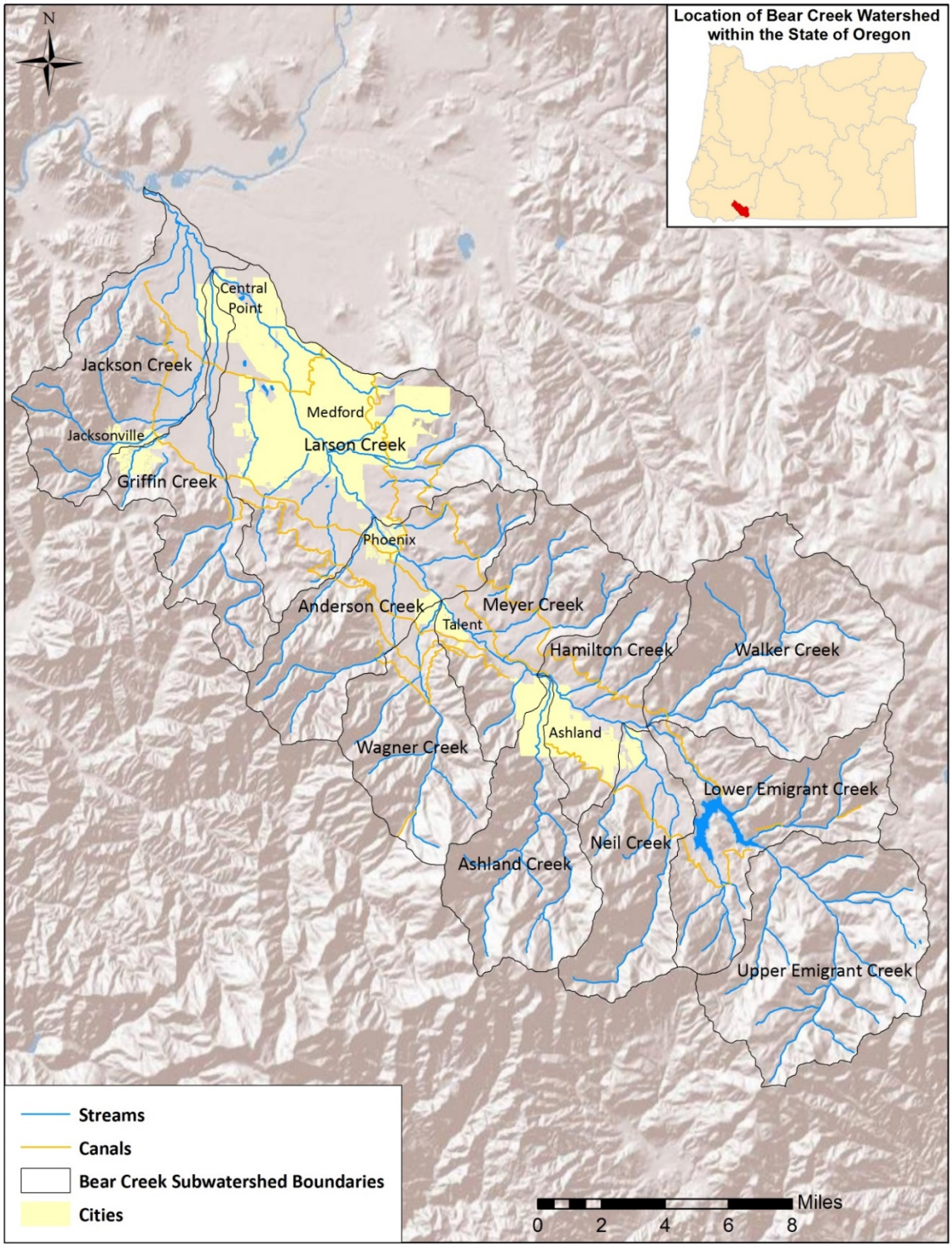
N
Location of Bear Creek Watershed within the State of Oregon
Central Point
Jackson Creek
Medford
Jacksonville
Larson Creek
Griffin Creek
Phoenix
Anderson Creek
Meyer Creek
Talent
Hamilton Creek
Walker Creek
Ashland
Wagner Creek
Lower Emigrant Creek
Neil Creek
Ashland Creek
Upper Emigrant Creek
Streams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

Figure 1

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

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

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

Table A–2 RVSS IDDE Annual sampling Timeline

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

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

A9. Measurement Quality Objectives

The specific data quality objectives of this study are:

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

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

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

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

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

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

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

A10. Training Requirements and Certification

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

A11. Documentation and Records:

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

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

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

Table A–3 Revision History

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

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

Table A–4 Document Retention Policy

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

Group B: DATA GENERATION AND ACQUISITION

B1. Sampling Process Design

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

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

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

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

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

B2. Sampling Method Requirements

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

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

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

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

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

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

B3. Sample Handling and Custody Procedures

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

B4. Analytical Methods Requirements

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

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

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

B5. Quality Control Requirements

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

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

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

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

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

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

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

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

B7. Instrument Calibration and Frequency

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

B8. Inspection/Acceptance Requirements

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

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

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

B9. Data Acquisition Requirements

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

B10. Data Management

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

Group C: ASSESSMENT AND OVERSIGHT

C1. Assessment and Response Actions

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

C2. Reports to Management

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

Group D: DATA VALIDATION AND USABILITY

D1. Data Review, Validation, and Verification

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

D2. Validation and Verification Methods

Validation and verification procedures will include the following basic steps:

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

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

D3. Reconciliation with Data Quality Objectives

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

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

RVSS *proposed* Pollutant Parameter Action Levels for dry weather sampling in the Bear Creek Watershed

Indicator monitoring is used to confirm illicit discharges, and provides clues about their source or origin. The following indicators can be used during dry weather outfall inspections to determine whether or not an upstream investigation is warranted.

Parameter	Bear Creek Basin Action Level	Rationale
E. coli	406 MPN/100mL	Single sample standard for fresh water.
pH	6.5-8.5	OAR 340-041-0275 water quality standard for the Rogue Basin.
Temperature	NA	Not a useful parameter as outfalls are only visited one time.
Conductivity	>450 uS/cm	Based on sample values from Bear Creek OFs, see explanation below.
Turbidity	15 NTU	Based on recommendation of Rogue Basin Coordinator.
Total Chlorine residual	Not measuring.	

Conductivity Pollutant Parameter Action Level

RVSS has a very small dataset from dry season sampling of flowing outfalls over the past 9 years, from which the average conductivity is 455 with a standard deviation of 145 us/cm. The OFs have not had any other parameters that would indicate a pollutant issue. RVSS' data corroborates with data collected at stormwater outfalls by RVCOG from 2013 to 2018 during dry weather. RVCOG's average conductivity during dry weather sampling is 426 with a standard deviation of 341 us/cm.

DEQ had suggested a pollutant parameter action level of >325uS/cm for the Willamette Valley, and the Rogue Basin TMDL coordinator thought this was appropriate. However, based on data collected from stormwater outfalls in the Bear Creek watershed, this value seems too conservative. I am proposing a pollutant parameter action level of 450 uS/cm for dry weather sampling in the Bear Creek Valley.

Appendix B

Construction Site Runoff

CS 5. *SOP 9.06*

Standard Operating Procedures

Title:	**9.06 Erosion and Sediment Control Inspection**
Department:	**Stormwater**
Approved by:	**Carl Tappert, Manager**
Responsible Person:	**Stormwater Program Manager**
Participants:	**RVSS Inspectors, Stormwater Program Manager**

General Description: This procedure covers the inspection of NPDES 1200-C and 1200-CN Permitted projects, as well as projects covered by RVSS' 1200-CA permit.

1. Erosion and Sediment Control (ESC) plans are developed or approved by the Stormwater Manager.
2. RVSS' Inspector will conduct inspections and complete RVSS' Oversight Inspection Form using the ARCGIS Collector App. at the following times:
    a. Prior to the start of ANY construction[1], other than the installation of ESC Best Management Practices (BMPs), RVSS Inspector will meet with the designated Erosion and Sediment Control Inspector on-site to inspect installation of the BMPs.
    b. If possible, within 1 business day before a forecasted rain event of 0.5 inch or more. If it is not possible to conduct the inspection prior to 0.5 inch rain event, the inspection must be completed within 1 business day after a rain event of 0.5 inch.
    c. Within 1 business day after receiving a complaint about a construction site.
    d. During routine sewer inspections the RVSS inspector will take note of erosion and sediment control conditions. This is only time when an Oversight Inspection Form is not required to be completed.

3. The following areas will be inspected each time a form is completed:
    a. All areas of the site disturbed by construction activity to ensure that BMPs are in proper working order.
    b. Discharge point(s) identified in the ESCP for evidence of or the potential for the discharge of pollutants (including sediment and turbidity),
    c. Locations where vehicles enter or exit the site for evidence of off-site sediment tracking.
    d. Areas used for storage of materials that are exposed to precipitation for evidence of spillage or other potential to contaminate stormwater runoff.

4. Enforcement actions, including Brown Tags, Stop Work Orders and Monetary Penalties, should be issued in accordance with the SW Quality Enforcement SOP.

[1] Construction is defined in the 1200-C/CN permit as clearing, grading, excavation, materials or equipment staging and stockpiling.

Appendix C

Municipal Pollution Prevention and Good Housekeeping

MPP1. *SOP 14.10 Manufactured SW Quality Feature Inspection and Maintenance*

MPP3.:

SOP and BMP Manual for Pollution Prevention and Good Housekeeping for RVSS

SOP and BMP Manual for Pollution Prevention and Good Housekeeping for Phoenix

SOP and BMP Manual for Pollution Prevention and Good Housekeeping for Talent

MPP5. *Talent Integrated Pest Management Plan*

Standard Operating Procedures

Title:	**14.10 Manufactured SW Quality Feature Inspection & Maintenance**
Department:	**Stormwater**
Approved by:	**Carl Tappert, Manager** 1/23/14
Responsible Person:	**Wade Denny, District Engineer**
Participants:	**Engineering, O&M**

General: This procedure describes the actions needed for inspection and maintenance of all manufactured stormwater features.

Routine Procedure:

1. In August of each year the SW Coordinator will provide the inspectors with a list of the manufactured SW quality features maintained by RVSS in their areas.
2. By the end of August, inspectors will visit each feature, measure the sludge depth using a sludge judge, and complete the top portion of the SW Vault Maintenance Log. They will then provide to the Flusher Crew Lead the logs of all vaults requiring maintenance.
3. The Flusher Crew Lead will schedule maintenance of the vaults for the month of September. All maintenance is to be completed by September 30th, so that the vaults are ready for the rainy season.
4. Flusher Crew will complete the bottom portion of the SW Vault Maintenance Log and return the form to the SW Coordinator.
5. The SW Coordinator will enter the data from the completed Maintenance Logs into the SW Quality database.

Heavy Rain Procedures:

1. Following periods of heavy rain the SW Coordinator may direct the inspectors to inspect particular SW Quality features and complete a Maintenance Log.
2. If maintenance is required, the log should be provided to the Flusher Crew Lead and the maintenance should be completed as soon as possible.
3. Flusher Crew will complete the bottom portion of the SW Vault Maintenance Log and return the form to the SW Coordinator.
4. The SW Coordinator will enter the data from the completed Maintenance Logs into the SW Quality database.

Rogue Valley Sewer Services
Stormwater Feature Maintenance Log

Project Name		**RVS Permit Number**	
Inspection Date		**1200C Permit Number**	
Assigned By		**Map Number**	
Storm Water Quality Feature Description			
Location			
Annual Cleaning	☐ Annual cleanings are to be completed in September.		
Priority I:	☐ Clean within 24 hours		
Priority II	☐ Clean within 3 Days		
Priority III	☐ Clean within 7 Days		
Clean Trash Only	☐		
Clean Sediment Only	☐	**Sediment Depth**	

Employee Responding		**Date**	
Clean & Report Amount of Trash Removed	☐		
Clean & Report Amount of Sediment Removed	☐		
Evidence of Oils or Chemicals	☐		
Comments			
Signature			

Standard Operating Procedures and Best Management Practices for Pollution Prevention and Good Housekeeping

ROGUE VALLEY
SEWER SERVICES
CLEAN WATER - HEALTHY COMMUNITIES

Finalized July 2021

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INTRODUCTION:

Rogue Valley Sewer Services (RVSS) operates under a Municipal Separate Storm Sewer System (MS4) Phase II permit which requires development of a pollution prevention or "good housekeeping" program. This document describes the Standard Operating Procedures (SOPs) that RVSS and its contractors will use to implement Best Management Practices (BMPs) for pollution prevention and good housekeeping to keep pollution out of the stormwater system and our waterways. These BMPs do not address other environmental issues or regulations.

Stormwater runoff in the Rogue Valley flows into the stormwater system and then directly into creeks and rivers untreated. Stormwater management facilities do exist on some properties to capture and treat runoff from that property, however most properties and roads do not have stormwater management facilities. As stormwater flows across impervious surfaces (for example roads, parking lots, driveways and roofs) it picks up and carries anything in its path, such as oil, paint, sediment, trash, chemicals, delivering these substances to the stormwater system and eventually creeks. Pollution Prevention and Good Housekeeping practices are used to keep pollutants off impervious surfaces and prevent their transport to the stormwater system and creeks.

CONVEYANCE SYSTEM MANAGEMENT AND MAINTENANCE

Cleaning Pipes, Catch Basins, and Inlets

The Phase II permit requires at least 50 percent of the jurisdiction's owned or operated catch basins and inlets within the MS4 be inspected at least once every five years. After inspecting, any maintenance or cleaning is to take place to ensure all catch basins and inlets continue to function as designed. RVSS is responsible for maintenance of the stormwater conveyance system in White City Industrial, within which all catch basins are inspected annually.

Perform conveyance system maintenance in a manner that prevents contamination of stormwater systems with pollutants and isolates stormwater system pollutants from downstream waterways. Maintenance is done to provide for adequate flow through facilities, prevent flooding and to repair damaged conveyances. As with sanitary sewer systems, stormwater conveyance systems should be maintained on a regular schedule.

BMPs:

1. RVSS' Operation and Maintenance department maintains a list of hotspots within the White city Industrial stormwater system. These hotspots, as well as all culverts in White City Industrial, will be inspected annually.
    a. If the sump is 50% full or more, flushing will be scheduled.
2. White City Industrial is divided into five stormwater basins. One basin will be flushed and TV'd each year, so that in five years, all basins will be flushed and TV'd.
3. Documentation: Completion of flushing and TV work are to be documented in the respective Digital Applications so that footages and numbers can be used for annual reporting.
4. All RVSS maintained manufactured stormwater management facilities are inspected by RVSS' inspectors annually in June, per SOP 14.10. If cleaning is needed to prevent back-up during leaf-fall, put in a request for cleaning. If cleaning will only be needed after leaf-fall, schedule in a request for cleaning post-leaf fall.
5. Schedule stormwater system maintenance during the summer when flow is low or non-existent.
6. A shovel, backhoe, vacuum truck, or similar equipment may be used to clean out accumulated debris and sediment from catch basins.
7. No water, sediment or debris shall be allowed to flow downstream, particularly at outfalls.
    a. When conveyance systems are flushed, a vacuum truck is used to collect debris and sediment (and any water used in the jetting process).
8. When working near outfalls, if the vacuum will not be sufficient to keep material from moving downstream, block the end of the outfall.
9. Material removed from catch basins is taken to the RVSS lagoon for drying and then disposed of at the landfill.
10. Report the location of catch basins that show signs of illicit dumping (i.e. used motor oil, paint, etc.) to the SW Manager.
11. If repairs are necessary during wet weather, use pre-cast structures if possible.
12. Isolate activities near water bodies to avoid contact between fresh concrete and water.

Culvert Cleaning and Repair

Replacement and repair of drainage structures to restore function or to prevent failure of drainage structure. This activity may include the use of temporary water management. Repairs and replacements may require excavating, diverting or impounding water, and backfilling. NOTE: Culvert replacement or extension will frequently require permits outside the scope of this guide.

BMPs:

1. Perform work when water flow in the ditch is low, except in cases of emergency where water is backed up onto the roadway or adjacent property. Divert flow to minimize turbidity, when and where possible.
2. Prior to ground disturbance, install erosion control and sediment prevention measures to prevent the downstream movement of sediment dislodged during culvert work.
3. Removed material shall either be hauled to the RVSS lagoons for drying and disposal at the landfill, or placed above the Ordinary High Water Line (OHWL) where there is no opportunity for material to reach waters of the State. If placing above the OHWL, either:
    a. Dry material and then haul away to the landfill, or
    b. Stabilize material in place within 14 days. Stabilization may include spreading and top seeding; covering with matting or straw; or other appropriate erosion prevention measures.

Ditch Shaping, Grading, Cleaning

Machine cleaning, grading, and reshaping of ditches to maintain or improve drainage. Vegetation located in the ditch may be removed during cleaning. Ditch maintenance may require permitting through the Army Corps of Engineers or Department of State Lands, Figure 7.1 below is used by ODOT to determine when permitting may be needed.

NOTE: In this document, the term “ditch” or “drainage ditch”, for the purpose of municipal operations, is a facility, typically parallel to a road or parking lot, which exclusively carries stormwater runoff draining from the road or other constructed facilities. In our region, there are also structures called “ditches” that are excavated channels (lined and unlined) that are used to transport irrigation water (though stormwater can also enter and be conveyed by these facilities). Also in our region, there are mapped streams that flow in channelized streambeds, sometimes adjacent and parallel to roads, which can look just like a ditch. These streams (either with or without fish) may look like ditches because the channel has been modified or impacted by development. Ditches used to convey stormwater, irrigation, and channelized streams are all regulated differently so it is important to identify them correctly. It can be difficult to distinguish a ditch, which exclusively carries stormwater or irrigation runoff from a channelized creek, so refer to the Stormwater Manager if unclear.

7.1. When Is A Waterway (Corps/DSL) Permit Needed for Ditch Maintenance?

Answer all questions from both columns

WATERWAY ISSUES			WETLAND ISSUES
Is there running or standing water in drainage facility other than during or after rainfall events?	Yes ☐ No ☐	☐ Yes ☐ No	Is there wetland vegetation (willows, rushes, cattails) in ditch?
Does the drainage have an open water connection to a lake, pond, creek, river, or wetland?* * If yes, contact *REC* to make appropriate coordination with local ODFW/NMFS fisheries biologist regarding potential impacts to fish.	Yes ☐ No ☐	☐ Yes ☐ No	Is there standing water or wetland vegetation adjacent to ODOT ROW? (Call Region Environmental Coordinator for assistance)
Is the waterway subject to tidal influence?	Yes ☐ No ☐	☐ Yes ☐ No	Would the activity add to or change the existing facility? (Add rip-rap, extend culverts, ditch widening or deepening or new work)
A 'Yes' to any questions in this column	If ALL responses are 'No'		A 'Yes' to any question in this column
PERMIT AND BIOLOGICAL ASSESSMENT MAY BE NEEDED Contact Region Environmental Coordinators	NO WATERWAY PERMITS NEEDED If ODOT Best Management Practices are followed		PERMIT MAY BE NEEDED Contact Region Environmental Coordinators

ODOT Environmental Permit Coordinators: Check regional listings for name and phone number.

BMPs:

1. Perform ditch work when flows are low or non-existent, but soil is moist to prevent dust. Maintenance work may be performed during wet weather in cases of emergency where water is backed up onto the roadway or adjacent property.
2. If flow is present, install check dams at the downstream end of the work zone following ODOT RD1006 Type 2 or 6, prior to beginning ditch work.
3. When practical, protect/maintain existing vegetation.
4. Machine brush ditches when removal of soil is unnecessary and control of vegetation growth is adequate to ensure drainage.
5. Reshape ditches to have flatter side-slopes where space exists and where vegetation can quickly re-establish.
6. Evaluate and modify existing ditch slopes, where feasible and appropriate, to trap sediment and support development of vegetation.
7. Removed material shall either be hauled to the RVSS lagoons for drying and disposal at the landfill, or placed above the Ordinary High Water Line (OHWL) where there is no opportunity for material to reach waters of the State. If placing above the OHWL, either:
    a. Dry material and then haul away to the landfill, or
    b. Stabilize material in place within 14 days. Stabilization may include spreading and top seeding; covering with matting or straw; or other appropriate erosion prevention measures.
8. Re-seed drainage ditches and steep slopes above the Ordinary High Water Line, or install non-vegetative permanent erosion prevention measures.
9. Install and maintain temporary sediment control until vegetation is re-established.
10. After soil is stabilized and sediment has settled out of water, scoop sediment out from behind check dams, then remove sediment controls.

Emergency Maintenance

To restore and manage the sanitary and storm sewers in the event of emergencies.

BMPs:

1. Identify environmental concerns, notifying any regulatory agencies, coordinating technical needs and staff, and obtaining verbal approval or after-the-fact permits as required by the situation.
2. Avoid and/or minimize additional impacts to wetlands or waterbodies. Coordinate with the relevant agencies on required mitigation.
3. Provide, whenever possible, adequate sediment control or bank stabilization necessary to keep material from entering watercourses.
4. Maintenance and repairs should be carried out in such a manner that additional impacts to wetlands or streams are avoided.
5. Removed material is taken to the RVSS lagoon for drying and then disposed of at the landfill.

ROAD REPAIR

Pavement Repair and Resurfacing

Includes a variety of practices to seal the roadway surface, restore surface life, flexibility, skid resistance and restore roadway markings. These may include major and minor patching of intermittent potholes, small depressions, edge breaks, and any surface irregularities with asphalt concrete material. Preparation work may include grinding of existing surfaces in some areas. Methods include:

- *Slurry seal:*
  The process of slurry sealing involves mixing and placing a liquid emulsified asphalt and sand mixture over existing asphalt to seal and maintain the road surface. This activity also includes crack sealing prior to slurry seal.
- *Chip Seal:*
  Chip sealing generally involves applying a single layer each of liquid asphaltic material and aggregate to a paved roadway. Excess gravel is swept onto the shoulders after sealing.
- *Pavement overlays:*
  The process of pavement overlays involves placement and compaction of hot mix asphalt concrete (a uniform mixture of hot asphalt oil and fine aggregate that hardens by cooling) over existing asphalt surfaces. Preparation work may include grinding of existing surfaces in some areas.

<u>Best Management Practices (BMPs) for all pavement repair and resurfacing activities:</u>

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. After the activity is complete:
   a. Sweep up and remove excess material from the roadway surface
   b. Remove material accumulated in front of inlets
   c. Deposit excess material at approved disposal sites, such as the RVSS lagoons or landfill
   d. Remove inlet protections and properly dispose or store for reuse.

<u>BMPs for Saw cutting:</u>

1. When saw cutting, storm drains must be covered with an impermeable barrier, not a filter BMP.
2. Install impermeable booms or barriers at the downstream end of the work to trap saw cut slurry.
3. Use a vacuum either while cutting or immediately following work to suck up saw-cut slurry.

<u>BMPs for pavement repair, resurfacing and overlays:</u>

1. Avoid paving or asphalt applications during wet weather. Cold mix may be applied in wet weather.
2. When working near water bodies, install perimeter controls to reduce runoff to water bodies. Refer to the ODOT Erosion Control Manual for guidance on perimeter control BMP installation.

3. Crack sealing operations that require water for cooling should not use the flusher, use hand spray containers, or backpack water tanks to avoid runoff.
4. Collect and remove broken asphalt from the site and dispose of properly. Recycle old asphalt products.
5. Load asphalt emulsions at least 150 feet away from an Ordinary High Water Line.
6. Do not use diesel fuel as a releasing agent. Use environmentally sensitive releasing agents such as plant based release agents.
7. If using concrete in a roadway connected to a waterbody, use foam or a quickset material designed for use in water to plug the void prior to using concrete. The plug is needed to prevent concrete from entering the waterbody.
8. Capture and recycle or dispose of release agents and materials as directed by a Safety Data Sheet or as directed by the manufacturer.

Pavement Striping and Marking:

Includes centerline, shoulder line, intersection, and miscellaneous pavement painting activities utilizing paint, beads, etc. The process includes use of a grinder to remove old markings, graffiti, center and shoulder lines, and disposal of waste paint.

BMPs:

1. Use only federally approved, low volatile organic compound (VOC) paint.
2. Use shovels, brooms, buckets and vacuums to collect all grindings and other loose materials and dispose of properly. Note: Some thermoplastic grindings are to be treated as hazardous material and disposed of at an appropriate facility.
3. Clean up spills on site with absorbents, shovels, and buckets, dispose of properly.

Vacuum Sweeping:

Performed on roadways and parking areas to remove dirt, leaves, debris, and other loose material from construction activities, to keep it out of the stormwater system and waterways. Collected materials must be disposed of at an approved waste facility.

BMPs:

1. Use water, as needed, to reduce dust during sweeping.
2. If collected material will be stockpiled temporarily, follow stockpiling BMPs.
3. Deposit excess material at approved sites.

Gravel Road Work

Gravel road maintenance includes restoring gravel roadways slope, drainage, and grade by blading, reshaping, and smoothing existing surface materials using a grader to provide a suitable driving surface.

BMPs:

1. Maintain existing roadside vegetation for natural filtration of contaminants and capture of sediments.
2. If not possible to maintain vegetated buffer, install perimeter controls to keep rock, excess sediment, and foreign debris out of ditches, and streams.
3. When re-gravelling, install temporary check dams in the roadside ditch down gradient of the work. Remove any accumulated sediment from the upstream side of the temporary check dam and dispose of at an approved location. When work is completed, remove the temporary check dam.
4. Contain spills with a dike composed of natural materials until berms or absorbent materials can be set up.

Shoulder Blading and Rebuilding

Activity includes restoring and reshaping shoulder sections or gravel surfaces by hand or mechanical means to ensure adequate width, smoothness, and drainage. New material may be added under this activity. This work is done to correct rutting and buildup of materials; correct drop-offs; restore proper cross section shape; repair erosion; to maintain safety; and to maintain proper drainage to provide a safe surface for vehicle recovery; to provide an adequate clear zone, and to drain water away from the road.

BMPs:

1. Protect and maintain existing vegetation, when practicable.
2. Either install perimeter sediment controls, or maintain a clear buffer space from the edge of the road surface to the ditch to prevent material from entering waterways.
3. Install check dams in roadside ditches when there is no buffer space and it is not possible to install perimeter controls.
4. Evaluate the width of the blading activity and (if the site warrants) modify the width to minimize disturbance of vegetation.
5. Blade in dry weather while moisture is still present in soil and aggregate (to minimize dust) where possible.
6. Permanently stabilize disturbed soils using BMPs (seeding, plants, etc.) as conditions warrant.
7. Care should be taken not to over-steepen ditch slopes/channels or decrease ditch/channel capacity. These actions could result in slope failure and increase likelihood of erosion.

Dust Control (for roads and construction sites)

The application of dust palliatives to control dust generated during routine activities, including road or construction work and road maintenance. Dust palliatives create a hard, compact surface that resists potholing, rutting and loss of aggregate. In addition, control of road surface soils reduces the short-term, localized air quality hazards associated with unpaved roads. Dust palliatives may include water, calcium magnesium acetate, magnesium chloride, or lignin sulfonates, applied in a liquid form.

BMPs:

1. Construct gravel berms at the low shoulders of the roadway during preparation for application of dust palliatives to inhibit liquid palliatives from entering waters of the state, where appropriate.
2. Do not apply dust palliatives during rain.
3. Use water (whenever feasible) as a dust palliative.
4. Apply materials in a manner that is not detrimental to either water or vegetation. Apply materials in accordance with the manufacturers' recommendations.
5. Provide adequate spill containment materials onsite when palliatives are applied.
6. The rate of application should be low enough to prevent runoff of dust suppressant product into roadside ditches.
7. Dispose of excess materials per manufacturers' recommendations.

GENERAL MAINTENANCE

Building, Parking Lot, and Sidewalk Maintenance

The maintenance of buildings, parking lots, and sidewalks can include washing, sweeping, painting, and other activities. Street sweeping can prevent pollutants such as sediment particles, organics, oil, grease, trash, road salt, and trace metals from entering and plugging the stormwater system. Hot or polluted wash water may not be discharged to the stormwater system.

BMPs:

1. Prior to washing parking lots, sidewalks or driveways, use dry cleanup methods first (sweep, blow, vacuum).
2. Protect storm drains with filtering BMPs such as witch's hats or impervious BMPs such as drain covers/mats prior to any maintenance activity. **Wood chip bio-bags are not appropriate protection for washing and painting.**
3. Wastewater from washing is not permitted to flow into the stormwater system. When maintenance operations produce wash water, the wash water must be collected and disposed of in the sanitary sewer system or directed to a location where it can infiltrate into the soil.
4. Use biodegradable soap and cold water.
5. Follow EPA lead paint guidelines if pre-1978 era paint is involved.
6. Immediately clean-up spills of any pollutants, such as oil, diesel, and transmission fluids with absorbent materials.

7. Properly dispose of debris.

General Excavation

BMPs:

1. Develop a schedule for erosion prevention, sediment control and stormwater system BMP installation throughout the project.
2. Prior to ground disturbance, install all erosion prevention, sediment control and stormwater system BMPs.
3. If work is stopped for 14 days or more, stabilize soils through installation of temporary erosion prevention measures, such as straw or erosion control matting. See DEQ's Construction BMP manual for applicable measures and installation and inspection measures https://www.oregon.gov/deq/FilterPermitsDocs/BMPManual.pdf.
4. When work is complete, stabilize the site with permanent erosion prevention measures such as seeding, gravel, or bark mulch.

BMPs:

1. All portable toilets should be located on flat, secure locations where they are less likely to be knocked or blown over, and 30 feet from a stormwater inlet. Ensure routine maintenance and cleaning is conducted.

Material and Waste Storage, Transfer, and Disposal

Prevent or reduce the discharge of pollutants to stormwater from material storage leaks or spills by minimizing the storage of hazardous materials, by storing materials in a designated area, by installing secondary containment or control measures, by properly labeling all containers and piles and by conducting regular inspections. Activity covers:

- Material stockpiles
- Fertilizer, Pesticide, and Paint Storage
- Fuel, oil, pressurized gases, and solvent storage
- Building and Custodial supply storage
- Construction and repair supply storage

BMPs:

1. Sediment or debris removed from storm sewer inlets, detention ponds, or vehicle washing areas will be taken to the lagoons until dry and then transferred to the dump.
2. Designate and sign areas for material delivery and storage.
3. Keep an accurate, up-to-date inventory of materials delivered and stored on-site.
4. Label all containers and keep closed when not in use.

5. Try to keep products in their original containers, and/or keep them well labeled, especially if hazard warnings are appropriate. Never store hazardous or flammable materials in glass jars or breakable containers.
6. Keep areas clean, neat and well labeled. Use dry cleanup methods in the storage area. Periodically inspect material storage areas to ensure that all materials are properly stored when not in use. Properly dispose of unused materials.
7. Storage of reactive, ignitable, or flammable liquids must comply with fire codes. Have product identification placards posted and Safety Data Sheets (SDS's) available for products.
8. Avoid storing near drainage paths or waterways.
9. When feasible, keep stored materials covered to prevent precipitation washing onto them. If materials must be stored uncovered, they must be in a sealed container with **tight**-fitting lids and secondary containment.
10. Do not store chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and preferably in secondary containments, such as prefabricated containments for barrels and drums.
11. Store unfinished metal parts and materials under cover.
12. Large, non-metal and non-rubber materials such as piping can be stored outside without a protective covering.

Material Stockpiles

1. When siting a loose material stockpile: consider overall site drainage, locate piles away from storm drains and waterbodies.
2. Stockpiles shall not be located on public streets.
3. Install protection around any downstream stormwater inlets.
4. Consolidate loose material (gravel, mulch, etc.) and install a physical barrier such as a silt fence or berm around the perimeter of the pile.
5. If the stockpile will not be moved for 14 days or more, cover the pile with an erosion prevention measure, see DEQ's Construction BMP manual for applicable measures and installation and inspection measures: https://www.oregon.gov/deq/FilterPermitsDocs/BMPManual.pdf.

Spill Control

1. A supply of spill response materials is to be stored in a well-labeled location in the O and M shop.
2. Spill kits are to be kept in every RVSS vehicle.
3. Kits shall be checked on an annual basis to ensure they are stocked.
4. All field employees are to be trained on how to utilize spill kits.
5. Response to spills will follow RVSS SOP 14.12.

EQUIPMENT AND VEHICLE MAINTENANCE

Regular maintenance activities for equipment and vehicles including repairs and washing.

Equipment and Vehicle Washing

BMPs:

1. RVSS vehicles will only be washed at the following locations:
    - Wash bay in back of the O and M building where wastewater drains to the sanitary sewer
    - Wash area where wastewater drains to a pervious surface (turf, planted area, soil, etc.)
    - Commercial car wash
2. Use environmentally sensitive cleaning agents when cleaning equipment and vehicles.
3. Cleaning is limited to removal of snow, ice, mud, and dirt from the surface of the vehicles only.
4. Sediment removed from vehicle washing areas (sediment traps, etc.) may need to be characterized prior to disposal to ensure there is no contamination (petroleum or metals) that requires specialized handling and disposal. Any waste characterization should be documented.

Vehicle Storage

BMPs:

1. When possible, store vehicles and equipment and perform maintenance activities inside a building.
2. Equipment and vehicles at construction sites shall be parked more than 150 away from Ordinary High Water Line at the end of a workday, or in an approved location.
3. Monitor vehicles and equipment closely for leaks and use drip pans as needed until repairs can be performed.
4. When drip pans are used, check frequently to avoid overtopping and properly dispose of fluids.
5. Drain fluids from leaking or wrecked vehicles and from motor parts as soon as possible.
6. Recycle or dispose of all wastes properly and promptly.

Vehicle Maintenance

BMPs:

1. Vehicles requiring a Commercial Driver's license for operation are to be inspected every time they are driven to identify leaks, drips and potential maintenance needs.
2. Perform routine preventive maintenance to ensure heavy equipment and vehicles are operating optimally.
3. Vehicle maintenance and refueling shall occur at least 150 feet away from an Ordinary High Water Line, or in an approved containment area.
4. Recycle or dispose of all wastes properly and promptly.
5. Do not dump any liquids or other materials outside.

LANDSCAPE & VEGETATION MANAGEMENT AND MAINTENANCE

Organic material, soil, and sediment as well as chemicals can act as a pollutant in waterways so BMPs relate to keeping this material and other landscape materials from entering waterbodies.

General Landscaping

BMPs

1. Mulch or vegetate bare areas as soon as possible to minimize erosion.
2. Leave clippings on grassy areas or dispose of by composting.
3. Brush off mowers (reels and decks) and tractors over grassy areas or in contained washout areas. Do not brush or hose off mowers over paved areas that drain to the stormwater system.
4. Remove (sweep or shovel) materials such as soil, mulch and grass clippings from parking lots, streets, curbs, gutters, and sidewalks. Collect and dispose of trash.
5. Repair broken sprinkler heads as soon as possible and only irrigate at a rate that can infiltrate into the soil to limit run-off.

General Vegetation Management

If the jurisdiction has an Integrated Pest Management (IPM) or other plan, refer to that, otherwise use the BMPs outlined here.

Methods for vegetation removal:

- Mechanical: using equipment such as mowers, chain saws, brushers, etc.
- Biological: using a natural predator to control the noxious weed or unwanted vegetation.
- Cultural: incorporating native or more appropriate plant material to out-compete the unwanted vegetation.
- Chemical: applying herbicides in accordance with the label.
- Alternative: steam weeding

BMPs

1. RVSS typically uses mechanical means to remove unwanted vegetation.
2. Use chemical methods only when mechanical, biological, cultural and alternative methods are not effective or feasible.

Use and Storage of Pesticides and Fertilizers

Fertilizers and pesticides over-applied on impervious surfaces or vegetation, or when a rain event is likely to occur in the following 24 hours, can be transported in stormwater runoff, so it is important to properly store, handle, apply, and clean up all fertilizers, and pesticides. When pesticide application is needed, RVSS will contract a licensed pesticide applicator who will follow the following protocols:

BMPs:

1. It is recommended that the jurisdiction identify buffer limits for areas around water resources, or required only aquatic approved pesticides to be used adjacent to water bodies.
    a. Site-specific minimization/avoidance measures may be developed.
2. Consider establishing spray setbacks from impervious surfaces.
3. Over-spray guards may be used to avoid spraying water bodies or impervious surfaces.
4. Prior to application, check the 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.
5. Follow label directions when applying, storing, handling, mixing, recycling, and disposing of chemicals and empty containers. Never perform these activities near stormwater inlets.
6. Have spill cleanup materials available in case of a spill.
7. Clean up chemicals promptly using dry methods, if possible.
8. Apply pesticides and fertilizers in accordance with the manufacturer's recommended application rates.
9. Application equipment should be checked on at least a monthly basis during the period of active use to ensure the equipment is applying the material at the prescribed rate.
10. In all cases, application should be limited to the minimum amount of product required to achieve the required results (i.e., avoid over-application of product).
11. Chemicals should be stored inside when not in use.
12. Recycle or dispose of all spent or excess chemicals properly and promptly.

DEFINITIONS:

Ordinary High Water Line (**OHWL)**: A line on the bank or shore to which high water ordinarily rises each year. Generally, the line can be determined by examining a bank or shore and visually estimating the point below which upland vegetation does not occur.

Integrated Pest Management Plan (IPM): IPM is a strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment. (edited from *University of California Agriculture and Natural Resources IPM Program*)

ATTRIBUTIONS:

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Marion County Department of Public Works, 2014, *Best Management Practices for Clean Water 2014 Crew Manual*, *Salem*, Oregon, Marion County

Road Services Division/Water Quality Program Department of Community Services Multnomah County, *Multnomah County Road Services Road Maintenance and Operations Manual 2015,* 2015, Portland, Oregon, Multnomah County

Tierra Group International LTD, 2018, *Standard Operating Procedures for Municipal Operations Douglas County*, Castle Rock, Colorado, Douglas County Public Works Engineering

APPENDIX:

FORMS to record data for reporting purposes:

STORMWATER MAINTENANCE REPORT FORM
SUGGESTED FIELDS

DATE REPAIRS/MAINTENANCE ACTIVITY COMPLETED: TIME Start Finish

EMPLOYEES COMPLETING WORK:

ADDRESS/LOCATION OF REPAIR:

PROBLEM DESCRIPTION:

DESCRIPTION OF REPAIR/MAINTENANCE ACTIVITY:

LOCATES CALLED IN? YES NO

DESCRIBE MATERIAL REMOVED: SEDIMENT TRASH OTHER (DESCRIBE)

AMOUNT OF MATERIAL REMOVED: CUBIC FEET

AMOUNT/SIZE/TYPE OF PIPE REPLACED

EQUIPMENT USED

NOTES

Standard Operating Procedures
& Best Management Practices
for Pollution Prevention and Good Housekeeping

City of Phoenix, Oregon

August 27, 2021

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INTRODUCTION:

The City of Phoenix operates under a Municipal Separate Storm Sewer System (MS4) Phase II permit, held by Rogue Valley Sewer Services, that requires development of a pollution prevention or "good housekeeping" program. The program describes how the City is required to operate and maintain facilities to reduce the discharge of pollutants to waters of the state. This document is a required part of the permit and outlines Standard Operating Procedures (SOPs) that the City of Phoenix and its contractors will use to implement Best Management Practices (BMPs) for pollution prevention and good housekeeping to keep pollution out of the stormwater system and our waterways. These BMPs do not address other environmental issues or regulations.

Stormwater runoff in the Rogue Valley flows into the stormwater system and then directly into creeks and rivers untreated. Stormwater management facilities do exist on some properties to capture and treat runoff from that property; however most properties and roads do not have stormwater management facilities. As stormwater flows across impervious surfaces (for example roads, parking lots, driveways and roofs) it picks up and carries anything in its path, such as oil, paint, sediment, trash, chemicals, delivering these substances to the stormwater system and eventually creeks. Pollution Prevention and Good Housekeeping practices are used to keep pollutants off impervious surfaces and prevent their transport to the stormwater system and creeks.

The City of Phoenix commits to providing training and orientation to all new staff to implement these pollution prevention and good housekeeping practices. As the program changes, follow-up training will be provided.

The City of Phoenix will maintain records for the program activities to meet the permit requirements. These records will include a descriptive summary of activities in an Annual Report that is provided to the RVSS Stormwater Manager.

CONVEYANCE SYSTEM MANAGEMENT AND MAINTENANCE

Cleaning Pipes, Catch Basins, and Inlets

The Phase II permit requires at least 50 percent of the jurisdiction's owned or operated catch basins and inlets within the MS4 be inspected at least once every five years. After inspecting, any maintenance or cleaning is to take place to ensure all catch basins and inlets continue to function as designed. The City of Phoenix is responsible for the maintenance of the stormwater conveyance system within city limits and for ensuring that inspection and maintenance requirements are met.

Operators are to perform conveyance system maintenance in a manner that prevents contamination of stormwater systems with pollutants and isolates stormwater system pollutants from downstream waterways. Maintenance is done to ensure adequate flow through facilities, prevent flooding and to repair damaged conveyances. Stormwater conveyance systems are maintained on a regular schedule.

Best Management Practices (BMPs):

1. 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.
2. Schedule stormwater system maintenance during the summer when flow is low or non-existent.
3. A shovel, backhoe, vacuum truck, or similar equipment may be used to clean out accumulated debris and sediment from catch basins.
4. No water, sediment or debris shall be allowed to flow downstream, particularly at outfalls.
5. Material removed from catch basins is disposed of at the landfill.
6. Report the location of catch basins that show signs of illicit dumping (i.e. used motor oil, paint, etc.) to the RVSS SW Manager.
7. If repairs are necessary during wet weather, use pre-cast structures if possible.
8. Isolate activities near water bodies to avoid contact between fresh concrete and water.

Culvert Cleaning and Repair

Replacement and repair of drainage structures restores function and can prevent failure of the drainage structure. This activity may include the use of temporary water management. Repairs and replacements may require excavating, diverting or impounding water, and backfilling. NOTE: Culvert replacement or extension will frequently require permits outside the scope of this guide.

BMPs:

1. Perform work when water flow in the ditch is low, except in cases of emergency where water is backed up onto the roadway or adjacent property. Divert flow to minimize turbidity, when and where possible.
2. Prior to ground disturbance, install erosion control and sediment prevention measures to prevent the downstream movement of sediment dislodged during culvert work.
3. Removed material shall be hauled or placed above the Ordinary High Water Line (OHWL) where there is no opportunity for material to reach waters of the State. If placing above the OHWL, either:
    a. Dry material and then haul away to the landfill, **OR**

b. Stabilize material in place within 14 days. Stabilization may include spreading and top seeding; covering with matting or straw; or other appropriate erosion prevention measures.

Ditch Shaping, Grading, Cleaning

Machine cleaning, grading, and reshaping of ditches assists in maintaining or improving drainage. Vegetation located in the ditch may be removed during cleaning. Ditch maintenance may require permitting through the Army Corps of Engineers or Department of State Lands, Figure 7.1 below is used by ODOT to determine when permitting may be needed.

NOTE: In this document, the term “ditch” or “drainage ditch”, for the purpose of municipal operations, is a facility, typically parallel to a road or parking lot, which exclusively carries stormwater runoff draining from the road or other constructed facilities. In our region, there are also structures called “ditches” that are excavated channels (lined and unlined) that are used to transport irrigation water (though stormwater can also enter and be conveyed by these facilities). Also in our region, there are mapped streams that flow in channelized streambeds, sometimes adjacent and parallel to roads, which can look just like a ditch. These streams (either with or without fish) may look like ditches because the channel has been modified or impacted by development. Ditches used to convey stormwater, irrigation, and channelized streams are all regulated differently so it is important to identify them correctly. It can be difficult to distinguish a ditch, which exclusively carries stormwater or irrigation runoff from a channelized creek, so refer to the RVSS Stormwater Manager as needed.

7.1. When Is A Waterway (Corps/DSL) Permit Needed for Ditch Maintenance?

Answer all questions from both columns

WATERWAY ISSUES			WETLAND ISSUES
Is there running or standing water in drainage facility other than during or after rainfall events?	Yes ☐ No ☐	☐ Yes ☐ No	Is there wetland vegetation (willows, rushes, cattails) in ditch?
Does the drainage have an open water connection to a lake, pond, creek, river, or wetland?* * If yes, contact *REC* to make appropriate coordination with local ODFW/NMFS fisheries biologist regarding potential impacts to fish.	Yes ☐ No ☐	☐ Yes ☐ No	Is there standing water or wetland vegetation adjacent to ODOT ROW? (Call Region Environmental Coordinator for assistance)
Is the waterway subject to tidal influence?	Yes ☐ No ☐	☐ Yes ☐ No	Would the activity add to or change the existing facility? (Add rip-rap, extend culverts, ditch widening or deepening or new work)
A 'Yes' to any questions in this column	If ALL responses are 'No'		A 'Yes' to any question in this column
PERMIT AND BIOLOGICAL ASSESSMENT MAY BE NEEDED Contact Region Environmental Coordinators	NO WATERWAY PERMITS NEEDED If ODOT Best Management Practices are followed		PERMIT MAY BE NEEDED Contact Region Environmental Coordinators

ODOT Environmental Permit Coordinators: Check regional listings for name and phone number.

<u>BMPs:</u>

1. Perform ditch work when flows are low or non-existent, but soil is moist to prevent dust. Maintenance work may be performed during wet weather in cases of emergency where water is backed up onto the roadway or adjacent property.

2. If flow is present, install check dams at the downstream end of the work zone following ODOT RD1006 Type 2 or 6, prior to beginning ditch work.
3. When practical, protect/maintain existing vegetation.
4. Machine brush ditches when removal of soil is unnecessary and control of vegetation growth is adequate to ensure drainage.
5. Reshape ditches to have flatter side-slopes where space exists and where vegetation can quickly re-establish.
6. Evaluate and modify existing ditch slopes, where feasible and appropriate, to trap sediment and support development of vegetation.
7. Removed material shall be hauled or placed above the Ordinary High Water Line (OHWL) where there is no opportunity for material to reach waters of the State. If placing above the OHWL, either:
    a. Dry material and then haul away to the landfill, or
    b. Stabilize material in place within 14 days. Stabilization may include spreading and top seeding; covering with matting or straw; or other appropriate erosion prevention measures.
8. Re-seed drainage ditches and steep slopes above the Ordinary High Water Line, or install non-vegetative permanent erosion prevention measures.
9. Install and maintain temporary sediment control until vegetation is re-established.
10. After soil is stabilized and sediment has settled out of water, scoop sediment out from behind check dams, and then wait for water to clear, this may take a day.
11. Once water is clear, remove sediment controls.

Emergency Maintenance

These activities are needed to restore and manage the sanitary and storm sewers in the event of emergencies.

BMPs:

1. Identify environmental concerns, notifying any regulatory agencies, coordinating technical needs and staff, and obtaining verbal approval or after-the-fact permits as required by the situation.
2. Avoid and/or minimize additional impacts to wetlands or waterbodies. Coordinate with the relevant agencies on required mitigation.
3. Provide, whenever possible, adequate sediment control or bank stabilization necessary to keep material from entering watercourses.
4. Maintenance and repairs should be carried out in such a manner that additional impacts to wetlands or streams are avoided.
5. Removed material can be dried and then disposed of at the landfill.

ROAD REPAIR & MAINTENANCE

Pavement Repair and Resurfacing

Includes a variety of practices to seal the roadway surface, restore surface life, flexibility, skid resistance and restore roadway markings. These may include major and minor patching of intermittent potholes, small depressions, edge breaks, and any surface irregularities with asphalt concrete material. Preparation work may include grinding of existing surfaces in some areas. Methods include:

- *Slurry seal:*
  The process of slurry sealing involves mixing and placing a liquid emulsified asphalt and sand mixture over existing asphalt to seal and maintain the road surface. This activity also includes crack sealing prior to slurry seal.
- *Chip Seal:*
  Chip sealing generally involves applying a single layer each of liquid asphaltic material and aggregate to a paved roadway. Excess gravel is swept onto the shoulders after sealing.
- *Pavement overlays:*
  The process of pavement overlays involves placement and compaction of hot mix asphalt concrete (a uniform mixture of hot asphalt oil and fine aggregate that hardens by cooling) over existing asphalt surfaces. Preparation work may include grinding of existing surfaces in some areas.

BMPs for all pavement repair and resurfacing activities:

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. After the activity is complete:
   a. Sweep up and remove excess material from the roadway surface
   b. Remove material accumulated in front of inlets
   c. Deposit excess material at approved disposal sites, such as the landfill
   d. Remove inlet protections and properly dispose or store for reuse.

BMPs for saw cutting:

1. When saw cutting, storm drains must be covered with an impermeable barrier, not a filter BMP.
2. Install impermeable booms or barriers at the downstream end of the work to trap saw cut slurry.
3. Use a vacuum either while cutting or immediately following work to suck up saw-cut slurry.

BMPs for pavement repair, resurfacing and overlays:

1. Avoid paving or asphalt applications during wet weather. Cold mix may be applied in wet weather.
2. When working near water bodies, install perimeter controls to reduce runoff to water bodies. Refer to the ODOT Erosion Control Manual for guidance on perimeter control BMP installation.

3. Crack sealing operations that require water for cooling should use hand spray containers or backpack water tanks to avoid runoff.
4. Collect and remove broken asphalt from the site and dispose of properly. Recycle old asphalt products.
5. Load asphalt emulsions at least 150 feet away from an Ordinary High Water Line.
6. Do not use diesel fuel as a releasing agent. Use environmentally sensitive releasing agents such as plant based release agents.
7. If using concrete in a roadway connected to a waterbody, use foam or a quickset material designed for use in water to plug the void prior to using concrete. The plug is needed to prevent concrete from entering the waterbody.
8. Capture and recycle or dispose of release agents and materials as directed by a Safety Data Sheet or as directed by the manufacturer.

Pavement Striping and Marking:

Includes centerline, shoulder line, intersection, and miscellaneous pavement painting activities utilizing paint, beads, etc. The process includes use of a grinder to remove old markings, graffiti, center and shoulder lines, and disposal of waste paint.

BMPs:

1. Use only federally approved, low volatile organic compound (VOC) paint.
2. Use shovels, brooms, buckets and vacuums to collect all grindings and other loose materials and dispose of properly. Note: Some thermoplastic grindings are to be treated as hazardous material and disposed of at an appropriate facility.
3. Clean up spills on site with absorbents, shovels, and buckets, dispose of properly.

Vacuum Sweeping:

Performed on roadways and parking areas to remove dirt, leaves, debris, and other loose material from construction activities, to keep it out of the stormwater system and waterways. Collected materials must be disposed of at an approved waste facility.

BMPs:

1. Use water, as needed, to reduce dust during sweeping.
2. If collected material will be stockpiled temporarily, follow stockpiling BMPs.
3. Deposit excess material at approved sites.

Gravel Road Work

Gravel road maintenance includes restoring gravel roadways slope, drainage, and grade by blading, reshaping, and smoothing existing surface materials using a grader to provide a suitable driving surface.

BMPs:

1. Maintain existing roadside vegetation for natural filtration of contaminants and capture of sediments.
2. If not possible to maintain vegetated buffer, install perimeter controls to keep rock, excess sediment, and foreign debris out of ditches, and streams.
3. When re-gravelling, install temporary check dams in the roadside ditch down gradient of the work. Remove any accumulated sediment from the upstream side of the temporary check dam and dispose of at an approved location. When work is completed, remove the temporary check dam.
4. Contain spills with a dike composed of natural materials until berms or absorbent materials can be set up.

Shoulder Blading and Rebuilding

Activity includes restoring and reshaping shoulder sections or gravel surfaces by hand or mechanical means to ensure adequate width, smoothness, and drainage. New material may be added under this activity. This work is done to correct rutting and buildup of materials; correct drop-offs; restore proper cross section shape; repair erosion; to maintain safety; and to maintain proper drainage to provide a safe surface for vehicle recovery; to provide an adequate clear zone, and to drain water away from the road.

BMPs:

1. Protect and maintain existing vegetation, when practicable.
2. Either install perimeter sediment controls, or maintain a clear buffer space from the edge of the road surface to the ditch to prevent material from entering waterways.
3. Install check dams in roadside ditches when there is no buffer space and it is not possible to install perimeter controls.
4. Evaluate the width of the blading activity and (if the site warrants) modify the width to minimize disturbance of vegetation.
5. Blade in dry weather while moisture is still present in soil and aggregate (to minimize dust) where possible.
6. Permanently stabilize disturbed soils using BMPs (seeding, plants, etc.) as conditions warrant.
7. Care should be taken not to over-steepen ditch slopes/channels or decrease ditch/channel capacity. These actions could result in slope failure and increase likelihood of erosion.

Dust Control (for roads and construction sites)

The application of dust palliatives controls dust generated during routine activities, including road or construction work and road maintenance. Dust palliatives create a hard, compact surface that resists potholing, rutting and loss of aggregate. In addition, control of road surface soils reduces the short-term, localized air quality hazards associated with unpaved roads. Dust palliatives may include water, calcium magnesium acetate, magnesium chloride, or lignin sulfonates, applied in a liquid form.

BMPs:

1. Construct gravel berms at the low shoulders of the roadway during preparation for application of dust palliatives to inhibit liquid palliatives from entering waters of the state, where appropriate.
2. Do not apply dust palliatives during rain.
3. Use water (whenever feasible) as a dust palliative.
4. Apply materials in a manner that is not detrimental to either water or vegetation. Apply materials in accordance with the manufacturers' recommendations.
5. Provide adequate spill containment materials onsite when palliatives are applied.
6. The rate of application should be low enough to prevent runoff of dust suppressant product into roadside ditches.
7. Dispose of excess materials per manufacturers' recommendations.

GENERAL MAINTENANCE

Building, Parking Lot, and Sidewalk Maintenance

The maintenance of buildings, parking lots, and sidewalks can include washing, sweeping, painting, and other activities. Litter control is required in all city operations to reduce the discharge of pollutants and litter to the storm sewer system. Street sweeping can prevent pollutants such as sediment particles, organics, oil, grease, trash, road salt, and trace metals from entering and plugging the stormwater system. Hot or polluted wash water may not be discharged to the stormwater system.

BMPs:

1. Prior to washing parking lots, sidewalks or driveways, use dry cleanup methods first (sweep, blow, vacuum).
2. Protect storm drains with filtering BMPs such as witch's hats or impervious BMPs such as drain covers/mats prior to any maintenance activity. **Wood chip bio-bags are not appropriate protection for washing and painting.**
3. Wastewater from washing is not permitted to flow into the stormwater system. When maintenance operations produce wash water, the wash water must be collected and disposed of in the sanitary sewer system or directed to a location where it can infiltrate into the soil.
4. Use biodegradable soap and cold water.
5. Follow EPA lead paint guidelines if pre-1978 era paint is involved.
6. Immediately clean-up spills of any pollutants, such as oil, diesel, and transmission fluids with absorbent materials.
7. Properly dispose of debris.

Street Sweeping

The City of Phoenix is divided into three zones, East Side, West Side, and Old Town with each zone swept once every three weeks. See attached map. The City sweeps one zone every week usually on Fridays, it takes about seven hours to complete sweeping for one zone.

General Excavation

BMPs:

1. Develop a schedule for erosion prevention, sediment control and stormwater system BMP installation throughout the project.
2. Prior to ground disturbance, install all erosion prevention, sediment control and stormwater system BMPs.
3. If work is stopped for 14 days or more, stabilize soils through installation of temporary erosion prevention measures, such as straw or erosion control matting. See DEQ's Construction BMP manual for applicable measures and installation and inspection measures https://www.oregon.gov/deq/FilterPermitsDocs/BMPManual.pdf.
4. When work is complete, stabilize the site with permanent erosion prevention measures such as seeding, gravel, or bark mulch.

BMPs:

1. All portable toilets should be located on flat, secure locations where they are less likely to be knocked or blown over, and 30 feet from a stormwater inlet. Ensure routine maintenance and cleaning is conducted.

Material and Waste Storage, Transfer, and Disposal

Prevent or reduce the discharge of pollutants to stormwater from material storage leaks or spills by minimizing the storage of hazardous materials, by storing materials in a designated area, by installing secondary containment or control measures, by properly labeling all containers and piles and by conducting regular inspections. These types of activities include:

- Material stockpiles
- Fertilizer, Pesticide, and Paint Storage
- Fuel, oil, pressurized gases, and solvent storage
- Building and Custodial supply storage
- Construction and repair supply storage

BMPs:

1. Sediment or debris removed from storm sewer inlets, detention ponds, or vehicle-washing areas will be taken to the dump.
2. Designate and sign areas for material delivery and storage.
3. Keep an accurate, up-to-date inventory of materials delivered and stored on-site.
4. Label all containers and keep closed when not in use.
5. Try to keep products in their original containers, and/or keep them well labeled, especially if hazard warnings are appropriate. Never store hazardous or flammable materials in glass jars or breakable containers.
6. Keep areas clean, neat and well labeled. Use dry cleanup methods in the storage area. Periodically inspect material storage areas to ensure that all materials are properly stored when not in use. Properly dispose of unused materials.
7. Storage of reactive, ignitable, or flammable liquids must comply with fire codes. Have product identification placards posted and Safety Data Sheets (SDS's) available for products.
8. Avoid storing near drainage paths or waterways.
9. When feasible, keep stored materials covered to prevent precipitation washing onto them. If materials must be stored uncovered, they must be in a sealed container with **tight**-fitting lids and secondary containment.
10. Do not store chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and preferably in secondary containments, such as prefabricated containments for barrels and drums.
11. Store unfinished metal parts and materials under cover.
12. Large, non-metal and non-rubber materials such as piping can be stored outside without a protective covering.

Material Stockpiles

1. When siting a loose material stockpile: consider overall site drainage, locate piles away from storm drains and waterbodies.
2. Stockpiles shall not be located on public streets.
3. Install protection around any downstream stormwater inlets.
4. Consolidate loose material (gravel, mulch, etc.) and install a physical barrier such as a silt fence or berm around the perimeter of the pile.
5. If the stockpile will not be moved for 14 days or more cover the pile with an erosion prevention measure, see DEQ's Construction BMP manual for applicable measures and installation and inspection measures: https://www.oregon.gov/deq/FilterPermitsDocs/BMPManual.pdf.

Spill Control

1. A supply of spill response materials is to be stored in a well-labeled location in the public works shop. It is to be accessible to all staff.
2. Spill kits are to be kept in every City vehicle.
3. Kits shall be checked on an annual basis to ensure they are stocked.
4. All field employees are to be trained on how to respond to spills and utilize spill kits.

EQUIPMENT AND VEHICLE MAINTENANCE

Regular maintenance activities for equipment and vehicles includes repairs and washing.

Equipment and Vehicle Washing

BMPs:

1. City vehicles will only be washed at the following locations:
   - Wash area where wastewater drains to a pervious surface (turf, planted area, soil, etc.)
   - Commercial car wash
   - Washing on pavement is ONLY allowed where wastewater drains to the sanitary sewer
2. Use environmentally sensitive cleaning agents when cleaning equipment and vehicles.
3. Cleaning is limited to removal of snow, ice, mud, and dirt from the surface of the vehicles only.
4. Sediment removed from vehicle washing areas (sediment traps, etc.) may need to be characterized prior to disposal to ensure there is no contamination (petroleum or metals) that requires specialized handling and disposal. Any waste characterization should be documented.

Vehicle Storage

BMPs:

1. When possible, store vehicles and equipment and perform maintenance activities inside a building.
2. Equipment and vehicles at construction sites shall be parked more than 150 away from Ordinary High Water Line at the end of a workday, or in an approved location.
3. Monitor vehicles and equipment closely for leaks and use drip pans as needed until repairs can be performed.
4. When drip pans are used, check frequently to avoid overtopping and properly dispose of fluids.
5. Drain fluids from leaking or wrecked vehicles and from motor parts as soon as possible.
6. Recycle or dispose of all wastes properly and promptly.

Vehicle Maintenance

BMPs:

1. Vehicles requiring a Commercial Drivers license for operation are to be inspected every time they are driven to identify leaks, drips and potential maintenance needs.
2. Perform routine preventive maintenance to ensure heavy equipment and vehicles are operating optimally.
3. Vehicle maintenance and refueling shall occur at least 150 feet away from an Ordinary High Water Line, or in an approved containment area.
4. Recycle or dispose of all wastes properly and promptly.
5. Do not dump any liquids or other materials outside.

LANDSCAPE & VEGETATION MANAGEMENT AND MAINTENANCE

Organic material, soil, and sediment as well as chemicals can act as a pollutant in waterways so BMPs relate to keeping this material and other landscape materials from entering waterbodies.

General Landscaping

BMPs

1. Mulch or vegetate bare areas as soon as possible to minimize erosion.
2. Leave clippings on grassy areas or dispose of by composting.
3. Brush off mowers (reels and decks) and tractors over grassy areas or in contained washout areas. Do not brush or hose off mowers over paved areas that drain to the stormwater system.
4. Remove (sweep or shovel) materials such as soil, mulch and grass clippings from parking lots, streets, curbs, gutters, and sidewalks. Collect and dispose of trash.
5. Repair broken sprinkler heads as soon as possible and only irrigate at a rate that can infiltrate into the soil to limit run-off.

General Vegetation Management

Methods for vegetation removal:

- Mechanical: using equipment such as mowers, chain saws, brushers, etc.
- Biological: using a natural predator to control the noxious weed or unwanted vegetation.
- Cultural: incorporating native or more appropriate plant material to out-compete the unwanted vegetation.
- Chemical: applying herbicides in accordance with the label.
- Alternative: steam weeding

BMPs

1. When feasible, use mechanical and other non-chemical means to remove unwanted vegetation.
2. Use chemical methods only when mechanical, biological, cultural and alternative methods are not effective or feasible.

Use and Storage of Pesticides and Fertilizers

Fertilizers and pesticides over-applied on impervious surfaces or vegetation, or when a rain event is likely to occur in the following 24 hours, can be transported in stormwater runoff, so it is important to properly store, handle, apply, and clean up all fertilizers, and pesticides. When pesticide application is needed, a licensed pesticide applicator will follow the following protocols:

BMPs:

1. It is recommended that the jurisdiction identify buffer limits for areas around water resources, or required only aquatic approved pesticides to be used adjacent to water bodies.
    a. Site-specific minimization/avoidance measures may be developed.
2. Consider establishing spray setbacks from impervious surfaces.
3. Over-spray guards may be used to avoid spraying water bodies or impervious surfaces.
4. Prior to application, check the 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.
5. Follow label directions when applying, storing, handling, mixing, recycling, and disposing of chemicals and empty containers. Never perform these activities near stormwater inlets.
6. Have spill cleanup materials available in case of a spill.
7. Clean up chemicals promptly using dry methods, if possible.
8. Apply pesticides and fertilizers in accordance with the manufacturer's recommended application rates.
9. Application equipment should be checked on at least a monthly basis during the period of active use to ensure the equipment is applying the material at the prescribed rate.
10. In all cases, application should be limited to the minimum amount of product required to achieve the required results (i.e., avoid over-application of product).
11. Chemicals should be stored inside when not in use.
12. Recycle or dispose of all spent or excess chemicals properly and promptly.

DEFINITIONS:

OHWL: ordinary high water line (also called "mark") is a line on the bank or shore to which high water ordinarily rises each year. Generally, the line can be determined by examining a bank or shore and visually estimating the point below which upland vegetation does not occur.

ATTRIBUTIONS:

Environmental Services Division Water Resource Section, 2010, *Evaluation Report For Stormwater Management Plan Minimum Control Measure #6 BMP OM1 Pollution Control Manuals for City Operations*, Springfield, Oregon, City of Springfield

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Oregon Department of Transportation Maintenance and Operations Branch, Revised 2020, *Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices Revised 2020*, (Blue Book) Salem, Oregon, State of Oregon

Marion County Department of Public Works, 2014, *Best Management Practices for Clean Water 2014 Crew Manual*, *Salem*, Oregon, Marion County

Road Services Division/Water Quality Program Department of Community Services Multnomah County, *Multnomah County Road Services Road Maintenance and Operations Manual 2015,* 2015, Portland, Oregon, Multnomah County

Tierra Group International LTD, 2018, *Standard Operating Procedures for Municipal Operations Douglas County*, Castle Rock, Colorado, Douglas County Public Works Engineering

APPENDIX:

FORMS to record data for reporting purposes:

STORMWATER MAINTENANCE REPORT FORM
SUGGESTED FIELDS

DATE REPAIRS/MAINTENANCE ACTIVITY COMPLETED: TIME Start Finish

EMPLOYEES COMPLETING WORK:

ADDRESS/LOCATION OF REPAIR:

PROBLEM DESCRIPTION:

DESCRIPTION OF REPAIR/MAINTENANCE ACTIVITY:

LOCATES CALLED IN? YES NO

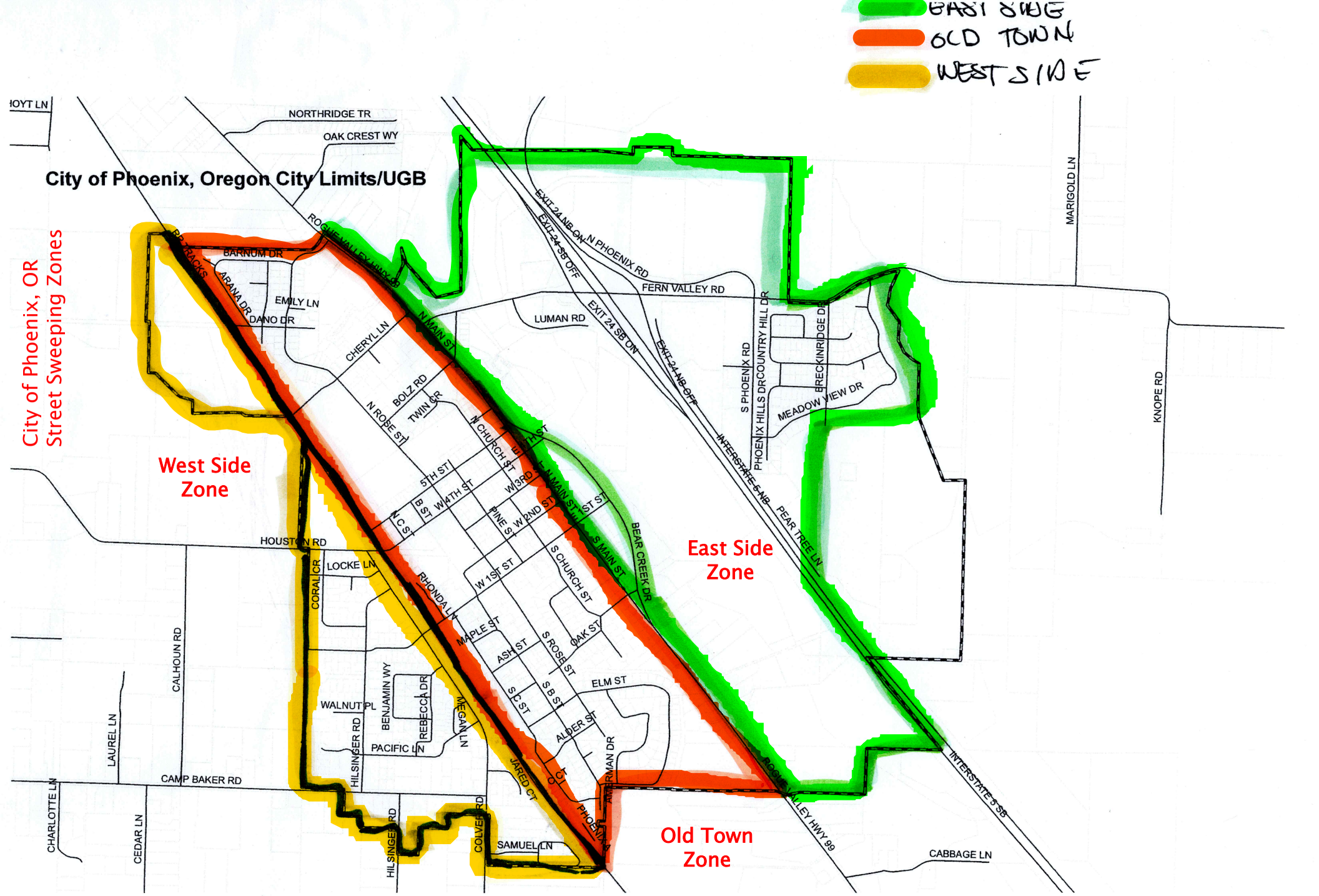
DESCRIBE MATERIAL REMOVED: SEDIMENT TRASH OTHER (DESCRIBE)

AMOUNT OF MATERIAL REMOVED: CUBIC FEET

AMOUNT/SIZE/TYPE OF PIPE REPLACED

EQUIPMENT USED

NOTES


EAST SIDE
OLD TOWN
WEST SIDE
City of Phoenix, Oregon City Limits/UGB
City of Phoenix, OR
Street Sweeping Zones
West Side Zone
East Side Zone
Old Town Zone
NORTHRIDGE TR
OAK CREST WY
MARIGOLD LN
ROGUE VALLEY HWY 99
EXIT 24 NB ON
EXIT 24 SB OFF
N PHOENIX RD
EXIT 24 SB ON
EXIT 24 NB OFF
FERN VALLEY RD
LUMAN RD
INTERSTATE 5 NB
PEAR TREE LN
S PHOENIX RD
COUNTRY HILLS DR
BRECKINRIDGE DR
MEADOW VIEW DR
KNOPE RD
BARNUM DR
ARANA DR
EMILY LN
DANO DR
CHERYL LN
N MAIN ST
BOLZ RD
TWIN CR
N ROSE ST
N CHURCH ST
5TH ST
W 4TH ST
W 3RD ST
W 2ND ST
PINE ST
B ST
C ST
S MAIN ST
BEAR CREEK DR
HOUSTON RD
LOCKE LN
CORAL CR
RHONDA LN
W 1ST ST
S CHURCH ST
MAPLE ST
ASH ST
S ROSE ST
OAK ST
ELM ST
S B ST
S C ST
ALDER ST
AMERMAN DR
WALNUT PL
BENJAMIN WY
REBECCA DR
MEGAN LN
PACIFIC LN
HILSINGER RD
CALHOUN RD
LAUREL LN
CAMP BAKER RD
JARED CT
COLVER RD
SAMUEL LN
CHARLOTTE LN
CEDAR LN
CABBAGE LN
INTERSTATE 5 SB

Standard Operating Procedures
and Best Management Practices
for Pollution Prevention and Good Housekeeping
City of Talent

September 23, 2021

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INTRODUCTION:

The City of Talent operates under a Municipal Separate Storm Sewer System (MS4) Phase II permit, held by Rogue Valley Sewer Services, that requires development of a pollution prevention or "good housekeeping" program. The program describes how the City is required to operate and maintain facilities to reduce the discharge of pollutants to waters of the state. This document is a required part of the permit and outlines Standard Operating Procedures (SOPs) that the City of Talent and its contractors will use to implement Best Management Practices (BMPs) for pollution prevention and good housekeeping to keep pollution out of the stormwater system and our waterways. These BMPs do not address other environmental issues or regulations.

Stormwater runoff in the Rogue Valley flows into the stormwater system and then directly into creeks and rivers untreated. Stormwater management facilities do exist on some properties to capture and treat runoff from that property; however, most properties and roads do not have stormwater management facilities. As stormwater flows across impervious surfaces (for example roads, parking lots, driveways and roofs) it picks up and carries anything in its path, such as oil, paint, sediment, trash, chemicals, delivering these substances to the stormwater system and eventually creeks. Pollution Prevention and Good Housekeeping practices are used to keep pollutants off impervious surfaces and prevent their transport to the stormwater system and creeks.

The City of Talent commits to providing training and orientation to all new staff to implement these pollution prevention and good housekeeping practices. As the program changes, follow-up training will be provided.

The City of Talent will maintain records for the program activities to meet the permit requirements. These records will include a descriptive summary of activities in an Annual Report that is provided to the RVSS Stormwater Manager.

CONVEYANCE SYSTEM MANAGEMENT AND MAINTENANCE

Cleaning Pipes, Catch Basins, and Inlets

The Phase II permit requires at least 50 percent of the jurisdiction's owned or operated catch basins and inlets within the MS4 be inspected at least once every five years. After inspecting, any maintenance or cleaning is to take place to ensure all catch basins and inlets continue to function as designed. The City of Talent is responsible for the maintenance of the stormwater conveyance system within city limits and for ensuring that inspection and maintenance requirements are met.

Operators are to perform conveyance system maintenance in a manner that prevents contamination of stormwater systems with pollutants and isolates stormwater system pollutants from downstream waterways. Maintenance is done to ensure adequate flow through facilities, prevent flooding and to repair damaged conveyances. Stormwater conveyance systems are maintained on a regular schedule.

Best Management Practices (BMPs):

1. 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.
2. Schedule stormwater system maintenance during the summer when flow is low or non-existent.
3. A shovel, backhoe, vacuum truck, or similar equipment may be used to clean out accumulated debris and sediment from catch basins.
4. No water, sediment or debris shall be allowed to flow downstream, particularly at outfalls.
5. Material removed from catch basins is disposed of at the landfill.
6. Report the location of catch basins that show signs of illicit dumping (i.e. used motor oil, paint, etc.) to the RVSS SW Manager.
7. If repairs are necessary during wet weather, use pre-cast structures if possible.
8. Isolate activities near water bodies to avoid contact between fresh concrete and water.

Culvert Cleaning and Repair

Replacement and repair of drainage structures restores function and can prevent failure of the drainage structure. This activity may include the use of temporary water management. Repairs and replacements may require excavating, diverting or impounding water, and backfilling. NOTE: Culvert replacement or extension will frequently require permits outside the scope of this guide.

BMPs:

1. Perform work when water flow in the ditch is low, except in cases of emergency where water is backed up onto the roadway or adjacent property. Divert flow to minimize turbidity, when and where possible.
2. Prior to ground disturbance, install erosion control and sediment prevention measures to prevent the downstream movement of sediment dislodged during culvert work.
3. Removed material shall be hauled or placed above the Ordinary High Water Line (OHWL) where there is no opportunity for material to reach waters of the State. If placing above the OHWL, either:
    a. Dry material and then haul away to the landfill, or

b. Stabilize material in place within 14 days. Stabilization may include spreading and top seeding; covering with matting or straw, or other appropriate erosion prevention measures.

Ditch Shaping, Grading, Cleaning

Machine cleaning, grading, and reshaping of ditches assists in maintaining or improving drainage. Vegetation located in the ditch may be removed during cleaning. Ditch maintenance may require permitting through the Army Corps of Engineers or Department of State Lands, Figure 7.1 below is used by ODOT to determine when permitting may be needed.

NOTE: In this document, the term “ditch” or “drainage ditch”, for the purpose of municipal operations, is a facility, typically parallel to a road or parking lot, which exclusively carries stormwater runoff draining from the road or other constructed facilities. In our region, there are also structures called “ditches” that are excavated channels (lined and unlined) that are used to transport irrigation water (though stormwater can also enter and be conveyed by these facilities). Also in our region, there are mapped streams that flow in channelized streambeds, sometimes adjacent and parallel to roads, which can look just like a ditch. These streams (either with or without fish) may look like ditches because the channel has been modified or impacted by development. Ditches used to convey stormwater, irrigation, and channelized streams are all regulated differently so it is important to identify them correctly. It can be difficult to distinguish a ditch, which exclusively carries stormwater or irrigation runoff from a channelized creek, so refer to the RVSS Stormwater Manager as needed.

7.1. When Is A Waterway (Corps/DSL) Permit Needed for Ditch Maintenance?

Answer all questions from both columns

WATERWAY ISSUES			WETLAND ISSUES
Is there running or standing water in drainage facility other than during or after rainfall events?	Yes ☐ No ☐	☐ Yes ☐ No	Is there wetland vegetation (willows, rushes, cattails) in ditch?
Does the drainage have an open water connection to a lake, pond, creek, river, or wetland?* * If yes, contact *REC* to make appropriate coordination with local ODFW/NMFS fisheries biologist regarding potential impacts to fish.	Yes ☐ No ☐	☐ Yes ☐ No	Is there standing water or wetland vegetation adjacent to ODOT ROW? (Call Region Environmental Coordinator for assistance)
Is the waterway subject to tidal influence?	Yes ☐ No ☐	☐ Yes ☐ No	Would the activity add to or change the existing facility? (Add rip-rap, extend culverts, ditch widening or deepening or new work)
A 'Yes' to any questions in this column	If ALL responses are 'No'		A 'Yes' to any question in this column
PERMIT AND BIOLOGICAL ASSESSMENT MAY BE NEEDED Contact Region Environmental Coordinators	NO WATERWAY PERMITS NEEDED If ODOT Best Management Practices are followed		PERMIT MAY BE NEEDED Contact Region Environmental Coordinators

ODOT Environmental Permit Coordinators: Check regional listings for name and phone number.

<u>BMPs:</u>

1. Perform ditch work when flows are low or non-existent, but soil is moist to prevent dust. Maintenance work may be performed during wet weather in cases of emergency where water is backed up onto the roadway or adjacent property.

2. If flow is present, install check dams at the downstream end of the work zone following ODOT RD1006 Type 2 or 6, prior to beginning ditch work.
3. When practical, protect/maintain existing vegetation.
4. Machine brush ditches when removal of soil is unnecessary and control of vegetation growth is adequate to ensure drainage.
5. Reshape ditches to have flatter side-slopes where space exists and where vegetation can quickly re-establish.
6. Evaluate and modify existing ditch slopes, where feasible and appropriate, to trap sediment and support development of vegetation.
7. Removed material shall be hauled or placed above the Ordinary High Water Line (OHWL) where there is no opportunity for material to reach waters of the State. If placing above the OHWL, either:
    a. Dry material and then haul away to the landfill, or
    b. Stabilize material in place within 14 days. Stabilization may include spreading and top seeding; covering with matting or straw, or other appropriate erosion prevention measures.
8. Re-seed drainage ditches and steep slopes above the Ordinary High Water Line, or install non-vegetative permanent erosion prevention measures.
9. Install and maintain temporary sediment control until vegetation is re-established.
10. After soil is stabilized and sediment has settled out of water, scoop sediment out from behind check dams, and then wait for water to clear, this may take a day.
11. Once water is clear, remove sediment controls.

Emergency Maintenance

These activities are needed to restore and manage the sanitary and storm sewers in the event of emergencies.

<u>BMPs:</u>

1. Identify environmental concerns, notifying any regulatory agencies, coordinating technical needs and staff, and obtaining verbal approval or after-the-fact permits as required by the situation.
2. Avoid and/or minimize additional impacts to wetlands or waterbodies. Coordinate with the relevant agencies on required mitigation.
3. Provide, whenever possible, adequate sediment control or bank stabilization necessary to keep material from entering watercourses.
4. Maintenance and repairs should be carried out in such a manner that additional impacts to wetlands or streams are avoided.
5. Removed material can be dried and then disposed of at the landfill.

ROAD REPAIR & MAINTENANCE

Pavement Repair and Resurfacing

Includes a variety of practices to seal the roadway surface, restore surface life, flexibility, skid resistance and restore roadway markings. These may include major and minor patching of intermittent potholes, small depressions, edge breaks, and any surface irregularities with asphalt concrete material. Preparation work may include grinding of existing surfaces in some areas. Methods include:

- *Slurry seal:*
  The process of slurry sealing involves mixing and placing a liquid emulsified asphalt and sand mixture over existing asphalt to seal and maintain the road surface. This activity also includes crack sealing prior to slurry seal.
- *Chip Seal:*
  Chip sealing generally involves applying a single layer each of liquid asphaltic material and aggregate to a paved roadway. Excess gravel is swept onto the shoulders after sealing.
- *Pavement overlays:*
  The process of pavement overlays involves placement and compaction of hot mix asphalt concrete (a uniform mixture of hot asphalt oil and fine aggregate that hardens by cooling) over existing asphalt surfaces. Preparation work may include grinding of existing surfaces in some areas.

<u>BMPs for all pavement repair and resurfacing activities:</u>

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. After the activity is complete:
   a. Sweep up and remove excess material from the roadway surface
   b. Remove material accumulated in front of inlets
   c. Deposit excess material at approved disposal sites, such as the landfill
   d. Remove inlet protections and properly dispose or store for reuse.

<u>BMPs for saw cutting:</u>

1. When saw cutting, storm drains must be covered with an impermeable barrier, not a filter BMP.
2. Install impermeable booms or barriers at the downstream end of the work to trap saw cut slurry.
3. Use a vacuum either while cutting or immediately following work to suck up saw-cut slurry.

<u>BMPs for pavement repair, resurfacing and overlays:</u>

1. Avoid paving or asphalt applications during wet weather. Cold mix may be applied in wet weather.
2. When working near water bodies, install perimeter controls to reduce runoff to water bodies. Refer to the ODOT Erosion Control Manual for guidance on perimeter control BMP installation.

3. Crack sealing operations that require water for cooling should use hand spray containers or backpack water tanks to avoid runoff.
4. Collect and remove broken asphalt from the site and dispose of properly. Recycle old asphalt products.
5. Load asphalt emulsions at least 150 feet away from an Ordinary High Water Line.
6. Do not use diesel fuel as a releasing agent. Use environmentally sensitive releasing agents such as plant based release agents.
7. If using concrete in a roadway connected to a waterbody, use foam or a quickset material designed for use in water to plug the void prior to using concrete. The plug is needed to prevent concrete from entering the waterbody.
8. Capture and recycle or dispose of release agents and materials as directed by a Safety Data Sheet or as directed by the manufacturer.

Pavement Striping and Marking:

Includes centerline, shoulder line, intersection, and miscellaneous pavement painting activities utilizing paint, beads, etc. The process includes use of a grinder to remove old markings, graffiti, center and shoulder lines, and disposal of waste paint.

BMPs:

1. Use only federally approved, low volatile organic compound (VOC) paint.
2. Use shovels, brooms, buckets and vacuums to collect all grindings and other loose materials and dispose of properly. Note: Some thermoplastic grindings are to be treated as hazardous material and disposed of at an appropriate facility.
3. Clean up spills on site with absorbents, shovels, and buckets, dispose of properly.

Vacuum Sweeping:

Performed on roadways and parking areas to remove dirt, leaves, debris, and other loose material from construction activities, to keep it out of the stormwater system and waterways. Collected materials must be disposed of at an approved waste facility.

BMPs:

1. Use water, as needed, to reduce dust during sweeping.
2. If collected material will be stockpiled temporarily, follow stockpiling BMPs.
3. Deposit excess material at approved sites.

Gravel Road Work

Gravel road maintenance includes restoring gravel roadways slope, drainage, and grade by blading, reshaping, and smoothing existing surface materials using a grader to provide a suitable driving surface.

BMPs:

1. Maintain existing roadside vegetation for natural filtration of contaminants and capture of sediments.
2. If not possible to maintain vegetated buffer, install perimeter controls to keep rock, excess sediment, and foreign debris out of ditches, and streams.
3. When re-gravelling, install temporary check dams in the roadside ditch down gradient of the work. Remove any accumulated sediment from the upstream side of the temporary check dam and dispose of at an approved location. When work is completed, remove the temporary check dam.
4. Contain spills with a dike composed of natural materials until berms or absorbent materials can be set up.

Shoulder Blading and Rebuilding

Activity includes restoring and reshaping shoulder sections or gravel surfaces by hand or mechanical means to ensure adequate width, smoothness, and drainage. New material may be added under this activity. This work is done to correct rutting and buildup of materials; correct drop-offs; restore proper cross section shape; repair erosion; to maintain safety; and to maintain proper drainage to provide a safe surface for vehicle recovery; to provide an adequate clear zone, and to drain water away from the road.

BMPs:

1. Protect and maintain existing vegetation, when practicable.
2. Either install perimeter sediment controls, or maintain a clear buffer space from the edge of the road surface to the ditch to prevent material from entering waterways.
3. Install check dams in roadside ditches when there is no buffer space and it is not possible to install perimeter controls.
4. Evaluate the width of the blading activity and (if the site warrants) modify the width to minimize disturbance of vegetation.
5. Blade in dry weather while moisture is still present in soil and aggregate (to minimize dust) where possible.
6. Permanently stabilize disturbed soils using BMPs (seeding, plants, etc.) as conditions warrant.
7. Care should be taken not to over-steepen ditch slopes/channels or decrease ditch/channel capacity. These actions could result in slope failure and increase likelihood of erosion.

Dust Control (for roads and construction sites)

The application of dust palliatives controls dust generated during routine activities, including road or construction work and road maintenance. Dust palliatives create a hard, compact surface that resists potholing, rutting and loss of aggregate. In addition, control of road surface soils reduces the short-term, localized air quality hazards associated with unpaved roads. Dust palliatives may include water, calcium magnesium acetate, magnesium chloride, or lignin sulfonates, applied in a liquid form.

BMPs:

1. Construct gravel berms at the low shoulders of the roadway during preparation for application of dust palliatives to inhibit liquid palliatives from entering waters of the state, where appropriate.
2. Do not apply dust palliatives during rain.
3. Use water (whenever feasible) as a dust palliative.
4. Apply materials in a manner that is not detrimental to either water or vegetation. Apply materials in accordance with the manufacturers' recommendations.
5. Provide adequate spill containment materials onsite when palliatives are applied.
6. The rate of application should be low enough to prevent runoff of dust suppressant product into roadside ditches.
7. Dispose of excess materials per manufacturers' recommendations.

GENERAL MAINTENANCE

Building, Parking Lot, and Sidewalk Maintenance

The maintenance of buildings, parking lots, and sidewalks can include washing, sweeping, painting, and other activities. Litter control is required in all city operations to reduce the discharge of pollutants and litter to the storm sewer system. Street sweeping can prevent pollutants such as sediment particles, organics, oil, grease, trash, road salt, and trace metals from entering and plugging the stormwater system. Hot or polluted wash water may not be discharged to the stormwater system.

BMPs:

1. Prior to washing parking lots, sidewalks or driveways, use dry cleanup methods first (sweep, blow, vacuum).
2. Protect storm drains with filtering BMPs such as witch's hats or impervious BMPs such as drain covers/mats prior to any maintenance activity. **Wood chip bio-bags are not appropriate protection for washing and painting.**
3. Wastewater from washing is not permitted to flow into the stormwater system. When maintenance operations produce wash water, the wash water must be collected and disposed of in the sanitary sewer system or directed to a location where it can infiltrate into the soil.
4. Use biodegradable soap and cold water.
5. Follow EPA lead paint guidelines if pre-1978 era paint is involved.
6. Immediately clean-up spills of any pollutants, such as oil, diesel, and transmission fluids with absorbent materials.
7. Properly dispose of debris.

Street Sweeping

The City of Talent is divided into two zones with each zone being swept every other week. The Northern Zone is generally Colver Rd. to Rapp Rd. and the Southern Zone is everything south of Rapp Rd.

General Excavation

BMPs:

1. Develop a schedule for erosion prevention, sediment control and stormwater system BMP installation throughout the project.
2. Prior to ground disturbance, install all erosion prevention, sediment control and stormwater system BMPs.
3. If work is stopped for 14 days or more, stabilize soils through installation of temporary erosion prevention measures, such as straw or erosion control matting. See DEQ's Construction BMP manual for applicable measures and installation and inspection measures https://www.oregon.gov/deq/FilterPermitsDocs/BMPManual.pdf.
4. When work is complete, stabilize the site with permanent erosion prevention measures such as seeding, gravel, or bark mulch.

BMPs:

1. All portable toilets should be located on flat, secure locations where they are less likely to be knocked or blown over, and 30 feet from a stormwater inlet. Ensure routine maintenance and cleaning is conducted.

Material and Waste Storage, Transfer, and Disposal

Prevent or reduce the discharge of pollutants to stormwater from material storage leaks or spills by minimizing the storage of hazardous materials, by storing materials in a designated area, by installing secondary containment or control measures, by properly labeling all containers and piles and by conducting regular inspections. These types of activities include:

- Material stockpiles
- Fertilizer, Pesticide, and Paint Storage
- Fuel, oil, pressurized gases, and solvent storage
- Building and Custodial supply storage
- Construction and repair supply storage

BMPs:

1. Sediment or debris removed from storm sewer inlets, detention ponds, or vehicle-washing areas will be taken to the dump.
2. Designate and sign areas for material delivery and storage.
3. Keep an accurate, up-to-date inventory of materials delivered and stored on-site.

4. Label all containers and keep closed when not in use.
5. Try to keep products in their original containers, and/or keep them well labeled, especially if hazard warnings are appropriate. Never store hazardous or flammable materials in glass jars or breakable containers.
6. Keep areas clean, neat and well labeled. Use dry cleanup methods in the storage area. Periodically inspect material storage areas to ensure that all materials are properly stored when not in use. Properly dispose of unused materials.
7. Storage of reactive, ignitable, or flammable liquids must comply with fire codes. Have product identification placards posted and Safety Data Sheets (SDS's) available for products.
8. Avoid storing near drainage paths or waterways.
9. When feasible, keep stored materials covered to prevent precipitation washing onto them. If materials must be stored uncovered, they must be in a sealed container with **tight**-fitting lids and secondary containment.
10. Do not store chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and preferably in secondary containments, such as prefabricated containments for barrels and drums.
11. Store unfinished metal parts and materials under cover.
12. Large, non-metal and non-rubber materials such as piping can be stored outside without a protective covering.

Material Stockpiles

1. When siting a loose material stockpile: consider overall site drainage, locate piles away from storm drains and waterbodies.
2. Stockpiles shall not be located on public streets.
3. Install protection around any downstream stormwater inlets.
4. Consolidate loose material (gravel, mulch, etc.) and install a physical barrier such as a silt fence or berm around the perimeter of the pile.
5. If the stockpile will not be moved for 14 days or more cover the pile with an erosion prevention measure, see DEQ's Construction BMP manual for applicable measures and installation and inspection measures: https://www.oregon.gov/deq/FilterPermitsDocs/BMPManual.pdf.

Spill Control

1. A supply of spill response materials is to be stored in a well-labeled location in the public works shop. It is to be accessible to all staff.
2. Spill kits are to be kept in every City vehicle.
3. Kits shall be checked on an annual basis to ensure they are stocked.
4. All field employees are to be trained on how to respond to spills and utilize spill kits.

EQUIPMENT AND VEHICLE MAINTENANCE

Regular maintenance activities for equipment and vehicles includes repairs and washing.

Equipment and Vehicle Washing

BMPs:

1. City vehicles will only be washed at the following locations:
   - Wash area where wastewater drains to a pervious surface (turf, planted area, soil, etc.)
   - Commercial car wash
   - Washing on pavement is ONLY allowed where wastewater drains to the sanitary sewer or when washing can only go into the SW system if it has no chemicals, soaps, detergents, steam or heated water, and no engine, transmission or undercarriage washing.
2. Use environmentally sensitive cleaning agents when cleaning equipment and vehicles.
3. Cleaning is limited to removal of snow, ice, mud, and dirt from the surface of the vehicles only.
4. Sediment removed from vehicle washing areas (sediment traps, etc.) may need to be characterized prior to disposal to ensure there is no contamination (petroleum or metals) that requires specialized handling and disposal. Any waste characterization should be documented.

Vehicle Storage

BMPs:

1. When possible, store vehicles and equipment and perform maintenance activities inside a building.
2. Equipment and vehicles at construction sites shall be parked more than 150 away from Ordinary High Water Line at the end of a workday, or in an approved location.
3. Monitor vehicles and equipment closely for leaks and use drip pans as needed until repairs can be performed.
4. When drip pans are used, check frequently to avoid overtopping and properly dispose of fluids.
5. Drain fluids from leaking or wrecked vehicles and from motor parts as soon as possible.
6. Recycle or dispose of all wastes properly and promptly.

Vehicle Maintenance

BMPs:

1. Vehicles requiring a Commercial Driver's license for operation are to be inspected every time they are driven to identify leaks, drips and potential maintenance needs.
2. Perform routine preventive maintenance to ensure heavy equipment and vehicles are operating optimally.
3. Vehicle maintenance and refueling shall occur at least 150 feet away from an Ordinary High Water Line, or in an approved containment area.
4. Recycle or dispose of all wastes properly and promptly.
5. Do not dump any liquids or other materials outside.

LANDSCAPE & VEGETATION MANAGEMENT AND MAINTENANCE

Organic material, soil, and sediment as well as chemicals can act as a pollutant in waterways so BMPs relate to keeping this material and other landscape materials from entering waterbodies.

General Landscaping

BMPs

1. Mulch or vegetate bare areas as soon as possible to minimize erosion.
2. Leave clippings on grassy areas or dispose of by composting.
3. Brush off mowers (reels and decks) and tractors over grassy areas or in contained washout areas. Do not brush or hose off mowers over paved areas that drain to the stormwater system.
4. Remove (sweep or shovel) materials such as soil, mulch and grass clippings from parking lots, streets, curbs, gutters, and sidewalks. Collect and dispose of trash.
5. Repair broken sprinkler heads as soon as possible and only irrigate at a rate that can infiltrate into the soil to limit run-off.

General Vegetation Management

Effective December 2018, the City of Talent has an Integrated Pest Management (IPM) plan that should be followed for vegetation management. For issues not addressed by the IPM, refer to the BMPs below.

Methods for vegetation removal:

- Mechanical: using equipment such as mowers, chain saws, brushers, etc.
- Biological: using a natural predator to control the noxious weed or unwanted vegetation.
- Cultural: incorporating native or more appropriate plant material to out-compete the unwanted vegetation.
- Chemical: applying herbicides in accordance with the label.
- Alternative: steam weeding

BMPs

1. When feasible, use mechanical means to remove unwanted vegetation.
2. Use chemical methods only when mechanical, biological, cultural and alternative methods are not effective or feasible.

Use and Storage of Pesticides and Fertilizers

Fertilizers and pesticides over-applied on impervious surfaces or vegetation, or when a rain event is likely to occur in the following 24 hours, can be transported in stormwater runoff, so it is important to properly store, handle, apply, and clean up all fertilizers, and pesticides. When pesticide application is needed, a licensed pesticide applicator will follow the following protocols:

BMPs:

1. It is recommended that the jurisdiction identify buffer limits for areas around water resources or require only aquatic approved pesticides to be used adjacent to water bodies.

    a. Site-specific minimization/avoidance measures may be developed.
2. Consider establishing spray setbacks from impervious surfaces.
3. Over-spray guards may be used to avoid spraying water bodies or impervious surfaces.
4. Prior to application, check the 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.
5. Follow label directions when applying, storing, handling, mixing, recycling, and disposing of chemicals and empty containers. Never perform these activities near stormwater inlets.
6. Have spill cleanup materials available in case of a spill.
7. Clean up chemicals promptly using dry methods, if possible.
8. Apply pesticides and fertilizers in accordance with the manufacturer's recommended application rates.
9. Application equipment should be checked on at least a monthly basis during the period of active use to ensure the equipment is applying the material at the prescribed rate.
10. In all cases, application should be limited to the minimum amount of product required to achieve the desired result (i.e., avoid over-application of product).
11. Chemicals should be stored inside when not in use.
12. Recycle or dispose of all spent or excess chemicals properly and promptly.

DEFINITIONS:

OHWL: ordinary high water line (also called "mark") is a line on the bank or shore to which high water ordinarily rises each year. Generally, the line can be determined by examining a bank or shore and visually estimating the point below which upland vegetation does not occur.

Integrated Pest Management Plan (IPM): IPM is a strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment. (Edited from University of California Agriculture and Natural Resources IPM Program)

ATTRIBUTIONS:

Environmental Services Division Water Resource Section, 2010, *Evaluation Report For Stormwater Management Plan Minimum Control Measure #6 BMP OM1 Pollution Control Manuals for City Operations*, Springfield, Oregon, City of Springfield

Environmental Services Division Water Resource Section, 2017, *City of Springfield Pollution Control Manual For Routine Maintenance Activities Pollution Control Best Management Practices (PC BMPs) and Control Measures (CMs),* Springfield, Oregon, City of Springfield

Oregon Department of Transportation Maintenance and Operations Branch, Revised 2020, *Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices Revised 2020*, (Blue Book) Salem, Oregon, State of Oregon

Marion County Department of Public Works, 2014, *Best Management Practices for Clean Water 2014 Crew Manual*, *Salem*, Oregon, Marion County

Road Services Division/Water Quality Program Department of Community Services Multnomah County, *Multnomah County Road Services Road Maintenance and Operations Manual 2015,* 2015, Portland, Oregon, Multnomah County

Tierra Group International LTD, 2018, *Standard Operating Procedures for Municipal Operations Douglas County*, Castle Rock, Colorado, Douglas County Public Works Engineering

APPENDIX:

FORMS to record data for reporting purposes:

STORMWATER MAINTENANCE REPORT FORM
SUGGESTED FIELDS

DATE REPAIRS/MAINTENANCE ACTIVITY COMPLETED: TIME Start Finish

EMPLOYEES COMPLETING WORK:

ADDRESS/LOCATION OF REPAIR:

PROBLEM DESCRIPTION:

DESCRIPTION OF REPAIR/MAINTENANCE ACTIVITY:

LOCATES CALLED IN? YES NO

DESCRIBE MATERIAL REMOVED: SEDIMENT TRASH OTHER (DESCRIBE)

AMOUNT OF MATERIAL REMOVED: CUBIC FEET

AMOUNT/SIZE/TYPE OF PIPE REPLACED

EQUIPMENT USED

NOTES

CITY OF TALENT

INTEGRATED PEST MANAGEMENT POLICY

EFFECTIVE DECEMBER 5, 2018

I. INTRODUCTION AND PURPOSE

Synthetic pesticides generally contain toxic substances that may have a detrimental effect on human health and, in particular, have adverse effects on the most vulnerable: infants, children, elders, and individuals who are taking medications or have suppressed immune systems.

Toxic substances in pesticides may also have a detrimental impact on the well-being of plants, animals and other living beings and entire ecosystems due to the pollution of air, water and soil.

The purpose of this Integrated Pest Management Policy (Policy) is to provide the City of Talent (City) a means of reducing the use of pesticides to protect the health, safety and well-being of our residents, pollinators and environment.

II. SCOPE OF POLICY

This Policy shall apply to all City Departments, operations and impacts under the City's jurisdiction, and not to those of its residents. However, an important Policy goal is to encourage education and outreach to expand these IPM Policy principles to all City residents and properties.

III. POLICY GOALS

- Reduce or eliminate the use of synthetic pesticides, to be phased out within three years of adoption of this Policy.
- Prioritize prevention and non-chemical control methods in park, facility and streetscape planning and design, manual maintenance and ecological controls, instead of the use of pesticides (other than organic low hazard pesticides) which shall be used only as a last resort.
- Safeguard the health, safety and welfare of people, pollinators, pets and the environment. Pollinators, being essential to the health of environments and agricultural interests, and who are particularly protected in Talent, which is a Bee City, should warrant special care.
- Educate Talent community members as to the health and environmental hazards of pesticides, and work towards phasing out the sale, provision, use and disposal of such pesticides.

IV. DEFINITIONS

This list is not intended to be all-inclusive but to define terms most commonly used in the Integrated Pest Management process.

Ecological Control is the control of a pest by the introduction of a natural enemy or predator.

Emergency includes pest emergencies that cause a risk to human health or significant economic crop loss or that create an urgent need to eliminate or mitigate a pest situation that threatens the health or safety of members of the public or the structural integrity of facilities, or noxious weed mitigation that cannot be otherwise managed through this Policy. Section 18 of EPA. ORS 634.700(6)

Integrated Pest Management is a coordinated decision-making and action process that uses the most appropriate pest control methods and strategies in an environmentally and

economically sound manner to meet pest management objectives. The elements of integrated pest management include: (a) preventing pest problems; (b) monitoring for the presence of pests and pest damage; (c) managing the density of pest populations, which may be set at zero, that can be tolerated or corrected with a damage level sufficient to warrant treatment of the problem based on health, public safety, economic or aesthetic thresholds; (d) treating pest problems to reduce populations below those levels established by damage thresholds using strategies that may include biological, cultural, mechanical and pesticidal control methods and that shall consider human health, ecological impact, feasibility and cost effectiveness; and (e) evaluating the effects and efficacy of pest treatments." Prevention is the prioritized strategy for an IPM program. Oregon Statute (ORS 262.1), Chapter 943.

IPM Coordinator – Public Works Director or his or her designee who is tasked with implementing this Policy into an Integrated Pest Management program. The IPM Coordinator will assist with and assure that the IPM program functions smoothly and interact directly at the department level in pest prevention or control. The IPM Coordinator will also plan and coordinate with the IPM Subcommittee to schedule and/or conduct training sessions for departments and greater community as needed.

Organic pesticides are products that have not been modified in any way from their original composition. The most common are plant oils. Many types of plants produce an odorous oil that can be used as both a deterrent for insects as well as a "contact kill." Organic pesticides have not been changed or modified in any way, although they are many times diluted in water.
Examples may include but are not limited to: types of mint, diatomaceous earth, or boric acid.

ORS refers to the Oregon Revised Statutes.

Pests are organisms located where they are not wanted, and/or which may cause health, economic, aesthetic, or ecological damage. In this context, "weed" is a social, economic, and legal term, not a biological one.

Pesticides are defined as "any product to kill or control or mitigate a pest." Pesticides include "insecticides" for use against insects, "herbicides" for use against weeds, "fungicides" for use against fungi or fungal spores, and "rodenticides" which kill rats and mice, etc.. Such products must be registered by the appropriate agency, be properly labeled and appropriately used.

Restricted pesticides Any products or synthetic pesticides that:
(a) Contain a pesticide product or active ingredient that has the signal words "warning" or "danger" on the label; (b) Contain a pesticide product classified as a human carcinogen or probable human carcinogen under the United States Environmental Protection Agency 1986 Guidelines for Carcinogen Risk Assessment; or (c) Contain a pesticide product classified as carcinogenic to humans or likely to be carcinogenic to humans under the United States Environmental Protection Agency Guidelines for Carcinogen Risk Assessment. ORS 634.705(5).

Synthetic pesticide is any product that has been modified by humans for the use of killing or repelling pests. The active ingredients are generally produced synthetically, e.g., are synthetic chemicals that prevent, mitigate, destroy, or repel any pest; or that act as a plant growth regulator, desiccant, defoliant or nitrogen stabilizer. There are many classes of synthetic pesticides. The main classes consist of organochlorines, organophosphates, carbamates, neonicotinoids, and pyrethroids. (EPA definition).

V. USE OF PESTICIDES BY CITY AND NON-CITY PERSONNEL

All City Department and public and private entities and contractors (including subcontractors and volunteers) performing any work on City properties or within the portions of the Bear Creek Greenway under the City's jurisdiction, shall be bound by this Policy and shall coordinate with Public Works, or the IPM Coordinator as separately designated, prior to any pesticide application to ensure Policy compliance.

All new Intergovernmental and Joint Powers Agreements, contracts and franchise and other agreements for any work on City properties or within the portions of the Bear Creek Greenway under the City's jurisdiction, must be consistent with this Policy.

City staff and contractors shall provide documentation (to include date and time, location, synthetic pesticide type and quantity) of substances used, and the City shall maintain such documentation to be available for public review.

VI. PUBLIC WORKS AND IPM SUBCOMMITTEE

The IPM Coordinator is charged with developing specific practices, (taking into account the Management Options listed in Paragraph VIII, below) a list of approved safer alternatives and methods, forms, signage and procedures for alternatives, application, safe handling and public warning/interaction that may be updated periodically without the need to modify this IPM Policy. The IPM Coordinator shall take the lead to work with and convene regular meetings with the Parks & Recreation Commission ("Parks Commission") and the IPM Subcommittee, to include a Parks Commission representative, a Together for Talent Committee representative, and a City Council Liaison, to assist with this process.

In practice, integrated pest management is continually evolving. The IPM Subcommittee shall hold quarterly meetings, to evaluate Policy implementation, report on all synthetic pesticide applications, share any pest-related concerns, new technologies and best practices, program-related information, or individual experiences with the general public/staff and to coordinate public outreach and education efforts in order to uphold the goals of this Policy. The IPM Subcommittee shall report to the Parks Commission during an open meeting at least annually.

Pesticide risks will be minimized by careful product selection and application, with emphasis on natural or organic remedies. When developing and updating the IPM program, City staff will rely on materials and methods, including science-based information, state university departments, university extension scientists, and other experts with emphasis on least toxic remedies.

VII. DECISION MAKING, EVALUATION

The IPM Coordinator is tasked with creating a program that uses the most appropriate pest control methods and strategies in an environmentally and economically sound manner to meet the pest management objectives in alignment with the goals in this Policy.

These program decisions include:

- Preventing pest problems;
- Monitoring for the presence of pests and pest damage;

- Managing the density of pest populations that can be tolerated or corrected with a damage level sufficient to warrant treatment of the problem based on health, public safety, economic or aesthetic thresholds; and

- Treating pest problems to reduce populations below those levels established by damage thresholds using strategies that may include biological, cultural, mechanical and organic pesticide control methods and that shall consider human health, ecological impact, feasibility and cost effectiveness.

The IPM Subcommittee shall develop evaluation criteria to determine the effects and efficacy of the pest treatment strategies and shall evaluate the program on a quarterly basis.

VIII. MANAGEMENT OPTIONS

This Policy prioritizes prevention and non-chemical control measures by following a systematic approach that uses extensive knowledge about pests and their hosts, such as infestation thresholds, life cycles, and environmental requirements to compliment and facilitate biological and other natural control of pests.

Management Options shall include:

- Appropriate prevention strategies;

- Monitoring protocols with associated tolerance/action thresholds;

- Tiered application of control measures moving from non-chemical methods, to organic pesticides and to restricted pesticides only in emergencies; and

- Specific use requirements and restrictions for each control method and product.

All pesticides available for use within City grounds must first be placed upon an IPM-Subcommittee approved list after undergoing an IPM Subcommittee review process that carefully examines the characteristics of the individual product and whether it would be an appropriate addition within this Policy. Issues of efficacy, public health and safety, potential environmental impacts, overall plant health requirements, land management needs, and other concerns are considered during this process. Applicators must then make their choices of materials from the approved list.

Principle: Utilize non-chemical management options first, and only use chemicals as a last resort.

Goal: To implement a phased in approach that will reduce and eventually eliminate the use of synthetic pesticides in parks and other City properties.

The expectation is that volunteers will be engaged to participate whenever possible.

Synthetic chemical pesticide applications are used only after other IPM strategies have first been either employed or considered. The majority of pest management practices should ideally never involve the use of synthetic pesticides, with particular care given to sensitive areas such as playgrounds, waterways, dog parks and riparian areas.

Management options include:

Landscapes and grassy areas:

- Lawn / grassy areas
  - Mow, and mulch in grass clippings
  - Treat areas to amend soil and biology such as with a diluted molasses solution
  - Fertilize with organic fertilizer
  - Check that irrigation amount is appropriate

- Landscaped areas / beds
  - Mulch with woodchips, bark, other appropriate materials
  - Weed whack borders and edges where possible
  - Treat established plants with mycorrhizae
  - Fertilize with organic fertilizer
  - Check that irrigation amount Is appropriate
  - Steam weed as available
- Right of ways
  - Weed whack or steam weed where possible

Insect pests:

- Identify the pest and its life cycle – when is it a problem?
- Determine if the pest can be excluded or trapped
- Utilize an organic insecticide as the first chemical option
- Deploy ecological controls such as beneficial insects

Mammal Pests:

- Identify the pest and its life cycle - what does it eat?
- Determine if the pest can be excluded or trapped
- Utilize a physical trap as first option

IX. ENDANGERED HABITAT, NON-TARGET AND SENSITIVE SPECIES

In the interest of preserving food, pollen, and nectar sources for endangered or threatened species, measures should be maintained to prevent widespread destruction of those sources. Some maintenance, landscaping, mowing, weeding and extensive use of toxic pesticides currently represent further degradation of vital or endangered species and therefore should be minimized or eliminated.

Measures should be taken to preserve endangered habitat and/or work around them where possible or practical, especially in playgrounds, waterways, dog parks and riparian areas, except where required in those rare City parks and public spaces that are maintained for aesthetic reasons, such as frequently managed turf areas, tree wells, ornamental plant beds and edges.

X. USE OF PESTICIDES – EMERGENCY CIRCUMSTANCES AND WAIVERS

True emergencies must first be correctly identified pursuant to the definition herein.

The City recognizes that circumstances may arise in which cultural, biological, and physical IPM practices may not be practical. If a situation is determined by the IPM Coordinator to be urgent/non-routine and requiring the use of a synthetic pesticide to achieve satisfactory levels of control, then the following steps shall be followed:

Before applying a restricted pesticide, IPM Coordinator must request a waiver and receive approval of the City Manager or his or her designee, prior to any such application. When applying a waiver, the applicant shall provide substantial proof that they have exhausted all reasonable alternatives to the use of restricted pesticides. In deciding waiver requests, the City Manager shall balance the true emergency or need for the use of restricted pesticides against the express goals of this IPM Policy. Restricted pesticide shall only be applied after a waiver is granted by the City. All applications, waiver determinations and documentation shall be provided to the IPM Subcommittee on a quarterly basis.

The use of occasional wasp or hornet sprays by employees or contractors who may otherwise be at risk of insect stings shall not be covered by this section, except that reports of such use shall be made to the IPM Coordinator, and persons who may be affected shall be given advance notice if time permits.

It is critical that pesticide actions undertaken with the guidance of this Policy should take great care to limit such actions in consideration of vital species such as common pollinators and non-target (not intended) species. Pollinators, being essential to the health of environments and agricultural interests, should warrant special care and be encouraged and invited into our community. Some pollinators should receive great care to be moved or otherwise discouraged if they become public threats. Such threats should also be clearly defined, as in the case of bees, by the *City of Talent Policy on Bee Swarms/Extractions.*

XI. EDUCATION AND OUTREACH

The IPM Subcommittee shall develop a plan for education and outreach into the greater community. This plan may include:

- Signage in parks to indicate management strategies being implemented;
- Community workshops, classes, and events to educate the public, staff, and professionals about reducing pesticide use and provide information from content experts about how to implement an organic IPM program; and
- Resources provided to interested citizens who want to learn more about the Talent IPM program or how they can implement their own.

XII. REVIEW AND MODIFICATION

The IPM Subcommittee may propose changes to this Policy periodically for Parks Commission review prior to that Commission recommending changes to Council.