



# POLK COUNTY

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COMMUNITY DEVELOPMENT

AUSTIN M'GUIGAN  
Director

February 28, 2018

Nancy Gramlich  
Willamette Basin Coordinator  
DEQ Salem Office, Western Region  
4026 Fairview Industrial Drive SE  
Salem, OR 97302

Subject: Polk County TMDL Implementation Plan – Fifth Year Review

Dear Ms. Gramlich,

Enclosed is Polk County's TMDL Implementation Plan 5<sup>th</sup> Year Review Report. The completed report contains the following sections:

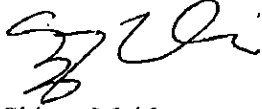
- Appendix A: Implementation Evaluation Report for the previous 5 years.
- Appendix B: Revised TMDL Implementation Plan
  - Exhibit 1: Revised TMDL Implementation Matrix –Proposed BMPs for the next five-year cycle.
  - Exhibit 2: Land Use Compatibility Statement (Submitted October 2008)
  - Exhibit 3: Polk County Stormwater Management Program- August 2011 (Submitted April 2013)
  - Exhibit 4: Polk County Zoning Ordinance Chapter 182. Section 182.050(B) describes the riparian and wetland setback requirements. Section 182.040(E) describes the management plan criteria. (Submitted October 2008)
  - Exhibit 5: Polk County Parks List (Submitted October 2008)
- Appendix C: Implementation Matrix – Status of BMPs on the current DEQ approved matrix of BMPs for the year 2017.
  - Exhibit 1: Management Plan Inventory
  - Exhibit 2: TEOPS mailing list and maps
  - Exhibit 3: Dates of weekly BMP meeting, sign-in sheet and topics

As discussed in this report, Polk County has proposed changes to the BMPs included in the TMDL Implementation Matrix that are proposed for the next five years of implementation of the TMDL Implementation Plan. See Appendix B, Exhibit 1. These changes are the product of

Polk County's evaluation of the effectiveness of the BMPs included in the current matrix, and are intended to increase the efficacy of Polk County's program to reduce stream temperature and levels of mercury and bacteria. I have also updated the text of the TMDL Implementation Plan narrative, included as Appendix B, to reflect the updated TMDL Implementation Matrix.

If you need additional information, please contact our office.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Mulder', written in a cursive style.

Sidney Mulder  
Senior Planner

**Polk County's TMDL 5<sup>th</sup> Year Review Report (January 1, 2013 – December 31, 2017)**

February 2018

**Matrix #1- Temperature, Mercury and Bacteria**

Over the previous five years, Polk County has continued to implement their stringent local riparian area setback standards found in Polk County Zoning Ordinance (PCZO) 182.050(B), which require a minimum setback distance of 25 feet from all inventoried significant wetlands. Within the riparian setback area, structural development is prohibited, and certain activities that are considered a conflicting use, such as vegetation removal, road construction, and timber harvesting, requires a management plan coordinated with the appropriate State or Federal managing agencies. Between January 1, 2013 and December 31, 2018, Polk County reviewed and approved 17 riparian area management plans.

The existing riparian management plan inventory contains the following information: file number, date approved, property owner, location, and water body. In order to improve the riparian management plan inventory, over the next five years all additional management plans added to the inventory will include an estimation of vegetation gains vs. losses. Providing additional information on vegetation gains and losses will allow Polk County to quantify the effectiveness of management plans acting as a filter for pollutants and providing shade to reduce river and stream temperatures.

**Matrix #2- Temperature, Mercury and Bacteria**

Over the previous five years, Polk County has completed, or partnered with other organizations to complete, five riparian restoration projects. Due to limited staff and funding resources, Polk County believed grants remain a viable option for potential riparian restoration projects. Over the next five years, Polk County will continue to explore grant funding for stream bank restoration in County road and park projects. The only proposed change to Matrix #2 is to also include the location and size of all restoration projects under the "Measure" column.

**Matrix #3- Temperature, Mercury and Bacteria**

Over the previous five years, Polk County staff has maintained the stormwater website as a method to provide stormwater information to property owners and construction operators. The stormwater website provides information on stormwater runoff, on-site-retention and infiltration, post-construction best management practices, and maintaining vegetation along riparian areas. In addition, the website provides links to other online resources regarding vegetated/grassed swales, bioretention, porous asphalt, rain barrel construction, and training opportunities. Supporting documents and web links are regularly verified to ensure they are working properly. New training opportunity announcements are added to the web site as they become available. Between January 1, 2013 through December 31, 2017, the stormwater website had a total of 787 page views, 579 of which were unique viewers and 238 were repeat viewers. Polk County believes that maintaining the stormwater website is an effective way to communicate stormwater information to targeted audiences including property owners and construction operators. No changes to Matrix #3 are proposed at this time.

**Matrix #4- Bacteria**

Over the previous five years, Polk County has received 37 complaints from the public regarding either failing or inadequate septic systems. In addition, over the last five years Polk County has

issued 135 septic repair permits. All code enforcement complaints regarding failing systems are treated as extremely high priorities and are investigated by either the Polk County Code Enforcement Officer and/or the Polk County Sanitarian. Polk County believes the existing Code Enforcement procedures for failing septic system complaints remains effective. Therefore, no changes to Matrix #4 are proposed for the next five years.

#### **Matrix #5- Bacteria**

Over the previous five year, Polk County developed a program to geocode all new septic system locations as a way to create an inventory of new system locations and installation dates. Implementation of this program was tested and completed near the end of 2017. However, no new septic system permits have been issued since testing was completed.

Over the next five years, Polk County will continue to build an inventory of all new septic system locations. Polk County will also expand on this program by also geocoding all existing septic systems that received an on-site inspection, such as a repair, alteration, site evaluation, or authorization. Because Polk County has invested resources in developing a program to collect and maintain georeferenced septic system locations, it would be beneficial to expand the inventory to include older systems as well. Expanding this program would require little additional staff time or funding to collect data on existing septic systems that receive an inspection.

In 2017, Polk County issued 50 new septic system construction permits, and 103 other types of septic permits that receive an on-site inspection. By expanding this program to geocode all septic system locations that receive an on-site inspection, approximately 324% more septic systems will be georeferenced on an annual basis.

#### **Matrix #6- Mercury and Bacteria**

Between January 1, 2013 and December 31, 2016, the Polk County Public Works Department conducted monthly meetings to educate staff on erosion and sediment control Best Management Practices (BMP's). In 2017, rather than holding monthly meetings to discuss BMP's, weekly meetings were held when projects were scheduled that would require the use of erosion and sediment control BMP's, such as ditch work or bridge construction. This approach ultimately resulted in more meetings annually, and ensured that proper implementation of BMP's was discussed during the same week that staff was expected to implement those BMP's. Over the next five years, the Public Works Department will continue this approach by conducting meetings to discuss erosion and sediment control BMP's at the beginning of each week when projects are scheduled that involve ditch work, bridge work, or other types of projects located in or near waterways.

In addition, the Polk county Public Works Director evaluates the Operations and Maintenance Plan on an annual basis to determine whether revisions are advisable. Over the next five years, the Public Works Department will continue to evaluate the O&M Plan on an annual basis and make any changes that are determined necessary.

#### **Matrix #7- Mercury and Bacteria**

Over the last five years, Polk County has ensured that restroom facilities are available at all 10 County parks and no septic system repairs or alterations have been required. In addition to County parks, there are also three large Oregon State Parks properties located within Polk County's jurisdiction that are frequented by the public; Sarah Helmick State Park, Fort Yamhill Heritage Area, and Luckiamute Landing Natural Area. Sarah Helmick State Park is located adjacent to the Luckiamute River, Fort Yamhill is located adjacent to Cosper Creek, and

Luckiamute Landing is adjacent to the Luckiamute River. Polk County will amend the existing County Park List and research the amenities that are present at these additional State Parks properties. Because these State Parks properties are all located adjacent to a major receiving water body, it is important to gather more information about potential pollution and contaminant sources that may be occurring at these sites which are regularly visited by the public.

#### **Matrix #8- Mercury and Bacteria**

The Polk County Building Division currently distributes a stormwater brochure with every building permit issued by Polk County. The existing brochure contains information about DEQ's 1200-C permit and provides guidance to property owners and construction operators when a development requires a 1200-C permit. Over the next five years, Polk County will revise this stormwater brochure to also include information on DEQ's 1200-Z permit, which is required for industrial stormwater runoff. Polk County contains several Industrial zoning designations that permit uses which may require a 1200-Z permit. Updating the existing stormwater brochure and continuing to distribute it with all building permits issued by Polk County will increase public awareness of the 1200-Z permit requirements.

#### **Matrix #9- Mercury and Bacteria**

Polk County's Code of Ordinances (PCCO) Section 80.133(1) states, "Building permits shall not be issued until all construction stormwater permits required by the Oregon Department of Environmental Quality have been obtained." Every building permit is reviewed by Polk County staff to verify whether a 1200-C permit would be required by DEQ for the proposed development project. If it is determined that a 1200-C permit is required, then no building permits are issued until evidence is submitted that a 1200-C permit has been obtained. Over the last five years, one development project that disturbed more than 1 acre required a 1200-C permit. This development project involved the construction of single-family dwellings on multiple lots that are part of a common development project. Prior to issuing any building permits, a 1200-C permit issued by DEQ was required. Polk County believes the existing strategy for reducing stormwater runoff from construction sites remains effective. No changes to Matrix #9 are proposed at this time.

#### **Matrix #10- Mercury and Bacteria**

Polk County's Code of Ordinances (PCCO) Section 43.057 prohibits throwing, draining, or otherwise discharging any pollutants, or waters containing pollutants, into the storm sewer system. This ordinance allows Polk County to maintain the legal authority to enforce upon violations. Over the last five years, Polk County has received six complaints of potential unauthorized discharges into the storm sewer system. All complaints submitted are investigated by Polk County's Code Enforcement Officer. Polk County believes the existing ordinance and code enforcement procedures are an effective way prohibit unauthorized discharges and resolve violations. No changes to Matrix #10 are proposed at this time.

#### **Matrix #11- Mercury and Bacteria (Within the Salem UGB)**

Polk County's Stormwater Management Plan (SWMP) was developed to meet the Municipal Separate Storm Sewer System (MS4) permit requirements of the National Pollutant Discharge Elimination System (NPDES). Polk County's NPDES permit expired on February 28, 2012. Polk County submitted a permit renewal package on August 30, 2011, which included an updated

SWMP that would span for the new permit cycle from February 29, 2012 through February 28, 2017. As of the writing of this report, Polk County has not been issued a new NPDES permit, and the second permit cycle expired on February 28, 2017. Polk County received confirmation from DEQ that a permit renewal application was not required, and the current permit must continue to be implemented until further notice.

Over the past five years, Polk County has continued to successfully implement Polk County's SWMP. DEQ is in the process of issuing a new general permit to Phase II MS4 communities, which will ultimately change certain aspects of Polk County's existing SWMP. Once Polk County's updated SWMP is completed, it will be submitted with future annual TMDL reports.

#### **Matrix #12- Mercury**

Polk County has continued to hold two Household Hazardous Waste Events annually. One event is held in Independence and the other is held in Dallas. Since 2013, Polk County has collected nearly 100,000 pounds of household hazardous waste materials, and over 120,000 pounds of latex and oil based paints. This program has been a successful way for the public to properly dispose of hazardous waste and reduce the potential for hazardous waste ending up in local waterways. Over the next five years, Polk County will continue to implement this program and no changes to Matrix #12 are proposed at this time.

#### **Matrix #13- Temperature, Mercury and Bacteria**

Over the previous five years, Polk County created a Targeted Education and Outreach Program (TEOPS), intended to expand outreach efforts to property owners who would benefit from information related to riparian and wetland restoration. This program used Geographic Information System (GIS) to identify properties that contain fish bearing streams, identified on Polk County's Significant Resources Areas (SRA) Map, and are primarily managed for agricultural crop production. The results of this analysis provided approximately 400 mailing addresses associated with these targeted properties. Polk County developed a brochure that contained information on local riparian area setback requirements, management plans, and local resources that are available for riparian restoration projects. Polk County coordinated with watershed groups to determine appropriate parameters for identifying the targeted properties. Watershed groups also reviewed draft copies of the brochure prior to it being finalized. Because the targeted properties mailing list contained more addresses than anticipated, Polk County divided the list into four separate mailing lists that each contained approximately 100 addresses. This allows Polk County staff a better opportunity to provide consultation to those targeted property owners. In 2016 the brochure was sent to the first mailing list and in 2017 the brochure was sent to the second mailing list. To continue these efforts, Polk County will send approximately 100 brochures per year until all targeted properties have received the outreach material.

#### **Matrix #14- Mercury (New)**

Over the next five years, Polk County proposes a new strategy for reducing mercury levels in stormwater caused from roadside litter. Polk County's Public Works Department currently administers the "Adopt-A-Road" program, which is a volunteer based program for cleaning up roadside litter. To advance this existing program, Polk County will update the stormwater website to include forms and general information about the program to the public. Polk County will also publish one advertisement in the local newspaper annually to solicit volunteer participation. Polk County believes that increasing awareness of this program to the general public, local community groups, and local businesses will increase the number of Adopt-A-Road

participants and ultimately will reduce the amount of litter along County roads. Implementation of this strategy will be by the end of 2018.

## Polk County Total Maximum Daily Load Implementation Plan

Revised February 2018

### Introduction

This Total Maximum Daily Load (TMDL) Implementation Plan is designed to reduce river and stream temperatures, and to reduce the levels of bacteria and mercury entering Polk County rivers and streams. This TMDL Implementation Plan will be applied to the area of Polk County that is outside of incorporated city limits. This area is predominantly rural in nature. Properties are primarily used for agricultural, forestry, and rural residential purposes. There are some commercial and industrial uses within unincorporated Polk County which are primarily located within Polk County's 15 unincorporated communities. This TMDL Implementation Plan is intended to implement the Willamette Basin TMDL and comply with OAR 340-042-0080(3). The TMDL is applicable county-wide, and the specific management strategies and timelines that would implement the TMDL are included in the TMDL Implementation Planning Matrix (Exhibit 1).

On account of the predominantly rural nature of the area covered by the TMDL Implementation Plan, the Plan will not be integrated with Polk County's Stormwater Management Program (SWMP). The SWMP is specific to the area within the Salem urban growth boundary (UGB) that is located within Polk County and outside of the incorporated city. The SWMP was developed to meet the Municipal Separate Storm Sewer System (MS4) permit requirements of the National Pollutant Discharge Elimination System (NPDES). Polk County's NPDES permit expired on February 28, 2012. Polk County submitted a permit renewal package on August 30, 2011, which included an updated SWMP that would span for the new permit cycle from February 29, 2012 through February 28, 2017. As of the writing of this report, Polk County has not been issued a new NPDES permit. The second permit cycle expired on February 28, 2017. Polk County received confirmation from DEQ that a permit renewal application was not required, and the current permit must continue to be implemented until further notice. Certain aspects of the SWMP will be applied county-wide as part of the TMDL Implementation Plan; however, technically the two plans will remain separate.

The background to the Willamette Basin TMDL, associated water quality issues, and Polk County's plan for implementation of the TMDL are discussed below.

### Background<sup>1</sup>

According to the Oregon Department of Environmental Quality (DEQ), the Willamette River and numerous tributaries do not currently meet several water quality standards including bacteria, mercury and temperature. These standards assure that beneficial uses of the river and tributaries, such as swimming, fish consumption and fish rearing, are protected. When water quality standards are not met, the federal Clean Water Act requires a TMDL to be established. A TMDL determines how much pollution can be added to the river without exceeding water quality standards.

In September 2006, DEQ issued the Willamette Basin TMDL as an Order, which was approved by the Environmental Protection Agency (EPA). As part of the Willamette TMDL, DEQ developed a Water Quality Management Plan (WQMP) to describe the overall framework for implementing the Willamette Basin TMDL. The WQMP includes a description of activities, programs, legal authorities and other measures for which DEQ and other designated management agencies (DMAs) have regulatory responsibility.

A DMA is "a federal, state or local governmental agency that has legal authority of a sector or source contributing pollutants, and is identified as such by the Department of Environmental

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<sup>1</sup> Oregon Department of Environmental Quality May 2007. TMDL Implementation Plan Guidance – for State and Local Government Designated Management Agencies, p. C1-C2. Available online at: <http://www.deq.state.or.us/wq/tmdls/docs/impl/07wq004tmdlimplan.pdf>



Quality in a TMDL.” TMDL implementation activities will be carried out under existing regulatory authorities, programs and water quality restoration plans as well as by TMDL implementation plans that certain DMAs will develop in fulfillment of the requirements of this TMDL.

Along with other counties, cities, and agencies in the Willamette Basin, Polk County has been named by DEQ as a DMA in that it has legal authority over a sector or source contributing pollutants within those sections of Polk County outside of the city limits of Salem, Dallas, Monmouth, Independence, Falls City, and Willamina, and further excluding those properties under the jurisdiction of the Confederated Tribes of Grand Ronde. Therefore, Polk County is required to develop a TMDL implementation plan for review and approval by DEQ.

TMDLs, the WQMP, and associated implementation plans and activities are designed to restore water quality to comply with water quality standards. In this way designated beneficial uses, such as aquatic life, drinking water supplies, and water contact recreation, will be protected. When implemented, the TMDL will result in a cleaner, healthier Willamette River for current and future generations.

### **Water Quality Issues<sup>2</sup>**

Receiving waterbodies within the jurisdiction of Polk County include the Willamette River, Luckiamute River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County.

### **TMDL Pollutants and Potential Sources of Pollutants within Polk County’s Jurisdiction<sup>3</sup>**

The area within Polk County’s jurisdiction that is covered under this TMDL Implementation Plan is primarily rural. TMDL pollutants within Polk County’s jurisdiction as well as the primary suspected sources of the pollutants are:

- **Warmer in-stream Temperatures:** Likely caused by historic removal of shade-producing vegetation along streams.
- **Bacteria:** The likely sources are failing septic systems and animal feces that are delivered to streams by stormwater run-off.
- **Mercury:** Found in sediments. The likely sources are erosion and stormwater run-off that contains atmospherically deposited mercury. Household hazardous waste is another potential source.

### **Concerns Associated with Pollutants<sup>4</sup>**

- **Temperature:** At times, the Willamette River and its tributaries are too warm to support healthy salmon and trout. Some of these cold water fish including lower Columbia Coho, spring Chinook, winter steelhead, and bull trout are threatened with extinction and elevated stream temperatures have contributed to their decline. Warm water interferes with adult salmon and trout migration and spawning. Warm water also decreases chances of juvenile survival, affects egg and embryo development, alters juvenile fish growth rates, and decreases their ability to compete with temperature-tolerant fish species for habitat and food. Salmon and trout are also more susceptible to disease when water temperatures are warmest.

<sup>2</sup> Oregon Department of Environmental Quality, May 2007. TMDL Implementation Plan Guidance – for State and Local Government Designated Management Agencies, p. C1-C2. Available online at: <http://www.deq.state.or.us/wq/tmdls/docs/impl/07wq004tmdlimplplan.pdf>

<sup>3</sup> Ibid, p. C2-C3. Also: Oregon Department of Environmental Quality, September 2006. Fact Sheet: Reducing Bacterial Pollution in the Willamette Basin. Also: Oregon Department of Environmental Quality, February 2007. Fact Sheet: Reducing Mercury Pollution in the Willamette River.

<sup>4</sup> Oregon Department of Environmental Quality, May 2007. TMDL Implementation Plan Guidance – for State and Local Government Designated Management Agencies, p. C3.

- **Bacteria:** People can be affected by bacteria present in water when enjoying water activities such as swimming, wading, wind surfing, water skiing, boating, or fishing. Ingestion or contact with water contaminated with bacteria can cause skin and respiratory ailments, gastroenteritis and other illnesses in humans.
- **Mercury:** The accumulation of mercury in fish is a well recognized environmental problem throughout the United States. Mercury is a potent toxin that can cause damage to the brain and nervous system. Small children and the developing fetus are most sensitive to mercury's toxic effects. The primary way that humans are exposed to mercury is through the consumption of fish or seafood containing elevated levels of mercury.

### **TMDL Implementation**

This Total Maximum Daily Load (TMDL) Implementation Plan has been created to meet the requirements of OAR 340-042-0080(3), which states:

#### **OAR 340-042-0080(3):**

*Persons, including DMAs other than the Oregon Department of Forestry or the Oregon Department of Agriculture, identified in a WQMP as responsible for developing and revising sector-specific or source-specific implementation plans must:*

- (a) Prepare an implementation plan and submit the plan to the Department for review and approval according to the schedule specified in the WQMP. The implementation plan must:
  - (A) Identify the management strategies the DMA or other responsible person will use to achieve load allocations and reduce pollutant loading;*
  - (B) Provide a timeline for implementing management strategies and a schedule for completing measurable milestones;*
  - (C) Provide for performance monitoring with a plan for periodic review and revision of the implementation plan;*
  - (D) To the extent required by ORS 197.180 and OAR chapter 340, division 18, provide evidence of compliance with applicable statewide land use requirements; and*
  - (E) Provide any other analyses or information specified in the WQMP.**
- (b) Implement and revise the plan as needed.*

### **TMDL Implementation Management Strategies**

The TMDL Implementation Planning Matrix, included as Exhibit 1, describes the management strategies and timelines that Polk County will use to continue implementation of existing efforts, as well as new strategies, intended to address the suspected sources of temperature, bacteria, and mercury pollution to county rivers and streams. The management strategies and their implementation timelines have been developed to comply with OAR 340-042-0080(3)(A)-(B). Polk County will make efforts to reduce bacteria and mercury from entering rivers and streams by implementing measures to increase the quality and decrease the quantity of stormwater runoff. Polk County will seek to reduce stream temperature by implementing Polk County's riparian setback ordinance in order to promote vegetation growth and shading along county rivers and streams.

This TMDL Implementation Plan covers the area of Polk County outside of incorporated city limits. This area is primarily rural in nature; however, there are neighborhoods in Polk County within the Salem UGB, but outside the incorporated city limits, that are developed to urban levels. Consequently, Polk County is implementing a Stormwater Management Program

(SWMP) that covers those areas and is specific to properties in the Salem UGB that are outside of the incorporated city limits. The SWMP (Exhibit 3) was developed to meet the Municipal Separate Storm Sewer System (MS4) permit requirements of the National Pollutant Discharge Elimination System (NPDES). DEQ is in the process of administering a new general permit for MS4 Phase II communities, which may replace Polk County's existing individual permit. Until a new general permit is issued by DEQ, Polk County will continue to implement the existing SWMP.

The SWMP includes strategies that address the mercury and bacteria components of the TMDL within the Salem UGB and outside of the incorporated city limits. The SWMP contains management strategies that address the "six minimum control measures." The six minimum control measures to address stormwater quantity and quality are: 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. The SWMP includes erosion and sediment control measures intended to decrease the quantity, and increase the quality of stormwater that runs into county creeks within the Salem UGB. Implementation of the strategies described in the SWMP, particularly the programs designed to control erosion and sediment flow, will address the bacteria and mercury TMDL within the Salem UGB. The riparian setbacks described in detail below will act to decrease stream water temperature within the Salem UGB, as well as throughout the county.

The SWMP will remain a separate program from this TMDL Implementation Plan, and remain specific to the Salem UGB. DEQ's Water Quality Management Plan, which specifies what DMAs' TMDL Implementation Plans must entail, requires that the "six minimum (stormwater) control measures" be implemented as "Urban/Residential Storm Water Control Measures."<sup>5</sup> As discussed above, the area within Polk County's jurisdiction is predominantly rural. The areas developed to urban residential levels are located in the Salem UGB, and are already covered under the SWMP. Therefore, the six minimum control measures are already being implemented in those urban/residential areas within Polk County's jurisdiction. This TMDL Implementation Plan does not expand strategies that address all of the six minimum control measures county-wide; however, it does apply specific management strategies described in the SWMP county-wide. These include the measures that Polk County believes will enhance stormwater quality in rural areas. As described in the TMDL Implementation Planning Matrix, included as Exhibit 1, the TMDL Implementation Plan includes erosion and sediment control measures designed to increase awareness among construction operators of when they need to obtain a 1200-C permit, and increase awareness among industrial site owners when they need to obtain a 1200-Z permit. As part of the TMDL Implementation Plan, Planning staff will implement Polk County's erosion and sediment control ordinance, Polk County Code of Ordinances (PCCO) 80.133(1), and Polk County's ordinance that prohibits non-stormwater discharges (PCCO 43.057). These erosion and sediment control measures are intended to reduce the levels of bacteria and mercury entering county streams.

Polk County developed an Operations and Maintenance (O&M) Plan to address stormwater issues that arise during road, ditch, and bridge construction and maintenance. The O&M Plan contains stormwater management best management practices (BMPs) designed to decrease the quantity and increase the quality of stormwater runoff associated with road, ditch, and bridge construction and maintenance. The O&M Plan is currently being implemented, and Public Works staff reviews the Plan on an annual basis to determine if changes should be made to the BMPs in order to help reduce the levels of bacteria and mercury that enter county rivers and streams. Polk County Planning staff will also continue to coordinate with the Public Works Department to explore grant funding opportunities to implement stream restoration strategies as a part of County road and park projects.

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<sup>5</sup> Oregon Department of Environmental Quality, September 2006. Willamette Basin TMDL; Chapter 14: Water Quality Management Plan, p. 22. Available online at: <http://www.deq.state.or.us/wq/TMDLs/docs/willamettebasin/willamette/chpt14wqmp.pdf>

The TMDL Implementation Plan includes a strategy to continue implementation of the riparian and wetland setbacks required by Chapter 182 of the Polk County Zoning Ordinance (PCZO). See Exhibit 4. The riparian and wetland setbacks should act to reduce stream temperature throughout Polk County's jurisdiction, as well as provide erosion and sediment control that reduces the levels of bacteria and mercury entering Polk County's rivers and streams. The riparian and wetland setback requirements include management standards for development in proximity to rivers, streams, lakes, and other wetlands identified on the National Wetlands Inventory (NWI) maps<sup>6</sup>; which have been incorporated into the Polk County Significant Resources Area Map. Rivers and streams identified on the Polk County Significant Resources Area Map must have a riparian management area that averages three times the stream width, but it shall not average less than 25 feet or more than 100 feet. Stream width is the average of the main channel width of the stream during its high water level flow. The riparian management area for lakes and significant wetlands identified on the Polk County Significant Resources Area Map also ranges from 25 to 100 feet based on the size of the lake or wetland. PCZO 182.050(B), which is included in Exhibit 4, prohibits all structural development within the riparian management area. Any non-structural development, with limited exceptions, that entails vegetation removal, road construction, or timber harvest (excepting those operations conducted under provisions of the Forest Practices Act), requires that the property owner prepare and implement a management plan designed to protect the riparian area that meets the requirements of PCZO 182.040(E). The management plan must be coordinated with the applicable state and federal managing agencies. The removal of non-native vegetation and invasive species within the riparian setback area is included in the activities that require a property owner to create a management plan in coordination with the Oregon Department of State Lands (DSL) and, if adjacent to a fish-bearing stream, with the Oregon Department of Fish and Wildlife (ODFW). A management plan in and of itself does not prohibit a property owner from removing invasive species. It does; however, require the property owner to consider such factors as the potential erosion impacts of the vegetation removal on the riparian area. If DSL or ODFW determines that removing invasive species would cause substantial erosion, the management plan could require that the area be stabilized with new plantings. The management plan requirements are not intended to prohibit property owners from removing invasive species, but are designed to require property owners to consider and account for the potential negative impacts associated with invasive species removal, such as increased sedimentation and erosion.

The riparian and wetland requirements listed in PCZO Chapter 182 provide protection to rivers and streams that are near construction sites of all sizes; including those of less than one acre and not covered by a DEQ 1200-C permit. Riparian and wetland setbacks provide natural filtration, shade, and erosion and sediment control. The riparian protections require that all trees be retained with the exception of dead, diseased, or dying trees. By providing shade and erosion and sediment control, these riparian areas should reduce river and stream temperature as well as bacteria and mercury pollution that enters county rivers and streams. PCZO Chapter 182 is applied at all times. Planning staff provides outreach and education to property owners about the riparian setback and management plan requirements when discussing potential projects over the phone or at the counter, and when property owners apply for planning or building permits. Those standards are enforced through the Code Enforcement Program in response to complaints filed with the County. Projects that require a Land Use Compatibility statement from Polk County is also an effective tool to ensure that management plan requirements are being met. As a part of the second five-year permit cycle, Polk County created a Targeted Education and Outreach Program, intended to expand outreach efforts to property owners who would benefit from information related to riparian and wetland restoration. This program used a Geographic Information System (GIS) to identify properties that contain fish bearing streams, identified on Polk County's SRA Map, and are primarily managed for agricultural crop production. The results of this analysis provided approximately 400 mailing addresses associated with these

<sup>6</sup> Polk County National Wetland Inventory Maps are available for review in the Polk County Community Development Department through Polk County's GIS. They are also available online at <http://wetlandsfws.er.usgs.gov/wtlnds/launch.html>.

targeted properties. Polk County developed a brochure that contained information on riparian area setbacks, management plans, and local resources that are available for riparian restoration projects. Polk County coordinated with watershed groups to determine appropriate parameters for identifying the targeted properties. Watershed groups also reviewed draft copies of the brochure prior to it being finalized. Because the targeted properties mailing list contained more addresses than anticipated, Polk County divided the list into four separate mailing lists that each contained approximately 100 addresses. This allowed Polk County staff a better opportunity to provide additional consultation to the targeted property owners. In 2016 the brochure was sent to the first mailing list and in 2017 the brochure was sent to the second mailing list. To continue these efforts, Polk County will send the brochure to the third and fourth mailing lists to ensure that all targeted properties receive the outreach material.

As part of the second five-year permit cycle, planning staff maintained an inventory of riparian management plans as a resource to track improvements to county riparian areas. Over the next 5 year permit cycle, Polk County will update their tracking methods to include an estimated size of riparian restoration projects that are associated with each riparian management plan. Including the size of riparian vegetation gains and losses will provide more qualitative information that the County can use to measure the effectiveness of requiring management plans within riparian management areas.

Polk County currently manages 10 parks which are listed in Exhibit 5. Each park provides restroom facilities. Buell Park contains restrooms that are connected to a septic system. Polk County will maintain that septic system within acceptable DEQ parameters so as to minimize the probability of bacteria entering nearby Mill Creek. The other nine parks are served by either a pit toilet or a "port-a-potty." Those toilets are pumped regularly when the parks are open. Parks officially open in late May and close September 30. Therefore, county parks are closed during the months of the year that experience high levels of rainfall and stormwater run-off. Additionally, county park maintenance is subject to the riparian setback standards listed in PCZO Chapter 182 (Exhibit 4). Also, road construction is listed as a conflicting use within identified significant water areas, wetlands, watersheds and groundwater resources areas. Therefore, county road construction within identified significant wetlands must be conducted in accordance with the applicable requirements specified in PCZO Chapter 182. These management strategies should act to reduce stream temperatures and the level of bacteria and mercury that enters streams from county parks. In addition to County parks, there are three large Oregon State Parks properties located within Polk County's jurisdiction; Sarah Helmick State Park, Fort Yamhill Heritage Area, and Luckiamute Landing Natural Area. Sarah Helmick State Park is located adjacent to the Luckiamute River, Fort Yamhill is located adjacent to Cosper Creek, and Luckiamute Landing is adjacent to the Luckiamute River. Polk County will amend the existing County Park List, Exhibit 5, and research the amenities that are present at these additional State Parks properties. Because these State Parks properties are all located adjacent to a major receiving water body that are regularly visited by the public, it is important to gather more information about potential pollution and contaminant sources that may be occurring at these sites.

#### **Public Involvement Opportunities During Plan Acceptance and Implementation**

Planning staff presented the TMDL Implementation Plan to the Polk County Board of Commissioners for acceptance at a public meeting on April 6, 2009. Regarding implementation, Polk County holds one public meeting each year where the City of Salem, the Glenn-Gibson Watershed Council, and the general public are invited to learn about and provide comments on implementation of the SWMP and the TMDL Implementation Plan. Annual public meetings are noticed to the local newspaper for publication and announced on Polk County's website. Polk County has also coordinated with local watershed groups to implement BMP 13, the Targeted Education and Outreach Program. Over the next 5 years, Polk County will increase public involvement by providing a draft copy of the TMDL Implementation Plan and annual report on Polk County's stormwater website at least 2 weeks prior to submission to DEQ. Comments and

input provided by the public will be considered prior to submitting the final annual report and TMDL Implementation Plan to DEQ.

### **Performance Monitoring & Adaptive Management**

OAR 340-042-0080(3)(a)(C) requires that Polk County “provide for performance monitoring with a plan for periodic review and revision of the implementation plan.” The TMDL Implementation Planning Matrix (Exhibit 1) describes performance measures for each management strategy. Polk County will track and monitor those measures and use that information to make changes to the TMDL Implementation Plan as necessary and appropriate. In order to comply with OAR 340-042-0080(3)(b), Polk County will also annually review progress toward implementing the management strategies described in Exhibit 1. Polk County will send an annual progress report to DEQ by a date agreed to by DEQ. The annual progress report will consist of a copy of the TMDL Implementation Planning Matrix, included in this plan (Exhibit 1), with the status column updated to reflect the year’s activities and any other relevant information. In these annual progress reports, Polk County will also include a description of any changes that have been made to the Plan as a result of data gathered through performance monitoring. Every five years, Polk County will prepare and send to DEQ an evaluation and review report of the Implementation Plan that will summarize and evaluate the projects completed within the previous five years of the Plan’s implementation. The Implementation Plan review, submitted every fifth year, will substitute for the annual status report that year. It will also indicate what changes, if any, will be made to the Plan in response to any DEQ revisions of the TMDL.

### **Land Use Compatibility**

This TMDL Implementation Plan was created by Polk County Planning staff in coordination with the Public Works Department. Planning staff reviewed the Plan for consistency with the Polk County Comprehensive Plan, the Polk County Zoning Ordinance, and the Polk County Subdivision and Partition Ordinance, and found that the proposed TMDL Implementation Plan would be consistent with those documents. A land use compatibility statement is included as Exhibit 2.

### **Fiscal Analysis**

As required by OAR 340-042-0080(3)(a)(C) and the WQMP, Polk County is directed to conduct a fiscal analysis to determine what additional resources are needed to implement the management strategies and to identify possible sources of funding. Certain management strategies identified in the TMDL Implementation Planning Matrix expand upon, or include, activities that will be conducted as part of the Polk County Stormwater Management Program (SWMP). As such, no additional funding will be required to include those activities in the TMDL Implementation Plan. The other components of the plan will be added to the work load of Polk County staff.

### **Exhibits**

- Exhibit 1: TMDL Implementation Planning Matrix (Revised February 2018)
- Exhibit 2: Land Use Compatibility Statement (Submitted October 2008)
- Exhibit 3: Polk County Stormwater Management Plan (SWMP), August 2011 (Submitted April, 2013)
- Exhibit 4: Polk County Zoning Ordinance Chapter 182. Section 182.050(B) describes the riparian and wetland setback. Section 182.040(E) describes the management plan criteria (Submitted October 2008)
- Exhibit 5: Polk County Parks List (Submitted October 2008)

Polk County TMDL Implementation Management Strategies Tracking Matrix  
February 2018

Receiving Waterbodies: Willamette River, Lucibamate River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| PROBLEM/ISSUE   | SOURCE   | SYMPTOMS   | HOW  | MEASURES  | SEVERITY   | BENCHMARK   | ADDITIONAL RESOURCES NECESSARY TO IMPLEMENT STRATEGY & HOW RESOURCES WILL BE OBTAINED | FUNDING SOURCE OF FOR ADDITIONAL REQUIRED RESOURCES |
|---|--|--|--|---|--|---|---|---|
| 1<br>What TMDL pollutant(s) does this strategy address?<br>Temperature, Mercury, & Bacteria | What suspected sources of this pollutant are under Polk County's jurisdiction<br>Solar radiation & stormwater runoff | What is being done, or what is being done, or reduce and/or control pollution emanating from this source?<br>Continue implementation of the riparian setbacks required by PCZO 182.050(B). Riparian vegetation provides shade over rivers and streams, which reduces river and stream temperatures. Riparian areas also act as a filter for pollutants including mercury and bacteria. | Specifically, how will this be done?<br>Require riparian setbacks during planning and building permit review. Maintain riparian setbacks when maintaining parks. | How will Polk County demonstrate successful implementation or completion of this strategy?<br>The Planning Division will maintain an accessible inventory of county riparian management plans. The inventory will contain the following information: location, affected water bodies, and an estimated size of riparian vegetation gain vs. loss. | When will the strategy begin? Be completed?<br>Ongoing | What intermediate goals will be achieved, and by when, to know progress is being made?<br>N/A | None  | N/A   |
| 2<br>Temperature, Mercury, & Bacteria   | Solar radiation & stormwater runoff  | Explore grant funding for stream bank restoration in County road and park projects. Riparian vegetation provides shade over rivers and streams, which reduces river and stream temperatures. Riparian areas also act as a filter for pollutants including mercury and bacteria.  | Planning and Public Works staff will explore grant opportunities in order to raise funds for stream restoration during County road and park projects             | Number, type, location and size of restoration projects completed each year   | Ongoing  | N/A   | Restoration projects may require additional funding                                   | Riparian area restoration grants                    |
| 3<br>Temperature, Mercury, & Bacteria   | Solar radiation & stormwater runoff  | Maintain a stormwater website as a method to provide information to the public. This information will include strategies for home owners and construction operators to minimize the quantity and maximize the quality of stormwater that leaves their property.  | Planning staff will maintain the stormwater website  | Number of hits to the website   | Ongoing  | N/A   | None  | N/A   |

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

Receiving Waterbodies: Willamette River, Luckiamute River, Rickreall Creek, Gibbon Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

| POB/CU/NIN   | SOURCE  | STRATEGY   | HOW  | MEASURE   | MILESTONE                                   | BENCHMARK   | DISCAPABILITIES   | Funding Source of for additional resources |
|--|---|--|--|---|---|---|---|--|
| What TMDL pollutant(s) does this strategy address? | What suspected sources of this pollutant are under Polk County's jurisdiction | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source? | Specifically, how will this be done?   | How will Polk County demonstrate successful implementation or completion of this strategy?  | When will the strategy begin? Be completed? | What intermediate goals will be achieved, and by when, to know progress is being made?  | Additional resources necessary to implement strategy & how resources will be obtained |  |
| 4  | Bacteria  | Enforce upon complaints of failing septic systems  | Receive complaints from the public and direct to the Code Enforcement Officer  | All complaints will be investigated   | Ongoing                                     | N/A   | None  | N/A  |
| 5  | Bacteria  | Require all applicable permits for the siting, construction, alteration, and repairs of septic systems         | Polk County Environmental Health Specialist will review all site evaluation, construction, alteration, and repair permits and track system locations | Polk County will expand their existing program that geocodes new septic system locations to also geocode all existing septic system locations that require an on-site inspection as part of the permitting process, such as repairs and alterations. Expanding the septic system inventory will allow older systems to be georeferenced as well as new septic systems, and provide information about installation, repair, and alteration dates. The inspector will be able to provide notes about their inspection and this information can be used to track a system's age, condition, and location in a digital mapped format. | Ongoing                                     | Polk County will continue to record the GPS location and maintain the data for all new septic system locations. Polk County will begin to record the GPS location of existing septic systems that receive an on-site inspection by the end of 2019. | None  | N/A  |



Polk County TMDL Implementation Management Strategies Tracking Matrix  
February 2018

Receiving Waterbodies: Willamette River, Luckiamute River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| PROBLEM  | SOURCE  | STRATEGY   | HOW  | MEASURE  | IMPLEMENT                                   | BENEFITS   | ADDITIONAL RESOURCES  | FUNDING SOURCE                                      |
|--|---|--|--|--|---|--|---|---|
| What TMDL pollutant(s) does this strategy address? | What suspected sources of this pollutant are under Polk County's jurisdiction | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source? | Specifically, how will this be done?   | How will Polk County demonstrate successful implementation or completion of this strategy?   | When will the strategy begin? Be completed? | What intermediate goals will be achieved, and by when, to know progress is being made? | Additional resources necessary to implement strategy & how resources will be obtained | Funding source of for additional required resources |
| 6<br>Mercury & Bacteria                            | County road, ditch, and bridge construction and maintenance                   | Implement erosion and sediment control BMPs during county road, ditch and bridge construction and maintenance  | Public Works staff will implement the BMPs in the Polk County O&M Plan as appropriate during Public Works operations | Public Works will hold weekly meetings when projects are scheduled that require the implementation of sediment and erosion control BMP's. Meeting topics will educate staff on proper sediment and erosion control BMP implementation. Public Works will also evaluate the O&M Plan on an annual basis to determine if revisions are advisable in order to minimize the Public Works Department's impact on County waterways | Ongoing                                     | N/A  | None  | N/A   |
| 7<br>Mercury & Bacteria                            | Stormwater runoff from County and Oregon State Parks properties               | Maintain stormwater quality at public parks  | Ensure availability of restroom facilities at County and Oregon State Parks properties. Maintain riparian areas.     | Polk County will track the number of repairs or septic alterations at County and Oregon State Parks properties in order to track the functionality of park septic systems  | Ongoing                                     | N/A  | None  | N/A   |

Polk County TMDL Implementation Management Strategies Tracking Matrix  
February 2018

Receiving Waterbodies: Willamette River, Luckiamute River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| TOXICANT   | SOURCE  | STRATEGY   | HOW   | INDICATOR  | TIMELINE                                    | BENCHMARK  | ADDITIONAL RESOURCES   | FUNDING SOURCE OF ADDITIONAL RESOURCES |
|--|---|--|---|--|---|--|--|--|
| What TMDL pollutant(s) does this strategy address? | What suspected sources of this pollutant are under Polk County's jurisdiction | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source? | Specifically, how will this be done?  | How will Polk County demonstrate successful implementation or completion of this strategy? | When will the strategy begin? Be completed? | What intermediate goals will be achieved, and by when, to know progress is being made? | Additional resources necessary to implement strategy & how resources will be obtained                                  |  |
| 8 Mercury & Bacteria                               | Stormwater runoff from construction sites and industrial sites.               | Increase awareness of need for 1200-C and 1200-Z permit requirements   | Update the existing stormwater brochure to include both 1200-C and 1200-Z permit requirements. Have the brochure available at the Polk County Community Development desk, on the Polk County stormwater website, and distribute with all building permits. Revise the brochure as needed. | Number of brochures distributed  | Ongoing                                     | N/A  | Resources associated with printing brochures   | Building permit fees                   |
| 9 Mercury & Bacteria                               | Stormwater runoff from construction sites                                     | Implement Polk County's Erosion and Sediment Control Protections in PCCO 80.133                                | Apply Polk County Code of Ordinances (PCCO) Section 80.133(1) which requires building permit applicants to obtain all necessary DEQ permits.  | Application of PCCO 80.133(1) to all applicable building permits                           | Ongoing                                     | N/A  | This review will be accommodated within the existing plan review process.  | Building permit fees                   |
| 10 Mercury & Bacteria                              | Non-stormwater discharges to the storm drainage system                        | Implement Polk County's unauthorized discharge restrictions in PCCO 43.057                                     | The Polk County Code Enforcement Officer will follow up on all complaints of potential unauthorized discharges into the storm sewer system as described in PCCO 43.057  | Investigation into all complaints of violations to PCCO 43.057                             | Ongoing                                     | N/A  | Investigation into complaints of non-compliance with PCCO 43.057 will be absorbed within the Code Enforcement Program. | N/A                                    |
| 11 Mercury & Bacteria (Within the Salem UGB)       | Stormwater runoff in the Salem UGB  | Implement SWMP for the area within Polk County and the City of Salem UGB.                                      | Adhere to the implementation schedule in the SWMP   | Completion of projects as specified in the SWMP  | Timelines specified in the SWMP             | Benchmarks specified in the SWMP   | Costs associated with acquiring or printing brochures. Staff time.   | Fees & General Fund                    |
| 12 Mercury   | Household hazardous waste   | Continue implementation of the Polk County Household Hazardous Waste Program                                   | Hold two events per year at various locations throughout Polk County  | Two Household Hazardous Waste events held each year  | Ongoing                                     | N/A  | None   | N/A                                    |

Polk County TMDL Implementation Management Strategies Tracking Matrix  
February 2018

Receiving Waterbodies: Willamette River, Luckiamute River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| IMPLEMENTATION                                     | SOURCES   | STRATEGIES   | HOW   | MEASURE  | IMPLEMENT  | BENCHMARK   | ADDITIONAL RESOURCES  | FUNDING SOURCE OF FOR ADDITIONAL REQUIRED RESOURCES |
|--|---|--|---|--|--|---|---|---|
| What TMDL pollutant(s) does this strategy address? | What suspected sources of this pollutant are under Polk County's jurisdiction | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source? | Specifically, how will this be done?  | How will Polk County demonstrate successful implementation or completion of this strategy?                                   | When will the strategy begin? Be completed?  | What intermediate goals will be achieved, and by when, to know progress is being made?  | Additional resources necessary to implement strategy & how resources will be obtained | Funding Source of for additional required resources |
| 13 Temperature, Mercury, & Bacteria                | Solar radiation & stormwater runoff   | Continue implementation of Polk County's Targeted Education and Outreach Program                               | Polk County Community Development staff has generated a mailing list of targeted properties that contain riparian waterways along fish bearing streams and are primarily managed for agricultural crop production. Staff created a brochure intended to be sent to these targeted properties with information about riparian area setback requirements, management plan criteria, and local resources available for riparian restoration. | Approximately 100 brochures will be sent per year until all of the targeted properties have received the outreach materials. | The educational brochure will be sent to the entire IEOPS mailing list by the end of 2019. | N/A   | Costs associated with printing and mailing. Staff time.                               | Fees & General Fund                                 |
| 14 Mercury   | Roadside litter.  | Increase awareness and solicit participation for Polk County's Adopt-A-Road program.                           | Provide information about Polk County's Adopt-A-Road program on the Polk County stormwater web page. Post an advertisement in a local newspaper once per year containing information on the program.  | Update Polk County's stormwater website. Provide an advertisement in the local newspaper once per year.                      | Ongoing  | The Polk County stormwater website will be updated and the first annual ad will be published in the local newspaper by the end of 2018. | Costs associated with publishing an ad in the local newspaper. Staff time.            | Fees & General Fund                                 |

**Land Use Compatibility statement findings and conclusions for the Polk County Total Maximum Daily Load (TMDL) Implementation Plan**

APPLICABLE PROVISIONS AND STAFF FINDINGS

**Comprehensive Plan:** Planning staff has reviewed the goals, policies and objectives of the Comprehensive Plan and has identified the following policies as applicable to implementing the TMDL Implementation Plan. Staff makes the following findings:

Natural Resources Policies:

3.1 *Polk County will cooperate with governmental agencies to conserve and protect identified fish and wildlife habitat. [Element D – Natural Resources, Policy 3.1]*

Staff Findings: The TMDL Implementation Plan would require implementation of management strategies intended to reduce pollutants in stormwater runoff. The TMDL Implementation Plan also contains a component that memorializes the administration of a riparian setback. The riparian setback outlined in PCZO 184.050(B) acts to protect streamside vegetation. These strategies are intended to reduce the water temperature and amount of bacteria and mercury that enter county streams. These strategies would protect fish and wildlife habitat in and surrounding streams in the permit area. Therefore, the SWMP is composed of programs that are compatible with Policy 3.1.

3.3 *Polk County will continue to recognize the importance of riparian vegetation as fish and wildlife habitat as well as erosion, sediment and run-off control and shall protect it through implementing ordinances. [Element D – Natural Resources, Policy 3.3]*

Staff Findings: Chapter 182 of the PCZO requires development setbacks from riparian areas, as well as coordination with applicable State and federal managing agencies in the creation of management plans for conflicting uses in identified fish and wildlife significant resources areas. The TMDL Implementation Plan would continue the implementation of Chapter 182 of the PCZO. A component of the TMDL Implementation Plan is to increase awareness of the need to obtain a NPDES 1200-C permit, through the Oregon Department of Environmental Quality, which requires erosion and sediment control standards for construction activities greater than or equal to one acre. The TMDL Implementation Plan also includes continuing the implementation of the Polk County Stormwater Management Program (SWMP) in the Salem urban growth boundary. The SWMP includes strategies for erosion and sediment control with construction and post-construction activities. As such, the TMDL Implementation Plan is consistent with this comprehensive plan policy.

3.4 *Polk County will recognize the value of fish and wildlife and protect identified significant (I-C) fish and wildlife resources through application of a significant resource areas overlay zone and implementing ordinance. [Element D – Natural Resources, Policy 3.4]*

Staff Findings: This section of the Comprehensive Plan is implemented through Chapter 182 of the Polk County Zoning Ordinance. The TMDL Implementation Plan would not affect the requirements and implementation of PCZO Chapter 182. Activities that are identified as conflicting with fish and wildlife significant resources would still require coordination with applicable State and federal

## Polk County TMDL Implementation Plan LUCS Findings

managing agencies and the creation of management plans, as detailed in PCZO Chapter 182. Therefore, the TMDL Implementation Plan is compatible with this comprehensive plan policy.

- 6.1 *Polk County will encourage the implementation of the water quality management plans of governmental agencies and may seek implementation measures at the County level that provide for the management of stream corridors, erosion, sedimentation and water quality.* [Element D – Natural Resources, Policy 6.1]

Staff Findings: The TMDL Implementation Plan is intended to implement the Willamette Basin TMDL and to comply with OAR 340-042-0080(3). The TMDL Implementation Plan consists of management strategies, including erosion and sediment control measures that will be employed by Polk County to reduce stream water temperature, bacteria, and mercury levels. As a result, the TMDL Implementation Plan is compatible with this comprehensive plan policy.

### Land Capability/Resource Quality Policies:

- 3.1 *Polk County will cooperate with cities and governmental agencies to achieve high water quality as defined by State and Federal standards.* [Element F - Land Capability/Resource Quality, Policy 3.1]

Staff Findings: The TMDL Implementation Plan includes implementation of the SWMP within the Salem urban growth boundary. Several components of the SWMP are currently and will be conducted in cooperation with the City of Salem. Collaboration with the City of Salem in the implementation of the SWMP would help the County to achieve high water quality; thereby complying with this section of the Comprehensive Plan.

- 3.3 *Polk County will support the water quality management plans and programs of governmental agencies by regulating land uses, encouraging improved treatment of point sources of pollution and controlling of non-point sources of pollution.* [Element F - Land Capability/Resource Quality, Policy 3.3]

Staff Findings: Polk County will continue to regulate land uses in riparian areas by implementing Chapter 182 of the PCZO. The remaining portions of the TMDL Implementation Plan do not directly regulate land uses but are intended to encourage practices that will increase the quality of stormwater, and regulate the siting and construction of septic systems. These efforts are intended to control non-point sources of water pollution. As such, the strategies listed in the TMDL Implementation Plan would be compatible with this comprehensive plan policy.

- 3.4 *Polk County will cooperate with the DEQ in applying State laws and standards for evaluating potential septic tank drainfield sites in order to provide for public safety and high water quality.* [Element F – Land Capability/Resource Quality, Policy 3.4]

Staff Findings: The Polk County Environmental Health Division is responsible for complying with Oregon Revised Statutes, Oregon Administrative Rules and County Nuisance Code. Section 43.085(1) of the Polk County Code prohibits the discharge of raw or partially treated sewage onto the ground surface or into the waters of the State of Oregon. The management strategies that

compose the TMDL Implementation Plan would not discontinue these actions by the Polk County Environmental Health Division, and would be compatible with this comprehensive plan policy.

- 3.5 *Polk County will encourage development of water management systems to effectively reduce the problems of erosion, sedimentation, flooding and soil wetness. [Element F – Land Capability/Resource Quality, Policy 3.4]*

Staff Findings: The TMDL Implementation Plan would include a strategy to inform construction operators of the need to obtain a NPDES 1200-C permit from the Oregon DEQ for projects that disrupt one or more acres of land. The SWMP, which is applicable to activities in the Salem urban growth boundary, also contains programs that would identify and then require compliance with post-construction BMPs. These BMPs would act to reduce pollution from stormwater runoff from new development and redevelopment projects that disturb one acre or more. The restrictions on structural and nonstructural development within the floodplain and floodway would continue in accordance with Chapter 178 of the PCZO. The TMDL Implementation Plan is compatible with this comprehensive plan policy.

- 3.6 *Polk County will cooperate with designated agencies to develop erosion and sediment control standards and specifications for use by Polk County in connection with land development plans and the federal Water Pollution Control Act and Amendments. [Element F – Land Capability/Resource Quality, Policy 3.6]*

Staff Findings: The TMDL Implementation Plan includes strategies to encourage erosion and sediment control. These strategies include increasing awareness of the need for a NPDES 1200-C permit for development activities that disrupt one or more acres of land. The SWMP, which is applicable to properties within the Salem urban growth boundary, also contains programs that would identify and then require compliance with post-construction BMPs. These BMPs would act to reduce pollution from stormwater runoff from new development and redevelopment projects that disturb one acre or more of land. Polk County is currently and would continue cooperate with the City of Salem to implement aspects of the SWMP. These programs are compatible with this comprehensive plan policy.

- 3.7 *Polk County will work closely with concerned citizens and agencies in promoting agricultural and other land use practices which reduce pollution of County water resources. [Element F – Land Capability/Resource Quality, Policy 3.7]*

Staff Findings: The Polk County SWMP is incorporated into the TMDL Implementation Plan and applicable to the area within the Salem urban growth boundary. The SWMP includes public education and outreach BMPs, including several programs to convey information about stormwater issues to the public. The Public Involvement/Participation BMPs of the SWMP provide opportunities for the public to be involved in activities designed to reduce pollution to the stormwater system. The Joint Polk County-Salem Review Committee will invite members of the Glenn-Gibson Watershed Council to provide feedback about the SWMP during an annual review. The TMDL Implementation Plan is consistent with this comprehensive plan policy.

**Urban Land Development**

2.13 *Polk County will work toward attaining improved delivery systems of services that require coordination between larger units of government.* [Element K – Urban Land Development, Policy 2.13]

**Staff Findings:** Polk County would collaborate with the City of Salem to implement the SWMP, which constitutes a portion of the TMDL Implementation Plan. This effort would reduce the duplication of services and increase the efficiency of program implementation. Through the iterative review and adaptive management process the County would annually evaluate the SWMP and determine if changes are needed in order to improve the delivery of services. As a result, the TMDL implementation Plan is compatible with this policy.

**Polk County Ordinances:** Planning staff has reviewed the goals, policies and objectives of the Polk County Zoning Ordinance and the Polk County Subdivision and Partition Ordinance. Based upon this review, staff makes the following findings:

1. PCZO Section 112.090 requires that septic tanks, septic tank drainfields, cesspool and pit privy disposal facilities; and all structures, buildings, or similar permanent fixtures, be setback a required distance from the high water line or mark along all streams. The TMDL Implementation Plan would not alter this section of the PCZO. Stream setbacks would continue to be enforced for applicable development. As a result, the TMDL Implementation Plan is compatible with PCZO 112.090.
2. The Polk County Subdivision and Partition Ordinance requires as a general criterion that all partition and subdivision proposals be consistent with the provisions and intent of the adopted comprehensive plan and the provisions of the PCZO. As discussed above, the TMDL Implementation Plan would be compatible with the Comprehensive Plan. Planning staff have not identified any conflicts between the TMDL Implementation Plan and the PCZO and the Polk County Subdivision and Partition Ordinance. As a result, the TMDL Implementation Plan is compatible with the Polk County Subdivision and Partition Ordinance.

**Conclusion:**

Based upon the findings above, the Planning Division concludes that the TMDL Implementation Plan is compatible with the Polk County Comprehensive Plan, the Polk County Zoning Ordinance, and the Polk County Subdivision and Partition Ordinance.

POLK COUNTY, OREGON  
STORMWATER MANAGEMENT PROGRAM (SWMP)  
TO MEET NPDES PHASE II MS4 COMPLIANCE  
FIVE YEAR PROGRAM: 2012-2017

AUGUST 2011

Polk County  
850 Main Street  
Dallas, Oregon 97338



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## 1.0 INTRODUCTION

This Stormwater Management Program (SWMP) was created for the area of Polk County, Oregon located within the City of Salem Urban Growth Boundary (UGB), and outside city limits. This program has been developed to meet the Municipal Separate Storm Sewer System (MS4) permit requirements of the National Pollutant Discharge Elimination System (NPDES). The MS4 program for small jurisdictions is often called "Phase II." The program outlined in this document was developed for a five year period.

The area within the Salem UGB in Polk County is managed by Polk County based on criteria in the *Intergovernmental Agreement between City of Salem and Polk County Regarding the Urban Growth Boundary and Management of the Urbanized Area* (September 11, 1991). Although this SWMP has been developed specifically for Polk County, some of the efforts outlined in this program will be coordinated with the City of Salem. The area within the Salem UGB is expected to be annexed into the City of Salem. At such time that annexation to the City of Salem occurs, annexed properties would no longer fall within the jurisdiction of Polk County and would no longer be covered by Polk County's Phase II NPDES MS4 permit and SWMP.

This SWMP is arranged by the six minimum control measures specified in Polk County's Phase II NPDES MS4 permit. At the beginning of each section is a summary table listing each proposed activity associated with the measure. The last five columns of the table indicate which year(s) during the five year permit period that the activity is scheduled to be completed. The summary tables are followed by descriptions of the best management practices (BMPs), measurable goals, responsible parties, and other implementation information for each activity.

The measurable goals proposed for each activity represent what seem reasonable for each situation, based on past experience and common practices for stormwater management. From a practical sense, not all activities can be performed in permit year one, so a conscientious attempt was made to spread them out over the five year permit term. Each goal and its frequency/schedule will be evaluated during the annual reporting effort.

Polk County first developed a SWMP in November 2006 in order to comply with newly applicable Phase II NPDES MS4 rules. During the initial permit cycle spanning from March 12, 2007 to February 28, 2012, Polk County developed new programs and ordinances to implement the SWMP. This current SWMP focuses on the implementation and further refinement of those programs. This SWMP makes reference to "permit years" when scheduling implementation. Those permit years correspond to the following time periods:

|                |                                       |
|----------------|---------------------------------------|
| Permit Year 1: | February 29, 2012 – February 28, 2013 |
| Permit Year 2: | March 1, 2013 – February 28, 2014     |
| Permit Year 3: | March 1, 2014 – February 28, 2015     |
| Permit Year 4: | March 1, 2015 – February 29, 2016     |
| Permit Year 5: | March 1, 2016 – February 28, 2017     |

## 2.0 PUBLIC EDUCATION AND OUTREACH PROGRAM

Polk County will implement a public education and outreach program for the permit area. The following presents the components of the five year program, how they will be achieved, and the implementation schedule.

TABLE 2.  
PUBLIC EDUCATION AND OUTREACH PROGRAM BMPS

| BMP Activity / Description                     | Permit Year |   |   |   |   |
|--|-------------|---|---|---|---|
|  | 1           | 2 | 3 | 4 | 5 |
| 2.1 Stormwater Brochure for the General Public |             | ■ |   | ■ |   |
| 2.2 Targeted Stormwater Brochure               | ■           | ■ | ■ | ■ | ■ |
| 2.3 Storm Drain Marking                        |             |   |   |   | ■ |
| 2.4 Stormwater Display/Exhibit                 | ■           | ■ | ■ | ■ | ■ |
| 2.5 Stormwater Web Site                        | ■           | ■ | ■ | ■ | ■ |
| 2.6 Household Hazardous Waste Program          | ■           | ■ | ■ | ■ | ■ |

■ Activity scheduled for permit year  
 □ No activity scheduled for permit year

### 2.1 Stormwater Brochure(s) for the General Public

In an effort to provide pertinent stormwater information to the general public, Polk County will distribute an existing or custom made stormwater brochure to the general public. The purpose of the brochure will be to educate the general public about the negative impacts associated with stormwater runoff and to provide strategies to prevent stormwater related pollution. The brochure may include information about the hazards associated with illegal discharges and improper disposal of waste, and will provide practical steps that citizens can take to reduce their stormwater impacts.

**Rationale for BMP:** This BMP was chosen because distributing brochures provides a method to present stormwater information to a high percentage of those residing in the permit area.

**Measurable Goal:** One general mailing to the permit area in Permit Years 2 and 4. Polk County will investigate and utilize the most effective way to distribute this information. It may be mailed with Polk County tax statements or included in a local newspaper that is mailed to households in the permit area. The stormwater brochure(s) will also be available at the Polk County Courthouse in the Community Development Department.

- o **Completion Date:** Permit Years 2 and 4.
- o **Rationale for Goal:** A general mailing to all households in the permit area will ensure widespread distribution of educational material throughout the permit area.
- o **Responsible Party:** Polk County Community Development Director.

### 2.2 Targeted Stormwater Brochure

Polk County has developed a brochure titled: *Guide to Erosion Prevention and Sediment Control During Construction Activities*. This brochure provides technical information detailing how to employ construction entrances that minimize offsite sediment transport, temporary sediment fences, straw bale sediment barrier/bio-filter bags, undisturbed vegetative buffers, temporary grasses and permanent vegetative cover, straw mulch, erosion and matting blankets, plastic sheet

covering, and storm drain inlet protection. Polk County will distribute this brochure, or another appropriate brochure, with all new building permits issued in the permit area.

**Rationale for BMP:** Construction activities have the potential to add pollutants to stormwater runoff; therefore, a targeted brochure that provides construction operators with preventative methods to reduce stormwater pollution will be beneficial.

**Measurable Goal:** Include an erosion control brochure with all new building permits issued in the permit area.

- o **Completion Date:** Each Permit Year
- o **Rationale for Goal:** Brochure distribution with building permit applications for construction within the permit area will allow targeted distribution of stormwater educational material.
- o **Responsible Party:** Polk County Community Development Director.

### 2.3 Storm Drain Marking

During the previous permit cycle, Polk County marked all stormwater catch basins in the permit area with a message "No Dumping!, No Contaminate! -Drains to Stream" or with a similar message discouraging illegal discharge into the storm sewer system. Polk County will inspect all catch basins during this permit cycle to determine if the storm drain markers are still legible and if replacements are needed.

**Rationale for BMP:** Through a review of potential BMPs, the County found that storm drain stenciling or marking is an effective and well-established way to build public awareness about the connection between storm drains and local streams. This BMP also provides an opportunity to involve citizens in program implementation. Inspecting the existing markers will help the County determine if replacement markers are needed.

**Measurable Goal:** Inspect all storm drain markers in the permit area once by the end of Permit Year 5.

- o **Completion Date:** Permit Year 5.
- o **Rationale for Goal:** This goal will assist staff in determining if and where replacement markers are needed.
- o **Responsible Party:** Polk County Community Development Director.

### 2.4 Stormwater Display/Exhibit

Polk County plans to provide a stormwater exhibit during at least two events each permit year. These events may include Household Hazardous Waste collection events or other publically attended events.

**Rationale for BMP:** This BMP was chosen because it provides an opportunity for the County to provide information to the general public at public gatherings and to increase public awareness about stormwater issues in the permit area.

**Measurable Goal:** Display stormwater exhibits at two events per year.

- o **Completion Date:** Each permit year.
- o **Rationale for Goal:** Displays offered at two events per year will promote public awareness of stormwater issues.
- o **Responsible Party:** Polk County Community Development Director.

## 2.5 Stormwater Web Site

Polk County will maintain a website focused on providing practical information to the public about stormwater related issues. Polk County will use the webpage for uses such as providing electronic copies of stormwater brochures, advertising stormwater related training opportunities for construction operators, and for providing information to homeowners looking to reduce their stormwater impacts. The website will provide links to stormwater related websites including the City of Salem's Stormwater web site.

**Rationale for BMP:** This BMP was chosen as a method to provide information to citizens 24 hours a day.

**Measurable Goal 1:** Provide guidance to homeowners on practical activities that can reduce household stormwater impacts.

- **Completion Date:** Each Permit Year
- **Rationale for Goal:** Achieving this goal will implement this BMP.
- **Responsible Party:** Polk County Community Development and Information Services Directors.

**Measurable Goal 2:** Maintain a list of known stormwater training opportunities for construction operators.

- **Completion Date:** Each Permit Year
- **Rationale for Goal:** Achieving this goal will implement this BMP.
- **Responsible Party:** Polk County Community Development and Information Services Directors.

## 2.6 Household Hazardous Waste Program

Polk County has developed and is currently implementing a Household Hazardous Waste Program. The program includes two collection events each year that are open to all county residents. Residents of Polk County are also able to deliver certain hazardous materials to the Marion County facility. The Marion County facility is located at 3230 Deer Park Drive SE, Salem, Oregon, and accepts pesticides, cleaners, and fuels.

**Rationale for BMP:** The Household Hazardous Waste Program offers a method for individuals to dispose of waste that might otherwise be dumped illegally into the storm sewer system.

**Measurable Goal:** Hold two household hazardous waste collection events each permit year.



- **Completion Date:** Each permit year.
- **Rationale for Goal:** Achieving this goal will implement this BMP.
- **Responsible Party:** Polk County Environmental Health Supervisor.

### 3.0 PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

Polk County will implement a public participation process that will provide opportunities for members of the public to participate in program development and implementation. The following describes the five year program.

TABLE 3.  
PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM BMPS

| BMP Activity / Description                                | Permit Year |   |   |   |   |
|---|-------------|---|---|---|---|
|   | 1           | 2 | 3 | 4 | 5 |
| 3.1 Annual Stormwater Meeting                             |             |   |   |   |   |
| 3.2 Solicit Input from the Glenn-Gibson Watershed Council |             |   |   |   |   |
| 3.3 Distribute News Releases                              |             |   |   |   |   |
| 3.4 Storm Drain Marking Program                           |             |   |   |   |   |

 Activity scheduled for permit year  
 No activity scheduled for permit year

#### 3.1 Annual Stormwater Meeting

Polk County will continue to annually meet with the City of Salem, the Glenn-Gibson Watershed Council, and the general public in order to coordinate, monitor, and evaluate stormwater programs in the permit area. At this annual meeting, Polk County will describe the recently completed and planned activities that will implement the SWMP. This annual meeting will provide an opportunity for stakeholders to discuss and learn more about Polk County's stormwater efforts. The Glenn-Gibson Watershed Council addresses watershed management issues in portions of the permit area. As described in BMP 3.2, Polk County will invite members of the Glenn-Gibson Watershed Council to attend and provide input at the County's annual review of the SWMP.

**Rationale for BMP:** This BMP was chosen because an annual meeting provides a forum for those administering the program and stakeholders to evaluate the BMPs that compose the SWMP.

**Measurable Goal:** Polk County will host a meeting once a year to coordinate, evaluate, and modify the SWMP as necessary. Polk County will include a summary of the meeting's discussions as part of the annual report.

- o **Completion Date:** Each permit year.
- o **Rationale for Goal:** An annual meeting will aid the County in evaluating its Stormwater Management Program.
- o **Responsible Party:** Polk County Community Development Director.

#### 3.2 Solicit Input From The Glenn-Gibson Watershed Council

The Glenn-Gibson Watershed Council addresses watershed management issues in portions of the permit area. Polk County will invite members of the Glenn-Gibson Watershed Council to attend and provide input at Polk County's annual review of the SWMP.

**Rationale for BMP:** Soliciting input from the Glenn-Gibson Watershed Council was chosen as a BMP because it provides a method to include stakeholders in evaluating and improving the SWMP.

Measurable Goal: Invite members of the Glenn-Gibson Watershed Council to attend and provide input at Polk County's annual meeting to review the SWMP. This information could be used to assist the County in evaluating and adapting the SWMP in order to better achieve the Program's objectives.

- o **Completion Date:** Each Permit Year.
- o **Rationale for Goal:** Input from the Glenn-Gibson Watershed Council will be helpful for Polk County in evaluating its SWMP.
- o **Responsible Party:** Polk County Community Development Director.

### 3.3 Distribute News Releases

Polk County will distribute news releases, when appropriate, about stormwater issues. These news releases may include information about ways that the public can be involved with activities in the SWMP. The distribution of news releases may occur when the local press is available and interested in stormwater topics, or when the County would like to advertise a stormwater meeting or event.

**Rationale for BMP:** This BMP was chosen because it offers an opportunity to encourage additional local coverage on the development of the activities of the Stormwater Management Program and to distribute information to a broad section of the public.

Measurable Goal: Distribute at least one news release regarding the SWMP to a local paper each year.

- o **Completion Date:** Each Permit Year.
- o **Rationale for Goal:** This goal is intended to encourage additional local coverage on the development of the SWMP.
- o **Responsible Party:** Polk County Community Development Director.

### 3.4 Storm Drain Marking

During the previous permit cycle, Polk County marked all stormwater catch basins in the permit area with a message "No Dumping!, No Contamine! -Drains to Stream" or with a similar message discouraging illegal discharge into the storm sewer system. Polk County will inspect all catch basins during this permit cycle to determine if the storm drain markers are still legible and if replacements are needed.

**Rationale for BMP:** Through a review of potential BMPs, the County found that storm drain stenciling or marking is an effective and well-established way to build public awareness about the connection between storm drains and local streams. This BMP also provides an opportunity to involve citizens in program implementation. Inspecting the existing markers will help the County determine if replacement markers are needed.



Measurable Goal: Inspect all storm drain markers in the permit area once by the end of Permit Year 5.

- o **Completion Date:** Permit Year 5 .
- o **Rationale for Goal:** This goal will assist staff in determining if and where replacement markers are needed .
- o **Responsible Party:** Polk County Community Development Director.

#### 4.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Polk County will implement an illicit discharge detection and elimination program for the permit area. The following presents the components of the five year program, how they will be achieved, and the implementation schedule.

| BMP Activity / Description                             | Permit Year |   |   |   |   |
|--|-------------|---|---|---|---|
|  | 1           | 2 | 3 | 4 | 5 |
| 4.1 Maintain the Storm Sewer System Map                |             |   |   |   |   |
| 4.2 Apply Polk County's Stormwater Ordinance           |             |   |   |   |   |
| 4.3 Illicit Discharge/Illegal Dumping Elimination Plan |             |   |   |   |   |
| 4.4 Training for Polk County Public Works Staff        |             |   |   |   |   |

 Activity scheduled for permit year  
 No activity scheduled for permit year

##### 4.1 Maintain the Storm Sewer System Map

During the previous permit cycle, Polk County created a Storm Sewer System Map that depicts all known outfalls, and the names of all water bodies that receive discharges from those outfalls. As new development is permitted, Polk County will update the Storm Sewer Map. The Public Works Department will maintain the Storm Sewer System Map by amending the Map as appropriate to reflect new development or new information concerning the storm sewer system.

**Rationale for BMP:** This BMP was selected because the Storm Sewer System Map aids the County in investigating suspicious discharges.

**Measurable Goal:** Maintain the Storm Sewer System Map in order to map all known storm drain outfalls to receiving waters.

- o **Completion Date:** Each Permit Year.
- o **Rationale for Goal:** Maintaining a comprehensive storm sewer system map will aid the County in inspecting outfalls and responding to written complaints of illegal discharges into the storm sewer system.
- o **Responsible Party:** Polk County Public Works Director.

##### 4.2 Apply Polk County's Ordinance to Prohibit Non-Stormwater Discharges

Polk County adopted an ordinance that prohibits non-stormwater discharges into the storm sewer system. That ordinance was included as Section 43.057 of the Polk County Code of Ordinances (PCCO). Polk County will enforce this ordinance as appropriate in response to written complaints of ordinance violations.

**Rationale for BMP:** This BMP was selected because ordinances are an effective way to establish performance standards for runoff controls.

**Measurable Goal:** Enforce PCCO 43.057 as appropriate in response to written complaints of potential code violations. Polk County will report to any written complaints and enforcement actions in Polk County's annual reports.

- o **Completion Date:** Each Permit Year.



- **Rationale for Goal:** Ordinances are an effective way to establish performance standards for runoff controls.
- **Responsible Party:** Polk County Community Development Director.

#### 4.3 Illicit Discharge/Illegal Dumping Elimination Program

Polk County will coordinate with the City of Salem, as appropriate, in implementing its Illicit Discharge/Illegal Dumping Elimination Program. This BMP is designed to detect and respond to illicit discharges and illegal dumping into the stormwater system. This includes erroneous household sewer connections to the storm sewer, improperly functioning on-site sewage systems discharging into drainage ways and streams, and illegal dumping. This program will focus on detecting and responding to illicit discharges and illegal dumping.

The majority of the permit area is not served by sanitary sewer services. In these areas the potential exists for improperly functioning septic tanks systems to discharge into the open drainage system.

Polk County will respond to citizen complaints submitted in writing to the County. The County's Code Enforcement program and Environmental Health Division have the responsibility for compliance with the Oregon Revised Statutes, Oregon Administrative Rules and County Nuisance Code.

**Rationale for BMP:** Implementation of an Illicit Discharge/Illegal Dumping Elimination Program was chosen as a BMP because it provides a comprehensive program to detect and respond to incidents of illicit discharge and illegal dumping.

**Measurable Goal 1:** Receive reports from the City of Salem's 24-hour "hot line" service. The County will record the number and types of calls reporting illegal dumping.

- **Completion Date:** Each Permit Year.
- **Rationale for Goal:** This hotline will assist the County in detecting illicit discharges and/or illegal dumping.
- **Responsible Party:** Polk County Code Enforcement Officer.

**Measurable Goal 2:** Coordinate with the City of Salem to respond to reports of illicit discharge/illegal dumping. The County will continue to respond to reports of unusual discharges or suspicious water quality conditions that are brought to the County's attention in the urban stream/open channel storm drainage system. Polk County will document all written complaints relating to illicit discharge/illegal dumping.

- **Completion Date:** Each Permit Year.
- **Rationale for Goal:** This goal will allow the County to determine what enforcement action, if any, is required to address possible incidents of illicit discharge/illegal dumping.
- **Responsible Party:** Polk County Code Enforcement Officer.

**Measurable Goal 3:** Conduct field inspections of outfalls during routine maintenance operations. If unusual discharges are observed, such as excessive flow during dry weather, appropriate actions will be taken to determine the source of the discharges found during the inspections. At a minimum, each outfall in the permit area will be inspected once during the five year permit period.

- **Completion Date:** Permit Year 5.
- **Rationale for Goal:** Field inspections will allow the County to investigate for possible illicit discharges and illegal dumping activities.
- **Responsible Party:** Polk County Public Works Director.

#### **4.4 Train Public Works Staff on Illicit Discharge/Illegal Dumping BMPs**

The Polk County Public Works Department implements a training program that includes training on stormwater related issues. This BMP will focus on providing refresher training on how to respond when illicit discharges/illegal dumping is suspected in the field.

**Rationale for BMP:** This BMP has been chosen because training that aids in the identification of and response to known or suspected illicit discharges will help contain and minimize the damage to the drainage ecosystem.

**Measurable Goal:** The Polk County Public Works Director will provide training to Public Works staff on how to respond when illicit discharges/illegal dumping is suspected in the field.



- **Completion Date:** Permit Years 2 and 4.
- **Rationale for Goal:** This training will educate Public Works staff on proper BMPs for illicit discharges and illegal dumping.
- **Responsible Party:** Polk County Public Works Director.

**5.0 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL PROGRAM**

Polk County will implement a program to reduce pollutants in stormwater runoff from construction activities. The following presents the components of the five-year program, how they will be achieved, and the implementation schedule.

TABLE 5.  
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL PROGRAM BMPS

| BMP Activity / Description                                      | Permit Year |   |   |   |   |
|---|-------------|---|---|---|---|
|   | 1           | 2 | 3 | 4 | 5 |
| 5.1 Apply Polk County's Erosion and Sediment Control Ordinance  |             |   |   |   |   |
| 5.2 Distribute Erosion Prevention and Sediment Control Brochure |             |   |   |   |   |
| 5.3 Receive Information from the Public                         |             |   |   |   |   |
| 5.4 Provide Information to Construction Operators               |             |   |   |   |   |

 Activity scheduled for permit year  
 No activity scheduled for permit year

**5.1 Apply Polk County's Erosion and Sediment Control Ordinance**

During the previous permit cycle, the County adopted provisions into the Polk County Code of Ordinances that require construction operators to obtain all applicable state stormwater permits. PCCO 80.133 requires that construction activities that result in a land disturbance of greater than or equal to one acre and construction activity disturbing less than one acre if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more obtain all construction stormwater permits required by the Oregon Department of Environmental Quality (DEQ) prior to the release of Polk County building permits. If a construction activity is of the size referenced above, it would most likely require a 1200-C Construction Stormwater Permit from the DEQ.

The DEQ's 1200-C permit requires permittees to prepare an Erosion and Sediment Control Plan (ESCP) and incorporate Best Management Practices (BMPs) into their land disturbing construction work. BMPs are used on the project site to prevent or minimize erosion and control sediment runoff from the site.

**Rationale for BMP** This BMP was selected in order to implement the ordinance adopted in the previous permit cycle.

**Measurable Goal:** Require that construction activities that result in a land disturbance of greater than or equal to one acre and construction activity disturbing less than one acre if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more obtain all construction stormwater permits required by the Oregon Department of Environmental Quality prior to the release of Polk County building permits.

- o **Completion Date:** Each Permit Year.
- o **Rationale for Goal:** This goal will implement this BMP.
- o **Responsible Party:** Polk County Community Development Director.

**5.2 Distribute Erosion Prevention and Sediment Control Brochure**

This BMP is the same as BMP 2.2, Targeted Stormwater Brochure. Polk County has developed a brochure titled: *Guide to Erosion Prevention and Sediment Control During Construction Activities*. This brochure provides technical information detailing how to employ construction

entrances that minimize offsite sediment transport, temporary sediment fences, straw bale sediment barrier/bio-filter bags, undisturbed vegetative buffers, temporary grasses and permanent vegetative cover, straw mulch, erosion and matting blankets, plastic sheet covering, and storm drain inlet protection. Polk County will distribute this brochure, or another appropriate brochure, with all new building permits issued in the permit area.

### 5.3 Receive Information from the Public

The phone number of the County's Code Enforcement Officer will be provided on brochures, permit applications, and other publications, in order to allow the public to submit written complaints and/or comments with regards to construction site runoff. These comments and follow-up activities will be monitored internally by County staff. The County will also coordinate with the City of Salem to respond to information submitted by the public to the City's "hot line" that concerns construction activity in the permit area. The phone number for the Oregon Department of Environmental Quality will be provided on stormwater brochures, applications, and other publications as a contact for after hour concerns.

**Rationale for BMP:** This BMP was chosen because receiving information from the public will assist the County to implement the construction site stormwater control provisions in the PCCO.

**Measurable Goal:** Publish Polk County's Code Enforcement phone number and the appropriate DEQ contact information on all applicable stormwater publications. Polk County will keep written logs of all written complaints that include the location of the construction site and the nature of the complaint. The County will record the number of complaints received and handled, and submit this information with the annual report. The Polk County Code Enforcement Officer will take appropriate follow up action.

- o **Completion Date:** Each Permit Year.
- o **Rationale for Goal:** This effort will allow the public to submit complaints and/or comments regarding construction site runoff; thereby allowing the County to respond to reports of construction site runoff.
- o **Responsible Party:** Polk County Community Development Director.

### 5.4 Provide Information To Construction Operators

The County will provide information to construction operators on the Polk County stormwater website that will primarily include information about training opportunities and BMPs that can be used during the construction process to prevent erosion and sediment flow. Polk County will include a copy of all County stormwater brochures on the website. The County may collaborate with the City of Salem to implement the City's existing training and education effort for contractors about stormwater pollution problems caused by construction and building activities.

**Rationale for BMP:** This BMP was chosen as a method to provide useful information to construction operators.



**Measurable Goal:** Provide training information to local construction operators on the Polk County stormwater website.

- o **Completion Date:** Each Permit Year.
- o **Rationale for Goal:** This BMP will allow the County an opportunity to inform construction operators about stormwater BMPs and where they can find additional training.
- o **Responsible Party:** Polk County Community Development Director.

## 6.0 POST-CONSTRUCTION STORMWATER MANAGEMENT PROGRAM

Polk County will implement a five year program for post-construction stormwater management. The following presents the components of the program, how they will be achieved, and the implementation schedule.

| BMP Activity / Description                                   | Permit Year |   |   |   |   |
|--|-------------|---|---|---|---|
|  | 1           | 2 | 3 | 4 | 5 |
| 6.1 Provide Post-Construction Runoff Control BMP Information |             |   |   |   |   |
| 6.2 Implement Post-Construction Runoff Control Ordinance     |             |   |   |   |   |
| 6.3 Training for Plan Reviewers and Field Inspectors         |             |   |   |   |   |

 Activity scheduled for permit year  
 No activity scheduled for permit year

### 6.1 Provide Post-Construction Runoff Control BMP Information

Polk County will maintain post-construction runoff control BMPs information on the stormwater web page. The objective of providing this information is to identify and distribute information about post-construction BMPs that are appropriate to the permit area that will decrease the quantity and increase the quality of post-construction stormwater runoff.

**Rationale for BMP:** The permit area consists almost entirely of residentially zoned properties. Eighty-five percent of the tax lots in the permit area contain a dwelling. Consequently, Polk County is experiencing little new residential development in the permit area. This BMP is designed to provide information to homeowners about how they can practically take actions to decrease the quantity and increase the quality of stormwater entering Polk County's drainage system.

**Measurable Goal:** Maintain information about post-construction BMPs on the Polk County stormwater web page.

- o **Completion Date:** Each Permit Year.
- o **Rationale for Goal:** This plan will help the County to distribute information about BMPs that are designed to minimize post-construction runoff.
- o **Responsible Party:** Polk County Community Development Director.

### 6.2 Implement Polk County's Post-Construction Runoff Control Ordinance

During the previous permit cycle, Polk County adopted PCCO 80.133(2). That section requires that applicants submit a Post-Construction Runoff Plan for construction activities that result in a land disturbance of greater than or equal to one acre and construction activity disturbing less than one acre if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The Post-Construction Runoff Plan requires construction operators to incorporate design elements into their construction project designed to maximize permeable areas, minimize the amount of runoff directed to impermeable areas and/or maximize stormwater storage for reuse, and allow all parking lots to have the capability to contain one inch of precipitation in a 24 hour period. Polk County will continue to implement PCCO 80.133(2), by requiring the submittal of a Post-Construction Runoff Plan as necessary, prior to the issuance of building permits. The Post-Construction Runoff Plan will be reviewed during the site plan review process.

**Rationale for BMP:** This BMP was selected in order to apply PCCO 80.133(2).

**Measurable Goal:** Require a Post-Construction Runoff Plan for all projects identified in PCCO Section 80.133(2) prior to the issuance of building permits. The County will report on the number of Post-Construction Runoff Plans reviewed during the annual review process.

- **Completion Date:** Each Permit Year.
- **Rationale for Goal:** This goal will implement the Post-Construction runoff control component of the PCCO.
- **Responsible Party:** Polk County Community Development Director.

### **6.3 Training for Plan Reviewers and Field Inspectors**

Polk County will provide refresher training for staff responsible for reviewing Post-Construction Runoff Plans and inspecting construction sites on what to look for to ensure that post-construction BMPs are employed. When appropriate and possible, training will be coordinated with other training efforts that are a part of this SWMP.

**Rationale for BMP:** This training is included as a BMP because it will help to ensure that required post-construction BMPs are used when required.



**Measurable Goal:** Provide refresher training for staff during Permit Years 2 and 4.

- **Completion Date:** Permit Years 2 and 4.
- **Rationale for Goal:** This training will help to ensure that post-construction BMPs are implemented.
- **Responsible Party:** Polk County Community Development Director.

**7.0 POLLUTION PREVENTION IN MUNICIPAL OPERATIONS PROGRAM**

Polk County will implement an operations and maintenance plan. The County owns and operates few public facilities within the permit area. Polk County maintains a 1.64 acre neighborhood park and a road system consisting of all paved surfaces. Stormwater is collected in predominately road side ditches. The County has maintenance responsibility for enclosed systems in three subdivisions. The following presents the requirements for the plan, how they will be achieved and the implementation schedule.

| BMP Activity / Description             | Permit Year |   |   |   |   |
|--|-------------|---|---|---|---|
|  | 1           | 2 | 3 | 4 | 5 |
| 7.1 Implement the Polk County O&M Plan |             |   |   |   |   |

 Activity scheduled for permit year  
 No activity scheduled for permit year

**7.1 Operation and Maintenance Plan**

Polk County will implement an Operations and Maintenance Plan (O&M Plan) designed to meet the specific conditions present in the permit area. Polk County's O&M Plan consists of BMPs intended to reduce pollutant runoff from Public Works operations.

**Rationale for BMP:** Implementing an O&M Plan has been included as a BMP because it is required by the NPDES Phase II permit and is intended to reduce the amount of pollutants carried by stormwater runoff into the storm drainage system as a result of County Public Works activities.

**Measurable Goal 1: Implement the Polk County O & M Plan.**

- o **Completion Date:** Each permit year.
- o **Rationale for Goal:** The O&M Plan was developed during the previous permit cycle and includes operation and maintenance procedures developed to minimize stormwater impacts of County Public Works operations.
- o **Responsible Party:** Polk County Public Works Director.

**Measurable Goal 2: Conduct a training of Public Works staff to refresh knowledge about procedures intended to minimize stormwater impacts of Public Works operations.**

- o **Completion Date:** Each permit year.
- o **Rationale for Goal:** This yearly training will refresh staff knowledge of procedures intended to minimize stormwater impacts.
- o **Responsible Party:** Polk County Public Works Director.

**Measurable Goal 3: Assess Program Effectiveness.**

- o **Completion Date:** Permit Year 5.
- o **Rationale for Goal:** This process will allow County officials to determine the effectiveness of the O&M Plan.
- o **Responsible Party:** Polk County Public Works Director.

## **8.0 EVALUATION AND ASSESSMENT**

Polk County will assess the SWMP each year and prepare an annual report as required by the County's Phase II MS4 NPDES permit. Polk County will document program implementation and progress. The Measurable Goals listed in this Program are initial goals. The Measurable Goals in this Program reflect the implementation schedule of each of the BMPs, and Polk County will revise the Measurable Goals as appropriate when goals are completed. The BMPs in the SWMP will be evaluated each year, and changes to the SWMP may be made in order to adapt the program to better achieve the goals of the program.



**CHAPTER 182**

**SIGNIFICANT RESOURCE AREAS OVERLAY ZONE**

- 182.010. Provisions
- 182.020. Purpose
- 182.030. Application
- 182.035. Definitions
- 182.040. Review Procedure and Management Plan Requirements
- 182.050. Specific Property Development Standards
- 182.060. State or Federal Threatened and Endangered Species
- 182.070. List of Conflicting Uses
- 182.080. State and Federal Managing Agencies

**182.010. PROVISIONS.** The provisions of this Chapter shall apply to significant (1-C) resources designated 3-A or 3-C in the following categories: A) Fish and Wildlife; B) Riparian areas and wetlands; and C) Ecologically and Scientifically Significant Natural Areas.

**182.020. PURPOSE.** The purpose of the Significant Resource Overlay is to conserve significant fish and wildlife habitat, riparian and natural areas identified on the Significant Resource Areas Map and to permit development where it can be shown that such development is compatible with the protection of these resources.

**182.030. APPLICATION.** The provisions of this Chapter shall apply to the establishment of conflicting uses (see Section 182.070) within a "Significant Resource Area" indicated on the Polk County Significant Resource Area (SRA) Map and within designated buffer areas pertaining to specific resources. Activities regulated under the Forest Practices Act (FPA) are excluded from the provisions of this Chapter.

**182.035. DEFINITIONS.**

"1-C": Refers to resources which, based on information regarding location, quality and quantity, are considered to be significant and identified on the County's Significant Resource Areas (SRA) Map.

"3-A": Resources so designated are considered to be of great significance and shall be preserved, notwithstanding affects of such preservation to identified conflicting uses.

"3-C": Resources so designated are considered to be significant and shall be protected by limiting conflicting uses.

Significant Resource Areas (SRA) Map: Official adopted Map which depicts all inventoried significant (1-C) resources in Polk County.

Inventory Sheets: Official adopted listings of all inventoried significant (1-C) resources in Polk County.

**182.040. REVIEW PROCEDURE AND MANAGEMENT PLAN REQUIREMENTS.**

**(A) PERMITTED USES IDENTIFIED AS CONFLICTING USES.**

If a permitted use in the underlying zone is listed as a conflicting use in Section 182.070, the applicant shall comply with the applicable review procedure and management plan requirements outlined in Section 182.040. This type of review is ministerial and shall be decided by the Planning Director. Appeals are made to the Board of County Commissioners.

**(B) CONDITIONAL USES IDENTIFIED AS CONFLICTING USES.**

(1) If a conditionally permitted use in the underlying zone is listed as a conflicting use in Section 182.070, it shall be subject to the following:

- (a) Chapter 119 - Conditional Uses;
- (b) Review procedures and Management Plan requirements contained in Section 182.040; and
- (c) Other specifically applicable criteria (e.g., non-farm dwelling, etc.)

This type of review shall be quasi-judicial and decided by the Hearings Officer. Decisions of the Hearings Officer on conditional use applications under shall be subject to the appeal provisions in Section 111.280 and the call of the Board of Commissioners as provided in Section 111.290.

(2) The Hearings Officer may limit changes in the natural grade of land, or the alteration, removal, or destruction of natural vegetation in order to prevent or minimize erosion, pollution, or degradation of a significant resource.

- (3) An application for a conditional use shall be denied if, in the opinion of the Hearings Officer, the proposed use would be detrimental to the identified resource.

(C) PROTECT THE RESOURCE DECISION (3-A).

- (1) The Management Plan: When a "3-A" decision has been made for a particular resource, as indicated on the Goal 5 inventory sheets, the applicant, in coordination with the County and State or federal managing agency (s), shall develop a management plan which comprises the following elements:
  - (a) A description of the type and extent of resources involved;
  - (b) A map showing the exact location of the resource;
  - (c) A print-out indicating ownership within designated buffer strips; and
  - (d) A written statement detailing a proposed strategy to protect the identified significant resources. Such strategy may include, but shall not be limited to the following:
    - (1) Restriction of conflicting activities during critical periods (e.g., sensitive nesting periods);
    - (2) Protecting the resource with buffer strips;
    - (3) A Monitoring Plan for the site, i.e., determine the long-range affects;
    - (4) Permanent or seasonal road closures to protect the resource site; and
    - (5) Conservation easements, tax incentives or land donations.

If the County and applicant concur on provisions of the management plan, and other applicable criteria are satisfied, approval of the administrative action or conditional use request shall be subject to fulfillment of the management plan objectives.

- (2) If the County and applicant cannot agree on a Management Plan which would allow for the proposed development, while protecting the resource, the County shall deny the land use request.

(D) ALLOW CONFLICTING USES DECISION (3-B).

- (1) When a "3-B" decision has been made for a particular resource (as indicated on the adopted Goal 5 inventory sheets), the request shall not be subject to the standards of this Chapter.

(E) LIMIT CONFLICTING USES (3-C).

- (1) The Management Plan: When a "3-C" decision has been made for a particular resource, as indicated on the Goal 5 inventory sheets, the applicant, in coordination with the County and State or federal managing agency (s), shall develop a Management Plan which comprises the following elements:
  - (a) A description of the type and extent of resources involved;
  - (b) A map showing the exact location of the resource;
  - (c) A print-out from the County Assessor's Office indicating ownership within designated buffer strips; and
  - (d) A written statement detailing a proposed strategy to protect the identified significant resources. Such strategy may include, but shall not be limited to the following:
    - (1) Restriction of conflicting activities during critical periods (e.g., sensitive nesting periods);
    - (2) Protecting the resource with buffer strips

- (3) A Monitoring plan for the site, i.e., determine the long-range affects;
- (4) Permanent or seasonal road closures to protect the resource site; and
- (5) Conservation easements, tax incentives or land donations.

If the County and applicant concur on provisions of the Management Plan and other applicable criteria are satisfied, approval of the administrative action or conditional use request shall be subject to fulfillment of the management plan objectives.

- (2) Alternative to the Management Plan: If the County and the applicant cannot agree on a management plan which would allow for both resource conservation and development, the applicant must make the following findings of fact:
  - (a) The proposed development would not result in the loss of a rare, irretrievable, or irreplaceable natural feature or scientific opportunity, or the disturbance of a substantially unaltered natural feature or area in or adjacent to the proposed site;
  - (b) There are no feasible alternative locations on the site where the development can occur without adverse impacts to the resource; and
  - (c) In consultation with the Oregon Department of Fish and Wildlife and/or other managing agencies, a mitigation plan shall be developed that will minimize impacts to the maximum extent feasible. The process for developing the mitigation plan shall consist of the following steps:
    - (1) Identify wildlife uses and habitat categories to be affected by the proposed development action and identify potential impacts upon wildlife habitat;
    - (2) Identify habitat mitigation opportunities provided by environmental laws and regulatory processes specifically applicable to the proposed action;
    - (3) Identify evaluation species for the purposes of comparing pre and post-development wildlife habitat conditions; and
    - (4) Develop a habitat mitigation plan which considers alternatives to the proposed development action and includes standards for post-development monitoring of the effectiveness of the mitigation measures and will provide for future modification of mitigation as required to meet the goal of the plan.

The property owner is responsible for the expense of planning and implementing the wildlife habitat mitigation plan and for the expense of collecting and analyzing any information needed to develop or evaluate the plan described above.

- (3) If the County, State or federal managing agency (s) finds the resource is not located on the applicant's property, and the development proposal will not impact the resource, the standards in this Chapter shall not apply.

#### **SECTION 182.050. SPECIFIC PROPERTY DEVELOPMENT STANDARDS.**

The following specific development standards apply to the establishment of identified conflicting uses (see Section 182.070) within deer and elk winter range, riparian areas and significant wetlands identified on the Significant Resource Areas (SRA) Map.

- (A) Deer and Elk Winter Range - To minimize impacts to deer and elk populations, the following standards apply (Note: Properties within the Rural Community Centers and areas zoned AR-5 and F/F are exempted from these requirements):

- (1) Dwelling units are limited to a maximum of 1 unit per 40 acres;
- (2) Dwelling units, roads, utility corridors and other development shall be sited on the least productive habitat land and away from sensitive slopes and soils;
- (3) Development shall be clustered and located as close as possible to existing development and services, with only essential roads provided;
- (4) Nonessential roads shall be closed and off-road vehicle use curtailed during the winter and spring.

(B) Riparian and Wetland Setbacks - In order to protect, maintain and enhance the water quality and biological productivity of waterways and wetlands indicated on the Significant Resources Areas map, the following setback requirements shall apply:

(1) Development, along streams and rivers with significant (1-C) riparian habitat as depicted on the Significant Resource Areas Map, shall be subject to a riparian setback. Within the riparian area, all structural development shall be prohibited. In addition, all trees and at least 50 percent of the understory shall be retained, with the following exceptions:

- (a) Removal of dead, diseased or dying trees, or leaning trees which pose an erosion or safety hazard;
- (b) The mowing, planting or maintenance of lawn and farm use, as defined in Section 110.223, existing on the effective date of this Ordinance, including the control of noxious weeds (this provision is not intended to restrict the selection of crop/commodity types in those existing farm use areas within the riparian setback);
- (c) Vegetation removal necessary to provide direct access for water dependent use, or an otherwise approved use;
- (d) Structural shoreline stabilization; and,
- (e) Vegetation removal necessary in conjunction with an approved in-water project, such as a bridge.

(2) Determining the Setback Area: The riparian setback shall be measured from the banktop on a straight line perpendicular to the flow of the waterway. The following requirements apply to determining the width of various types of riparian management areas:

Streams identified on the SRA Map: The width of the riparian management area shall average three times the stream width, but shall not average less than 25 feet or more than 100 feet. Stream width is the average of the main channel width of the stream during its high water level flow.

Lakes and significant wetlands identified on the SRA Map: The width of the riparian management area for lakes and significant wetlands less than 1 acre in size shall average 25 feet; for lakes and wetlands between 1 and 5 acres in size, the width shall average 50 feet; for lakes and wetlands between 5 and 10 acres in size shall average 75 feet in width; and, for lakes and wetlands over 10 acres in size, the width shall average 100 feet.

Note: The provisions of subsection (1) above do not apply to forest activities regulated under the Forest Practices Act.

- (3) Septic drainfields are subject to a 100 foot riparian setback along all rivers and streams.
- (4) The riparian setback requirement may be reduced if the Planning Director or his designee finds, after consultation with the Oregon Department of Fish and Wildlife, the character and size of the proposed development and its potential

for adverse impacts on the water resource, fish or wildlife habitat area, or other riparian values is minimal. However, the riparian buffer shall not be reduced below 25 feet, nor shall loss of vegetation exceed 25 percent.

- (5) Water dependent commercial and industrial uses and private boat docks, marinas and boat ramps, which are proposed in waters solely under County jurisdiction shall be subject to the approval of the Planning Director or his designee after consultation with the Oregon Department of Fish and Wildlife and other agencies with statutory jurisdiction who must concur that such a use will not negatively impact the resource.
- (6) Exceptions to Riparian Setback Requirements - The following are excepted from the strict application of the riparian setback provisions for development:
  - (a) Residential lots of record or approved subdivision lots granted an exception which have a lot depth which precludes compliance with the setback standards of this section. Such structures shall be setback the maximum practicable distance.
  - (b) Additions to existing non-conforming structures shall, at a minimum, meet the same setback of the existing structure.
  - (c) Public uses, such as bridges for public roads, shall be allowed within the setbacks set forth in this section provided that adverse impacts are mitigated as recommended by the Oregon Department of Fish and Wildlife.
  - (d) Structures necessary to make use of a water right.
  - (e) Approved erosion control - structural or nonstructural. Note: nonstructural solutions to erosion and flooding are preferred to structural solutions.

**182.060. STATE OR FEDERAL THREATENED AND ENDANGERED SPECIES.**

Development which may disturb species (plant or animal) listed by the State of Oregon or the U.S. Fish and Wildlife Service as threatened or endangered shall comply with appropriate State and Federal Laws and regulations. In addition, the review procedure and management plan requirements outlined in Section 182.040 shall apply.

**182.070. LIST OF CONFLICTING USES.**

- (A) FISH AND WILDLIFE AREAS AND HABITATS (Designated on the SRA Map)
  - (1) Fish Habitat
    - (a) Loss of streamside vegetation
    - (b) Road construction
    - (c) Development along lake/reservoir shorelines
    - (d) Dam construction
    - (e) Aggregate removal
  - (2) Black-tailed Deer and Roosevelt Elk Winter Habitat
    - (a) Residential development
    - (b) Roads
    - (c) Landfills
    - (d) Commercial feedlots
    - (e) Airports
    - (f) Open concrete canals

- (3) Sensitive Bird Sites
  - (a) Any activity which results in the destruction of Mineral Springs
  - (b) Development within 1/4 mile of an Osprey or Bald Eagle nest during critical nesting periods (specified by the ODFW or USFW)
  - (c) Development within 600 feet of a Great Blue Heron Rookery during critical nesting periods (specified by the ODFW)
  - (d) Harvest of trees utilized for nesting by Osprey or Bald Eagle
- (4) Upland Game and Waterfowl
  - (a) Riparian vegetation removal, except as provided under Section 182.050.
  - (b) Filling, diking and drainage of ponds and wetland areas
  - (c) Disturbance and destruction of mineral springs
  - (d) Development on or adjacent to sensitive waterfowl habitat
- (B) ECOLOGICALLY AND SCIENTIFICALLY SIGNIFICANT NATURAL AREAS.
  - (1) Encroachment of agricultural activities (including seasonal grazing) onto the resource site
  - (2) Timber harvest or tree planting on the resource site or within a designated buffer zone, excepting those operations conducted under provisions of the Forest Practices Act (FPA).
  - (3) Fill or removal at the resource site
  - (4) Stream alteration
  - (5) Mineral or aggregate extraction on the resource site
  - (6) Off-road vehicle use
  - (7) Residential, commercial or industrial development
  - (8) Road construction on the resource site (except by a managing public agency).
- (C) WATER AREAS, WETLANDS, WATERSHEDS AND GROUNDWATER RESOURCES.
  - (1) Riparian Areas
    - (a) Vegetation removal
    - (b) Road Construction
    - (c) Timber harvest (excepting those operations conducted under provisions of the FPA)

**182.080. STATE AND FEDERAL MANAGING AGENCIES.**

- (A) Fish and Wildlife Habitat Areas
  - (1) Oregon Department of Fish and Wildlife
  - (2) U.S. Department of Fish and Wildlife
- (B) Water Areas and Resources
  - (1) Oregon Department of Fish and Wildlife (ODFW)
  - (2) Oregon Division of State Lands (DSL)
  - (3) Oregon Water Resources Department (DWR)
  - (4) Oregon Department of Environmental Quality (DEQ)

POLK COUNTY PARK LIST

BALLSTON PARK

PICNIC TABLES, PLAYGROUND EQUIPMENT, HISTORICAL SCHOOL SITE  
LOCATED AT BALLSTON

BLM

PICNIC TABLES, FIRE PITS, PIT TOILETS, FISHING, SCENIC TRAILS  
LOCATED AT ¼ MILE BEYOND MILL CREEK PARK

BUELL PARK

RESTROOM FACILITIES, PICNIC TABLES, FIRE PITS, PLAYGROUND EQUIPMENT, RUNNING  
WATER/DRINKING FOUNTAIN, SCENIC TRAILS, FISHING  
LOCATED AT BUELL

BUENA VISTA PARK

PIT TOILETS, PICNIC TABLES, FIRE PITS, BOATRAMP/DOCK, FISHING, SCENIC RIVER AREA AT  
FERRY  
LOCATED AT BUENA VISTA

EOLA HEIGHTS

PICNIC TABLES, PLAYGROUND EQUIPMENT  
LOCATED IN EOLA HEIGHTS (WEST SALEM)

GERLINGER PARK

PIT TOILETS, PICNIC TABLES, FIRE PITS, FOOTBRIDGE, FISHING  
LOCATED JUST OUTSIDE FALLS CITY (This park is closed until further notice)

MILL CREEK PARK

PIT TOILETS, PICNIC TABLES, FIRE PITS, GRASS AREA, FISHING  
FIRST PARK ON LEFT OFF OF MILL CREEK RD., 2 MILES OFF OF HIGHWAY 22

NESMITH PARK

PICNIC TABLES, FIRE PITS, PORTAPOTTY, OPEN PLAY AREA, SCENIC TRAILS, HISTORICAL SITES,  
FISHING, ALSO CAN UTILIZE FAIR PLAYAREA  
LOCATED ADJACENT TO POLK COUNTY FAIRGROUNDS AT RICKREAL



**RITNER CREEK BRIDGE**

PICNIC TABLES, COVERED BRIDGE

LOCATED 2 MILES PAST PEDEE

**RITNER CREEK PARK**

PIT TOILETS, PICNIC TABLES, FIRE PITS, FOOT TRAILS/BRIDGES, SCENIC TRAILS

LOCATED OUT KINGS VALLEY HIGHWAY, TURN ONTO BURBANK ROAD, 2 MILES ON THE LEFT

**SOCIAL SECURITY HOLE**

PORTAPOTTY, PICNIC TABLES, FISHING, SCENIC RIVER AREA

LOCATED AT END OF HALLS FERRY ROAD, IN INDEPENDENCE AREA

- PARK USAGE IS BY FIRST COME FIRST SERVE BASIS
- CAMPING IS NOT ALLOWED
- OFFICIAL OPENING DATE: MAY 27
- OFFICIAL CLOSING DATE: SEPTEMBER 30

Polk County TMDL Implementation Management Strategies Tracking Matrix  
2017 Progress Report

Appendix C

Receiving Waterbodies: Willamette River, Luckiamute River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| POLLUTANT                             | SOURCE   | STRATEGY  | HOW   | MEASURE   | TIMELINE                                    | BENCHMARKS   | STATUS  |
|---------------------------------------|--|---|---|---|---|--|---|
| 1<br>Temperature, Mercury, & Bacteria | What suspected sources of this pollutant are under Polk County's jurisdiction? | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source?  | Specifically, how will this be done?  | How will Polk County demonstrate successful implementation or completion of this strategy?      | When will the strategy begin? Be completed? | What intermediate goals will be achieved, and by when, to know progress is being made? | Ongoing. Polk County maintains an inventory of riparian management plans that are reviewed and approved by Polk County. Polk County has been working to educate citizens about the impacts associated with riparian and wetland development and can report that there was (1) management plan added to the inventory in 2017 for vegetation removal within riparian or wetland setback areas. The updated management plan inventory for 2017 is included as Exhibit A. The criteria for management plans, riparian area setbacks, and conflicting uses can be found in PCZO Chapter 182 here: <a href="http://www.co.polk.or.us/sites/default/files/attachments/planning_division/page5121/chapter_182.pdf">http://www.co.polk.or.us/sites/default/files/attachments/planning_division/page5121/chapter_182.pdf</a> |
| 2<br>Temperature, Mercury, & Bacteria | Solar radiation & stormwater runoff  | Continue implementation of the riparian setbacks required by PCZO 182.050(B). Riparian vegetation provides shade over rivers and streams, which reduces river and stream temperatures. Riparian areas also act as a filter for pollutants including mercury and bacteria. | Require riparian setbacks during planning and building permit review. Maintain riparian setbacks when maintaining parks | The Planning Division will maintain an accessible inventory of county riparian management plans | Ongoing                                     | N/A  | Ongoing. Polk County Planning and Public Works staff are continually exploring grant opportunities for stream restoration projects. In 2017, Polk County partnered with Ash Creek Water Control District for a stream restoration project that involved removing blackberries and establishing native plants.   |

Polk County TMDL Implementation Management Strategies Tracking Matrix  
2017 Progress Report

Receiving Waterbodies: Willamette River, Luckiamute River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| POLEPARENT   | SOURCE  | STRATEGY  | HOW   | MEASURE  | WHEN  | BENCHMARK  | STATUS   |
|--|---|---|---|--|---|--|--|
| What TMDL pollutant(s) does this strategy address? | What suspected sources of this pollutant are under Polk County's jurisdiction | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source?  | Specifically, how will this be done?                | How will Polk County demonstrate successful implementation or completion of this strategy? | When will the strategy begin? Be completed? | What intermediate goals will be achieved, and by when, to know progress is being made? |  |
| 3<br>Temperature, Mercury, & Bacteria              | Solar radiation & stormwater runoff   | Maintain a stormwater website as a method to provide information to the public. This information will include strategies for home owners and construction operators to minimize the quantity and maximize the quality of stormwater that leaves their property. | Planning staff will maintain the stormwater website | Number of hits to the website  | Ongoing                                     | N/A  | Ongoing. The Stormwater Resources website is located at <a href="http://www.co.polk.or.us/cd/building/stormwater-resources">http://www.co.polk.or.us/cd/building/stormwater-resources</a> . During 2017, it received 168 hits. |

Polk County TMDL Implementation Management Strategies Tracking Matrix  
2017 Progress Report

Receiving Waterbodies: Willamette River, Lockamute River, Rickreall Creek, Gleann Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| PROBLEM | SOURCE  | STRATEGY   | HOW   | MEASURE  | IMPLEMENT                                   | BENCHMARK  | STATUS  |
|---------|---|--|---|--|---|--|---|
| 4       | What suspected sources of this pollutant are under Polk County's jurisdiction | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source? | Specifically, how will this be done?  | How will Polk County demonstrate successful implementation or completion of this strategy?   | When will the strategy begin? Be completed? | What intermediate goals will be achieved, and by when, to know progress is being made? | In 2017 the Environmental Health Division received nine code enforcement complaints regarding either a failing septic system or inadequate systems. Seven complaints were resolved and no longer pose a health risk and two complaints are still being investigated as of the writing of this report. The two pending two septic system complaints from 2016 have been resolved. The Environmental Health Division issued 29 septic system repair permits during 2017.  |
| 5       | Bacteria  | Enforce upon complaints of failing septic systems  | Receive complaints from the public and direct to the Code Enforcement Officer   | All complaints will be investigated  | Ongoing                                     | N/A  | Ongoing. Polk County's Environmental Health Division has obtained the necessary software and installed applications (ArcGIS, Survey123) on employee's phones in order to collect data on new septic system locations. Staff conducted a training with Polk County's Information Services Department on November 20th, 2017. Since installation of the applications and training staff, no new septic system permits have been issued. However, staff has tested the software and applications on other types of septic permits. |
|         | What TMDL pollutant(s) does this strategy address?                            | Require all applicable permits for the siting and construction of septic systems                               | Polk County Environmental Health Specialist will review all site evaluation and construction permits and track system locations | Polk County will develop a program to geocode new septic system locations in order to create an inventory of new septic system locations and installation dates that can be used to track system's ages and locations in the future. | Ongoing                                     | Polk County will record the GPS location of all new septic systems by the end of 2016. |   |

Polk County TMDL Implementation Management Strategies Tracking Matrix  
2017 Progress Report

Receiving Waterbodies: Willamette River, Luciasmute River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| POLLUTANT  | SOURCE  | STRATEGY   | HOW  | MEASURE   | TERMBINE                                    | BENCHMARK  | STATUS   |
|--|---|--|--|---|---|--|--|
| What TMDL pollutant(s) does this strategy address? | What suspected sources of this pollutant are under Polk County's jurisdiction | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source? | Specifically, how will this be done?   | How will Polk County demonstrate successful implementation or completion of this strategy?  | When will the strategy begin? Be completed? | What intermediate goals will be achieved, and by when, to know progress is being made? |  |
| 6<br>Mercury &<br>Bacteria                         | County road, ditch, and bridge construction and maintenance                   | Implement erosion and sediment control BMPs during county road, ditch, and bridge construction and maintenance | Public Works staff will implement the BMPs in the Polk County O&M Plan as appropriate during Public Works operations | Public Works will hold monthly meetings to educate staff on BMP implementation. Public Works will also evaluate the O&M Plan on an annual basis to determine if revisions are advisable in order to minimize the Public Works Department's impact on County waterways | Ongoing                                     | N/A  | Ongoing. The Public Works Department held 17 meetings in 2017 that focused on proper implementation of erosion and sediment control BMPs. Rather than holding a meeting every month, weekly meetings were held when work was scheduled that required the use of sediment and erosion control BMPs (ditch work and bridge projects). Exhibit 5 contains the dates of when these 17 meetings were held. One additional meeting was held on December 5, 2017. The sign-in sheet from this meeting and print out BMP topics that were discussed are also included in Exhibit 3. The Public Works Department did not identify any changes that needed to be made to the O&M Plan during 2017. |

Polk County TMDL Implementation Management Strategies Tracking Matrix  
2017 Progress Report

Receiving Waterbodies: Willamette River, Luckiamute River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| POLLUTANT  | SOURCE  | STRATEGY   | HOW   | MEASURE   | WHEN                                       | DEVELOPER  | STATUS  |
|--|---|--|---|---|--|--|---|
| What TMDL pollutant(s) does this strategy address? | What suspected sources of this pollutant are under Polk County's jurisdiction | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source? | Specifically, how will this be done?  | How will Polk County demonstrate successful implementation or completion of this strategy?  | When will the strategy begin? Be complete? | What intermediate goals will be achieved, and by when, to know progress is being made? |   |
| 7 Mercury & Bacteria                               | Stormwater runoff from county parks   | Maintain stormwater quality at public parks  | Ensure availability of restroom facilities at county parks. Maintain riparian areas.  | Polk County will track the number of repairs or septic alterations at county parks in order to track the functionality of pack septic systems | Ongoing                                    | N/A  | Ongoing. No County park septic systems required repair in 2017.   |
| 8 Mercury & Bacteria                               | Stormwater runoff from construction sites                                     | Increase awareness of need for 1200-C permit requirements  | Make a stormwater brochure available at the Polk County Community Development desk and to distribute with new building permits. Revise the brochure as needed | Number of brochures distributed   | Ongoing                                    | N/A  | Ongoing. The Polk County Building Division distributed 210 brochures during 2017.   |
| 9 Mercury & Bacteria                               | Stormwater runoff from construction sites                                     | Implement Polk County's Erosion and Sediment Control Protections in PCCO 80.133                                | Apply Polk County Code of Ordinances (PCCO) Section 80.133(1) which requires building permit applicants to obtain all necessary DEQ permits                   | Application of PCCO 80.133(1) to all applicable building permits  | Ongoing                                    | N/A  | Ongoing. Polk County reviews all building permits, and if a DEQ permit is required, the County directs an applicant to obtain all necessary DEQ permits prior to issuance of building permits. PCCO 80.133 can be found on the Polk County website at <a href="http://www.co.polk.or.us/sites/default/files/fileattachments/board_of_commissioners/page/2705/chapter_80_building_code_2011.pdf">http://www.co.polk.or.us/sites/default/files/fileattachments/board_of_commissioners/page/2705/chapter_80_building_code_2011.pdf</a>                           |
|  |   |  |   | Apply PCCO 80.133 to all applicable building permits  | Ongoing                                    | N/A  | Ongoing. Polk County reviews all building permits, and if a DEQ permit is required, the County directs an applicant to obtain all necessary DEQ permits. One development project required review of a Post-Construction Runoff Plan during 2017. PCCO 80.133 can be found here: <a href="http://www.co.polk.or.us/sites/default/files/fileattachments/board_of_commissioners/page/2705/chapter_80_building_code_2011.pdf">http://www.co.polk.or.us/sites/default/files/fileattachments/board_of_commissioners/page/2705/chapter_80_building_code_2011.pdf</a> |

Polk County TMDL Implementation Management Strategies Tracking Matrix  
2017 Progress Report

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette  
Receiving Waterbodies: Willamette River, Lualaba River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

| POB/UTM/ANNUAL                                     | SOURCE   | STRATEGY   | HOW  | MEASURES   | TIMELINE   | BENCHMARK  | STATUS  |
|--|--|--|--|--|--|--|---|
| What TMDL pollutant(s) does this strategy address? | What suspected sources of this pollutant are under Polk County's jurisdiction? | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source? | Specifically, how will this be done?   | How will Polk County demonstrate successful implementation or completion of this strategy?   | When will the strategy begin? Be completed?  | What intermediate goals will be achieved, and by when, to know progress is being made?   |   |
| 10 Mercury & Bacteria                              | Non-stormwater discharges to the storm drainage system                         | Implement Polk County's unauthorized discharge restrictions in PCCO 43.057                                     | The Polk County Code Enforcement Officer will follow up on all complaints of potential unauthorized discharges into the storm sewer system as described in PCCO 43.057   | Investigation into all complaints of violations to PCCO 43.057   | Ongoing  | N/A  | Ongoing. Polk County received four complaints of unauthorized discharges into the storm sewer system during 2017. Three complaints have been resolved and one complaint is still under investigation. PCCO 43.057 can be found here: <a href="http://www.co.polk.or.us/sites/default/files/attachments/board_of_commissioners/page/2974/chapter_43_nuisance_abatement_2010.pdf">http://www.co.polk.or.us/sites/default/files/attachments/board_of_commissioners/page/2974/chapter_43_nuisance_abatement_2010.pdf</a>  |
| 11 Mercury & Bacteria (Within the Salem UGB)       | Stormwater runoff in the Salem UGB   | Implement SWMP for the area within Polk County and the City of Salem UGB.                                      | Adhere to the implementation schedule in the SWMP  | Completion of projects as specified in the SWMP  | Timelines specified in the SWMP  | Benchmarks specified in the SWMP   | Ongoing. Polk County continues to implement the SWMP.   |
| 12 Mercury   | Household hazardous waste  | Continue Implementation of the Polk County Household Hazardous Waste Program                                   | Hold two events per year at various locations throughout Polk County   | Two Household Hazardous Waste events held each year  | Ongoing  | N/A  | Ongoing. Polk County held two (2) household hazardous waste collection events in 2017 on May 6th and October 7th.   |
| 13 Temperature, Mercury, & Bacteria                | Solar radiation & stormwater runoff  | Create a Targeted Education and Outreach Program   | Polk County Community Development staff will analyze aerial photography, LIDAR, and other available information sources to target regions of the County that have seen relatively high levels of riparian deforestation. | Polk County will target areas in need of outreach and provide property owners in those areas with information about how to restore wetland areas and obtain additional resources if necessary. | This project will be implemented in phases over the course of the five year TMDL Implementation Plan cycle. All property owners of targeted properties will be contacted by the end of 2016. | Polk County will gather the resources needed in order to identify geographical areas in Polk County for targeted outreach by the end of December 2015. Community Development Staff will create a plan to deliver targeted outreach material by the end of December 2014. | Complete. On December 17, 2017, an educational brochure was sent to 97 targeted properties/property owners. Exhibit B includes a narrative describing why these properties were targeted; a list of water bodies located on the targeted properties; the mailing list, and a map of the targeted properties. A copy of the brochure that was sent to the mailing list can be found on the Polk County Stormwater website at <a href="http://www.co.polk.or.us/sites/default/files/attachments/building/page/2981/teops_brochure.pdf">http://www.co.polk.or.us/sites/default/files/attachments/building/page/2981/teops_brochure.pdf</a> |

Polk County TMDL Implementation Management Strategies Tracking Matrix  
2017 Progress Report

Receiving Waterbodies: Willamette River, Luckiamute River, Rickreall Creek, Glenn Creek, Gibson Creek, Spring Valley Creek, Ash Creek, Hartman Slough, as well as tributaries to those waterbodies within the jurisdiction of Polk County

DMA Name: Polk County  
Subbasin: Mid & Upper Willamette

| POLUTANT   | SOURCE  | STRATEGY   | HOW   | MEASURE  | TIMELINE                                    | BENEFIT  | STATUS   |
|--|---|--|---|--|---|--|--|
| What TMDL pollutant(s) does this strategy address? | What suspected sources of this pollutant are under Polk County's jurisdiction | What is being done, or what will Polk County do to reduce and/or control pollution emanating from this source? | Specifically, how will this be done?  | How will Polk County demonstrate successful implementation or completion of this strategy? | When will the strategy begin? Be completed? | What intermediate goals will be achieved, and by when, to know progress is being made?   |  |
|  |   |  | Polk County will partner with local watershed councils to connect property owners in targeted areas with resources to restore riparian areas. | All identified property owners will be contacted by the end of 2016.                       |   | Polk County will create a network of watershed council representatives and other available resources by the end of 2014. Polk County will begin distributing targeted outreach material in 2015. | Ongoing. Polk County maintained a network of watershed council representatives and other resources in 2017. The brochure that was sent to targeted properties contains contact information for local resources to assist in riparian restoration projects. |



Exhibit 1

2017 Riparian Management Plan Inventory

| Date Approved | File Number | Property Owner    | Property Location T,R,S - Taxlot | Water Body           |
|---------------|-------------|-------------------|----------------------------------|----------------------|
| 12-Jan-17     | LJD 17-01   | Hancock & Hampton | 9.8 Tax Lots 200 & 504           | Fourth of July Creek |

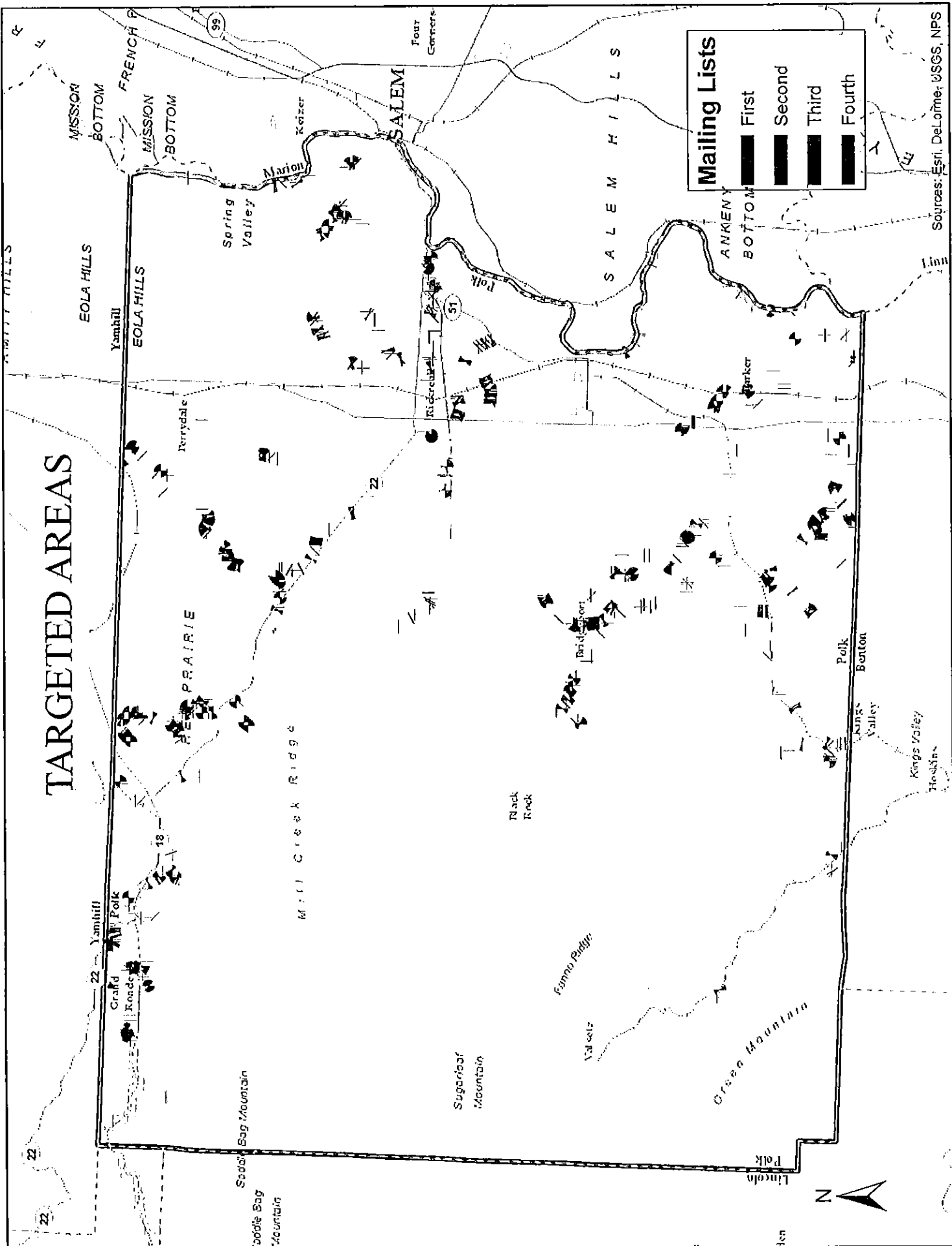
## Second

| Property Owner                         | Address                     | City           | State | Zipcode |
|--|-----------------------------|----------------|-------|---------|
| SCHUDEL ENTERPRISES, LLC               | 800 CORNELL AVE NW          | CORVALLIS      | OR    | 97330   |
| CLANFIELD GERALD WAYNE                 | 16070 BROWN RD              | DALLAS         | OR    | 97338   |
| PAQUET CINDY S PHILLIPS                | 6927 38TH AVE SW            | SEATTLE        | WA    | 98126   |
| MILLER PRUDENCE                        | 4220 SW GREENLEAF DR        | PORTLAND       | OR    | 97221   |
| WASHBURN PAUL A & DIANN M              | P O BOX 760                 | DALLAS         | OR    | 97338   |
| RATZLAFF ALBERT L & SUSAN J            | 15785 HWY 22 HWY            | DALLAS         | OR    | 97338   |
| WILFONG DENNY L & JEANNETTE S          | 13595 BECK RD               | DALLAS         | OR    | 97338   |
| HOEKSTRE DELBERT A                     | 15010 HWY 22 HWY            | DALLAS         | OR    | 97338   |
| VILLWOCK EUGENE E, TRUST               | 14950 SALT CREEK RD         | DALLAS         | OR    | 97338   |
| SALT CREEK FARM LLC                    | 397 NW DOUGLAS ST           | DALLAS         | OR    | 97338   |
| FROLOV MIKE F                          | 3740 2ND ST                 | HUBBARD        | OR    | 97032   |
| WALKER FREDERICK FISHER ETAL           | 13885 HWY 22 HWY            | DALLAS         | OR    | 97338   |
| TARPLEY TIMOTHY A & KATHLEEN M         | 13935 HWY 22 HWY            | DALLAS         | OR    | 97338   |
| RUPP EFFIE JUNE & RUPP PAUL L          | 13925 HWY 22 HWY            | DALLAS         | OR    | 97338   |
| GIULIANI MARCO & ERIN E                | 13335 HWY 22 HWY            | DALLAS         | OR    | 97338   |
| SIMPSON ROSS ANDREW, TRUST             | P O BOX 2305                | SALEM          | OR    | 97308   |
| PARK THOMAS R & JANET J                | 481 REUBEN BOISE RD         | DALLAS         | OR    | 97338   |
| MANNENBACH STEPHEN F & S L             | 15380 ELLENDALE RD W        | DALLAS         | OR    | 97338   |
| HOLMQUIST GLEN E & DIMPNA              | 16318 ELLENDALE RD W        | DALLAS         | OR    | 97338   |
| MAUK DALE N E & CHRISTINA F            | 15590 ELLENDALE RD W        | DALLAS         | OR    | 97338   |
| BAUGHMAN MABEL ROSE, LIVING TRUST      | 1920 COCHRANE LN            | DALLAS         | OR    | 97338   |
| HEDLUND RICHARD P & LORI A             | 16055 GILLIAM RD            | DALLAS         | OR    | 97338   |
| HUDGINS WALTER & JEANETTE              | PO BOX 235                  | FALLS CITY     | OR    | 97344   |
| WOOD ILENE M                           | 137 ALAPAKI PL              | HILO           | HI    | 96720   |
| MORTON MICHAEL B ET AL                 | 6290 SOUTH KINGS VALLEY HWY | DALLAS         | OR    | 97338   |
| SEIBERT JULIA, L-EST                   | PO BOX 982                  | DALLAS         | OR    | 97338   |
| BLAIR DIANA C                          | 15400 FERNS CORNER RD       | DALLAS         | OR    | 97338   |
| HALLINAN JOHN N JR                     | 16500 FALLS CITY RD         | DALLAS         | OR    | 97338   |
| DHOOGHE JERRY M                        | 16385 BRIDGEPORT RD         | DALLAS         | OR    | 97338   |
| CANE JASON & DENISE R                  | 13960 FISHBACK RD           | MONMOUTH       | OR    | 97361   |
| WESTON DAVID RALPH & WESTON DELL WAYNE | 14370 FISHBACK RD           | MONMOUTH       | OR    | 97361   |
| HUERTA FRANCISCO                       | 14390 FISHBACK RD           | MONMOUTH       | OR    | 97361   |
| U/D/T DATED DECEMBER 15, 2010          | 6006 FERN HILL RD           | MONMOUTH       | OR    | 97361   |
| HALE DAVID A JR & KIMBERLY D           | 15655 MONMOUTH HWY          | MONMOUTH       | OR    | 97361   |
| THORP ARLENE                           | 15730 MONMOUTH HWY          | MONMOUTH       | OR    | 97361   |
| FARMLAND RESERVE, INC                  | PO BOX 511196               | SALT LAKE CITY | UT    | 84151   |

| Property Owner                          | Address                 | City         | State | Zipcode |
|---|-------------------------|--------------|-------|---------|
| BANKS GEORGE WILLIAM ETAL               | 7350 SMITH RD           | MONMOUTH     | OR    | 97361   |
| MADDUX FAMILY TRUST OF 1996             | 466 COLLEGE ST S        | MONMOUTH     | OR    | 97361   |
| MEADE ALFORD PAUL                       | 6705 COOPER HOLLOW RD   | MONMOUTH     | OR    | 97361   |
| MONAHAN ROBERT & SUSAN, FAMILY          | 14380 FISHBACK RD       | MONMOUTH     | OR    | 97361   |
| ALVAREZ ERICK & DORIS                   | 14384 FISHBACK RD       | MONMOUTH     | OR    | 97361   |
| SHEA DAVID M & SHEA JEANINE B           | PO BOX 394              | DALLAS       | OR    | 97338   |
| HEINTZ PHILLIP L & YVONNE L             | 14950 FISHBACK RD       | MONMOUTH     | OR    | 97361   |
| GRAHAM WANDA L, TRUST                   | 16215 AIRLIE RD         | MONMOUTH     | OR    | 97361   |
| KING SUSAN M & DENNIS J                 | 9730 HULTMAN RD         | INDEPENDENCE | OR    | 97351   |
| HAMILTON FARMS LLC                      | 14190 AIRLIE RD         | MONMOUTH     | OR    | 97361   |
| BAUMANN RICHARD JAMES                   | 333 NW 9TH AVE #705     | PORTLAND     | OR    | 97209   |
| LYMAN KAUP FOREST PROPERTIES LLC        | 8150 SMITH RD           | MONMOUTH     | OR    | 97361   |
| ROGERS DEBORAH J, RVC LVG TRUST         | P O BOX 612             | DALLAS       | OR    | 97338   |
| COOPER CREEK LLC                        | 841 LATOUR CT #STE A    | NAPA         | CA    | 94558   |
| MCKEE PROPERTIES LLC                    | 23350 MCKEE RD SW       | AMITY        | OR    | 97101   |
| DORITY MARGARET A & MITCHELL PATRICIA A | 475 REUBEN BOISE RD     | DALLAS       | OR    | 97338   |
| HALLBERG GWYNN M                        | 235 REUBEN BOISE RD     | DALLAS       | OR    | 97338   |
| MIHALYI-MARUNA CHRISTINA L              | 145 REUBEN BOISE RD     | DALLAS       | OR    | 97338   |
| ROBSON GEORGE, EST                      | 15550 ELLENDALE RD W    | DALLAS       | OR    | 97338   |
| BEEHNER ROBERT L & SHERI L              | 1816 COCHRANE LN        | DALLAS       | OR    | 97338   |
| BRUNE BRUCE H                           | 1808 COCHRANE LN        | DALLAS       | OR    | 97338   |
| K & J FARMS, LLC                        | 17400 GARDNER RD        | DALLAS       | OR    | 97338   |
| ROBERTS JOHN                            | 16330 BRIDGEPORT RD     | DALLAS       | OR    | 97338   |
| SAVAGE LOUIS D & SEAGREN CHERYL T       | 11255 KROENIG RD        | AMITY        | OR    | 97101   |
| MCKEE ROBERT L & LEANN R                | 24903 PERRYDALE RD SW   | AMITY        | OR    | 97101   |
| MISCHEL FAMILY TRUST                    | 8115 TUCKER RD          | AMITY        | OR    | 97101   |
| EICHLER KENNETH W ET AL, RVC LVG TR     | 8250 TUCKER RD          | AMITY        | OR    | 97101   |
| SPENCER KEITH H & RUTH A, LIVING TRUST  | 8205 BROADMEAD RD       | AMITY        | OR    | 97101   |
| PERRYDALE HILLS VINEYARD LLC            | PO BOX 710              | AMITY        | OR    | 97101   |
| BERGER SEED COMPANY                     | PO BOX 1359             | HILLSBORO    | OR    | 97123   |
| BROADMEAD LLC                           | 11120 MCCANN RD         | AMITY        | OR    | 97101   |
| VAN OTTEN DANIEL A JR & CAROLYN J       | 8130 BROADMEAD RD       | AMITY        | OR    | 97101   |
| TRACEY ROBERT K                         | 1160 SW TALL OAKS DR    | MCMINNVILLE  | OR    | 97128   |
| SCHARF MILLER LLC                       | 9950 BETHEL RD          | AMITY        | OR    | 97101   |
| BUSH RICHARD T & ALYCE K                | 3928 HOMESTEAD RD S     | SALEM        | OR    | 97302   |
| BERKEY FAMILY TRUST                     | 5890 NORTH OAK GROVE RD | RICKREALL    | OR    | 97371   |
| MULLER LARRY HUGH                       | 14520 BECK RD           | DALLAS       | OR    | 97338   |
| DODSON R CHESTER & DODSON DORIS I,L-EST | 6440 ENTERPRISE RD      | DALLAS       | OR    | 97338   |

| Property Owner                     | Address                 | City         | State | Zipcode |
|------------------------------------|-------------------------|--------------|-------|---------|
| WILFONG DUSTIN                     | 13115 BECK RD           | DALLAS       | OR    | 97338   |
| MASCIORINI DAVID V & CASI M        | 5600 VAN WELL RD        | DALLAS       | OR    | 97338   |
| BUHLER CLARENCE L, TRUST ET AL     | 5390 ENTERPRISE RD      | DALLAS       | OR    | 97338   |
| D & M FAST #2 LLC                  | 5335 ENTERPRISE RD      | DALLAS       | OR    | 97338   |
| ALDRICH DALE S & DARLENE M         | 5630 ENTERPRISE RD      | DALLAS       | OR    | 97338   |
| REMPEL ROBERT                      | PO BOX 673              | DALLAS       | OR    | 97338   |
| PERKINS KEN & GINGER               | P O BOX 74              | INDEPENDENCE | OR    | 97351   |
| PACIFIC FARMS CO, LLC              | PO BOX 1144             | DALLAS       | OR    | 97338   |
| GROSS FLORENCE                     | PO BOX 218              | HEBO         | OR    | 97122   |
| ATHERTON MICHAEL A & VICTORIA      | 18035 BRIDGEPORT RD     | DALLAS       | OR    | 97338   |
| FINEGAN TOMMY D                    | 18650 FALLS CITY RD     | DALLAS       | OR    | 97338   |
| LAMB FAMILY REVOCABLE LIVING TRUST | 349 WALNUT DR S         | MONMOUTH     | OR    | 97361   |
| HAWRYLUK SELENA & KEITH            | 14723 KESTREL PL NE     | POULSBO      | WA    | 98370   |
| FINEGAN JOYCE A                    | 1321 SW CLAY ST         | DALLAS       | IR    | 97338   |
| FERN EDWARD, EST                   | 18660 FALLS CITY RD     | DALLAS       | OR    | 97338   |
| SMITH JERRY RILEY & DANA M         | 1115 MADISON ST NE #824 | SALEM        | OR    | 97301   |
| NILES MARK A & NILES HAZEL E       | 3355 DUNCAN AVE NE      | SALEM        | OR    | 97301   |
| LUCKIAMUTE VALLEY CHARTER SCHOOL   | 17475 BRIDGEPORT RD     | DALLAS       | OR    | 97338   |
| HOLT CHARLES HAROLD II             | 733 MUSTANG LN          | GARDNERVILLE | NV    | 89410   |
| HALVERSON MATTHEW & HALVERSON LEE  | PO BOX 966              | DALLAS       | OR    | 97338   |
| ANDERSON RONALD E, TRUST           | 40 CASTLE PARK WAY      | OAKLAND      | CA    | 94611   |
| MADDOX JAMES A, TRUST              | 2795 PERRYDALE RD       | DALLAS       | OR    | 97338   |
| NEES DAVID W ETAL                  | 2542 CURLEW CIR         | ANCORAGE     | AK    | 99502   |

# TARGETED AREAS

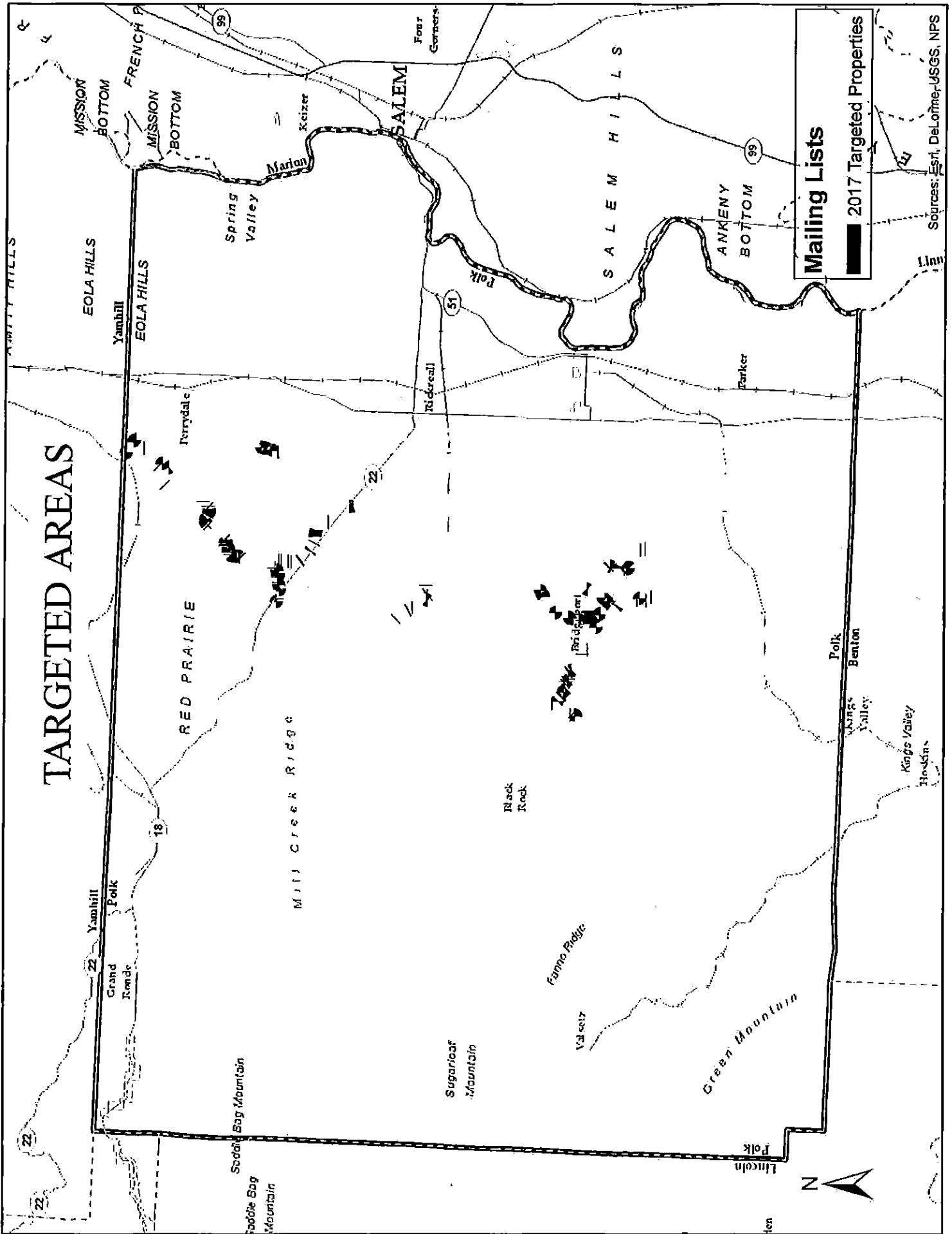


**Mailing Lists**


- First
- Second
- Third
- Fourth

Sources: Esri, DeLoorme-USGS, NPS

# TARGETED AREAS



**MEMO**

To: Sidney Mulder, Senior Planner  
From: Danny Lundy, Roadmaster   
Subject: Public Works Sediment Control Best Management Practices Meetings  
Date: February 27, 2018

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As standard practice, when Public Works has ditching work scheduled, there is a meeting with the crew on sediment control and verifying they have bio-bags and all necessary supplies. The following weeks the crew was scheduled for ditching work in 2017 and sediment control best management practices were discussed at the start of the week.

Weeks of, May 8<sup>th</sup>, 22<sup>nd</sup>, and 29<sup>th</sup>, June 5<sup>th</sup>, 12<sup>th</sup>, 19<sup>th</sup>, and 26<sup>th</sup>, July 3<sup>rd</sup> and 10<sup>th</sup>, August 7<sup>th</sup> and 14<sup>th</sup>, September 11<sup>th</sup> and 25<sup>th</sup>, October 9<sup>th</sup>, 16<sup>th</sup>, 23<sup>rd</sup>, and 30<sup>th</sup>.

In addition, Public Works had three bridge projects (listed below) in 2017 where the potential for sediment runoff and erosion existed. Sediment control best management practices were discussed throughout the completion of these projects, to ensure there was no impact to stream water quality.

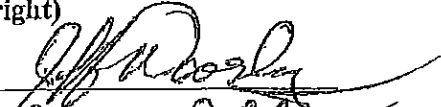

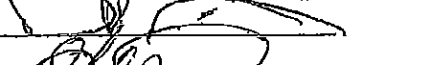

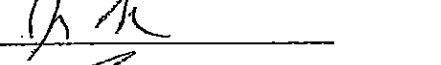
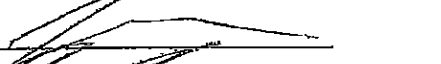

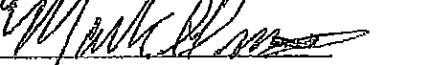
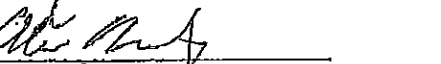

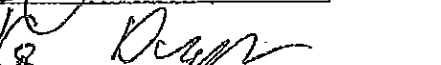

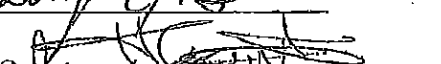
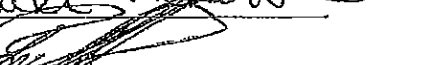

- Ballston Rd bridge #53C006 - May 2017
- West Perrydale Rd bridge #53C026 - September 2017
- Morrow Rd bridge #53C082 - October 2017.

## BEST MANAGEMENT PRACTICES – STORM WATER

PROJECT: Storm Water BMPs <sup>County</sup> Wide DATE: 12/5/17  
CONDUCTED BY: Danny Lundy & Video  
TOPIC: Storm Water BMPs  
ADDITIONAL TOPICS: \_\_\_\_\_  
COMMENTS: \_\_\_\_\_

### MEETING ATTENDANCE

(Print, then sign your name to the right)

1. Jeff Woosley 
2. Clinton Cobble 
3. DUSTIN THOMPSON 
4. Gil Doersch 
5. JOSH HERZBERG 
6. Joe Phillips 
7. Ben Brown 
8. Mark Dimes 
9. Alec Meant 
10. Ben Turner 
11. Ken Dungan 
12. Kerrin Hanson 
13. DALE HLAUINKA 
14. Robert Johnson 
15. Danny Lundy 

(ATTACH ADDITIONAL REPORTS FOR ADDITIONAL ATTENDANTS)

Turn Over



13. ~~Ditch Shaping, Grading, and Cleaning~~ ✓

a. **Description**

Machine cleaning, grading, and reshaping of ditches to maintain or improve drainage including removal, loading, hauling, and disposing of excess materials.

**Ditch:** a facility, typically parallel to a road or parking lot, which carries storm water runoff draining from the road or other constructed facilities. It is not a channelized stream, either with or without fish.

**Stream:** a channel that is usually flowing but can be dry. It may or may not be in its natural course, and can be parallel or perpendicular to the road. It may contain fish, but not necessarily so. The stream collects drainage water from its whole watershed, rather than just a facility.

*Catch Basins West Subarea Area w/ Fish Sticker on them*

b. **Concerns**

- Erosion
- Debris
- Disposal of material

c. **Best management practices for PCPW will be to:**

- Minimize amount of material removed and disturbance to side slopes to protect existing vegetation. Avoid disturbing sides of ditch and avoid creating vertical back slopes.
- Machine brush ditches instead of ditching when removal of soil is unnecessary and control of vegetation growth is adequate to ensure drainage.
- Use erosion control measures such as aggregate check dams, biofilter bags, or skip ditching when the potential exists to have sediments flow downstream. Erosion control devices will be regularly inspected and maintained.
- Maintain erosion control devices until vegetation is re-established either naturally or through hydro-seeding.
- Perform work when ditch is dry or when water in the ditch is low, except in cases of emergency where

water is backed up onto the roadway or adjacent property.

Store and dispose of removed materials above the 100-year floodplain at a supervisor-approved site; and not within 75 feet of a stream, wetland, or riparian area. Appropriate erosion control measures will be used to minimize erosion and sedimentation.

- When practical, reshape ditches to have flatter side-slopes where space exists and where vegetation can quickly re-establish.
- Evaluate and modify, where feasible and appropriate, existing ditch slopes to trap sediments, and support development of vegetation.
- If pumping is required, use appropriate fish screen on pump inlets and ensure that relevant water laws are observed.
- Refuel equipment a minimum of 25 feet from watercourses.

Prior to ditch shaping, grading and cleaning of ditches, check the location and make a determination based on readily available data if caution or environmentally sensitive areas are to be avoided.