

**City of Keizer, Oregon**

**ANNUAL REPORT**

**PERMIT YEAR 2015 / 2016  
STORMWATER NPDES PERMIT #102904**



**October 29, 2015**

**Prepared by:  
Environmental and Technical Division Staff  
City of Keizer, Public Works Department**

**Certification Regarding the City of Keizer  
NPDES Municipal Stormwater Annual Report 2015 / 2016**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



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**ACRONYMS AND ABBREVIATIONS**

<b>ACWA</b>	<b>Association of Clean Water Agencies</b>
<b>BMPs</b>	<b>Best Management Practices</b>
<b>CCR</b>	<b>Consumer Confidence Report</b>
<b>CFR</b>	<b>Code of Federal Regulations</b>
<b>City</b>	<b>City of Keizer, Oregon</b>
<b>CS</b>	<b>Construction Site Standards</b>
<b>CWA</b>	<b>Clean Water Act</b>
<b>DEQ</b>	<b>Oregon Department of Environmental Quality</b>
<b>DLCD</b>	<b>Department of Land Conservation and Development</b>
<b>DSL</b>	<b>Oregon Department of State Lands</b>
<b>DS</b>	<b>Development Standards</b>
<b>DWPA</b>	<b>Drinking Water Protection Areas</b>
<b>EFU</b>	<b>Exclusive Farm Use</b>
<b>EPSC</b>	<b>Erosion Prevention Sediment Control</b>
<b>EPA</b>	<b>Environmental Protection Agency</b>
<b>ESU</b>	<b>Equivalent Service Unit</b>
<b>ESA</b>	<b>Endangered Species Act</b>
<b>FTE</b>	<b>Full Time Equivalent</b>
<b>GIS</b>	<b>Geographic Information System</b>
<b>IDDE</b>	<b>Illicit Discharge Detection and Elimination</b>
<b>LID</b>	<b>Low Impact Development</b>
<b>MCM</b>	<b>Minimum Control Measure</b>
<b>MEP</b>	<b>Maximum Extent Practicable</b>
<b>MS4</b>	<b>Municipal Separate Storm Sewer System</b>
<b>NPDES</b>	<b>National Pollutant Discharge Elimination System</b>
<b>OAR</b>	<b>Oregon Administrative Rules</b>
<b>ODFW</b>	<b>Oregon Department of Fish and Wildlife</b>
<b>ODOT</b>	<b>Oregon Department of Transportation</b>
<b>O &amp; M</b>	<b>Operation &amp; Maintenance</b>
<b>ORS</b>	<b>Oregon Revised Statutes</b>
<b>PE</b>	<b>Public Education</b>
<b>Permittee</b>	<b>City of Keizer</b>
<b>PI</b>	<b>Public Involvement and Participation</b>
<b>PY</b>	<b>Permit Year</b>
<b>RR</b>	<b>Record Keeping and Reporting</b>
<b>SWAC</b>	<b>Stormwater Advisory Committee</b>
<b>SWMP</b>	<b>Storm Water Management Plan or Program</b>
<b>TMDL</b>	<b>Total Maximum Daily Load</b>
<b>UGB</b>	<b>Urban Growth Boundary</b>
<b>UIC</b>	<b>Underground Injection Control</b>
<b>USACE</b>	<b>United States Army Corps of Engineers</b>
<b>USFWS</b>	<b>United States Fish and Wildlife Service</b>
<b>USGS</b>	<b>United States Geologic Survey</b>
<b>VSF</b>	<b>Vegetated Stormwater Facility</b>
<b>WPCF</b>	<b>Water Pollution Control Facilities (permit)</b>

## Executive Summary

A substantial amount of time in the 2015/2016 report year was devoted to participating in the MS4 Advisory Committee (MAC) activities with other Phase II agencies and DEQ. This effort has resulted in a DEQ designed draft General Permit for Phase II permittees which is nearing final issuance.

The Environmental and Technical Division Manager from Keizer has been a committee member for the MS4 Advisory Committee (MAC) for development of the new Phase II permit. This Annual Report reflects those activities that are being implemented from the original Stormwater Management Plan (SWMP) with the addition of some BMPs that were referenced in the revised SWMP. Given the new permit will require a new SWMP Plan, the City of Keizer will provide documentation in this report, that the program is moving forward in complying with permit #102904 until the new permit is issued.

### Progress of Note for 2015/2016

Many of the activities for the 2015/2016 report year are directed toward Post-Construction standards in new and re-development. Environmental staff participated as part of the Technical Advisory Committee (TAC) for the development of the *Low Impact Development in Western Oregon: A Practical Guide for Watershed Health*. This document has been instrumental in helping the City to move forward with developing standards to be approved and adopted by the City Council. Environmental staff are meeting at least twice a month to push the program forward and have included the Community Development Department in those discussions.

Operations personnel have taken on the responsibility for maintenance of the public Low Impact Development (LID) facilities. Environmental staff are providing the technical background for function and overall facility assessment. This new coordinated activity is working well and has resulted in some innovative practices for overall design that make maintenance a more streamlined process.

Environmental staff have been actively involved in plan review for new and re-development over the reporting period. This new role has resulted in promotion and implementation of post-construction practices in both public and private development. The City is commonly using Vegetated Stormwater Facilities (VSFs) for stormwater management in most new development.

The City has continued its private stormwater inventory program. The 2015/2016 effort resulted in an inventory of 133 properties. This program has been extremely beneficial in helping the City to identify what facilities are on private property and how they are connected to the City's MS4. New private UICs have been identified with notification to DEQ.

Environmental staff absorbed training responsibilities for maintenance personnel this past year. The change has worked very well and this issue of limited training in past years has now been corrected. A training schedule was developed and will be refined for 2016/2017.

## **Section 1 - Introduction**

### **1.1 Background**

The federal Clean Water Act (CWA) was amended in 1987 to include the requirement that stormwater be regulated as a point source discharge under the NPDES program. In 1990, the EPA developed regulations for stormwater discharges that were applicable to entities that own and operate MS4s. The program was employed in two phases with Phase I regulations first being applied to large MS4s with populations of 100,000 or more. Phase II regulations were adopted in 1999 for small MS4s. In Oregon, DEQ has been delegated authority from the EPA for the NPDES program.

As a result of the NPDES Phase II requirements, the City of Keizer established a citizen's Stormwater Task Force to assist in the development of a stormwater management strategy that would meet state and federal regulations, and was suitable for the City of Keizer. The original Stormwater Task Force worked with staff and a consultant to establish the original Stormwater Management Plan (SWMP) and a stormwater utility fee. The initial stormwater fee of \$2.70 per month has been increased several times and the City is currently following a long range financial plan. The fee as of 1/01/2016 was \$5.51 per month for 1 Equivalent Service Unit (ESU).

After filing an application for an Individual NPDES Permit, the City of Keizer was notified in a letter dated March 12, 2007, that the public review process for the MS4 Phase II individual permit for the City had been completed by the DEQ. NPDES Permit No. 102904 (DEQ File No. 100032) was issued to the City of Keizer, Oregon. The Permit authorizes the discharge of stormwater from all municipal separate storm sewer system outfalls owned and operated by the City. In August 2011 the City of Keizer applied for a permit renewal. The original permit expired on February 28, 2012. A general permit was developed by DEQ in 2015/2016 and is nearing issuance to Phase II agencies.

### **1.2 Annual Report Requirements**

In accordance with Schedule B(2) of the Permit, the City of Keizer as the permittee must submit an annual report to DEQ by November 1 of each year for the time period of July 1 through June 30. The annual report must contain:

- 1. The status of compliance with permit conditions, an assessment of the appropriateness of the identified BMPs, progress towards achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable (MEP) , and the measurable goals for each of the minimum control measures;*

2. *Results of information collected and analyzed, if any, during the reporting period, including evaluation criteria used to assess the success of the program at reducing the discharge of pollutants to the MEP;*
3. *A summary of the stormwater activities the permittee plans to undertake during the next reporting cycle, including a schedule for implementation;*
4. *A description of changes made to the SWMP, including changes to BMPs or measurable goals identified in the SWMP;*
5. *Information on all new additions or removals of annexed areas that result in an expansion or contraction of the MS4's boundaries;*
6. *Notice that the permittee is relying on another government entity to satisfy some of the permittee's permit obligations (if applicable); and*
7. *Number and nature of enforcement actions taken.*

This document serves as the Annual Report for year 2015/2016 for the City of Keizer.

The City of Keizer does not rely on other government entities to satisfy any of the permit obligations. While Keizer owns the sanitary sewer system within the City's UGB, the City of Salem provides maintenance and repair of that system through an Inter-governmental Agreement (IGA). The City of Keizer would also utilize outside agencies in the event of an emergency beyond the City's response capacity. A large scale spill or accident might require a response from the Keizer Fire District, the City of Salem Fire Department or the Salem Public Works Environmental Services group, or the Marion County Fire District. The City also has the option to utilize the State of Oregon Spill Response Contractor. The City of Keizer is a member of the Oregon Water/Wastewater Agency Response Network (ORWARN), and has an Inter-governmental Agreement (IGA) with the Oregon Department of Transportation (ODOT); a Public Works Cooperative Assistance Agreement.

### **1.3 Organizational Structure and Primary Contacts**

The City's operational structure is a City Manager / City Council type structure with Department Heads in Finance, Community Development, Human Resources, City Recorder, Police, and Public Works. The implementation of the Phase II permit is carried out by the Stormwater Division and Environmental and Technical Division. These groups are under the management of the Public Works Director and respective Division Managers. The Stormwater Division is responsible for maintaining the system, stormwater facilities, and responding to illicit discharge complaints. The Environmental and Technical Division is responsible for the implementing permits, developing operational plans, management plans, and data management. The Stormwater Division has 3.25 FTEs allocated through the Stormwater Fund and the Environmental and Technical Division has 4.00 FTE allocated through the Stormwater Fund.

### 1.3 Responsible Personnel

Table 1.3 – Responsible Personnel

<i>Key Personnel</i>	<i>Area of Responsibility</i>
<p><b>Bill Lawyer</b>, Public Works Director            P.O. Box 21000            Keizer, OR 97307            (503)390-3700  <a href="mailto:lawyerb@keizer.org">lawyerb@keizer.org</a></p>	<p>Department Director            Stormwater Budget            Inter-Agency Lead            Citywide Communication</p>
<p><b>Elizabeth Sagmiller</b>, Environmental &amp; Technical Division Manager            P.O. Box 21000            Keizer, OR 97307            (503)856-3563  <a href="mailto:sagmillere@keizer.org">sagmillere@keizer.org</a></p>	<p>Management of Permitted Stormwater Programs            Annual Reporting/Regulatory Reporting            Operational Plan Development            Maintenance/Repair Policy Development            Recordkeeping Policy Development            Education and Outreach            GIS Management            Inter-Agency Coordination            Post-Construction in New and Re-development            UIC Installation Policy            UIC Decommission/Retrofits Policy</p>
<p><b>Kat LaFever</b>, Senior Environmental Program Technician            P.O. Box 21000            Keizer, OR 97307            (503)856-3526  <a href="mailto:lafever@keizer.org">lafever@keizer.org</a></p>	<p>Regulatory Support            Systemwide Assessment            Monitoring Plan            Data Analysis/Recordkeeping</p>
<p><b>Billy Johnson</b>, Environmental Program Technician            P.O. Box 21000            Keizer, OR 97307            (503)856-3424  <a href="mailto:johnsonb@keizer.org">johnsonb@keizer.org</a></p>	<p>Stormwater GIS Management/Maintenance            Erosion Control            Post-Construction</p>
<p><b>Mike Griffin</b>, Stormwater Operations &amp; Streets Division Manager            P.O. Box 21000            Keizer, OR 97307            (503)856-3551  <a href="mailto:griffinm@keizer.org">griffinm@keizer.org</a></p>	<p>Implementation of UIC Operations and Maintenance Plan            Implementation of Good Housekeeping Plan            Implementation of Spill Response Field Manual            Implementation of Illicit Discharge and Detection Plan            Stormwater System Repairs and Recordkeeping            Field Investigation and Response (IDDE, Spills)            UIC Maintenance and Management</p>
<p><b>Matt Reyes</b>, Public Works Project Manager            P.O. Box 21000            Keizer, OR 97307            (503)856-3558  <a href="mailto:reyesm@keizer.org">reyesm@keizer.org</a></p>	<p>Project Management for Large Scale Development</p>

## 1.4 Contents

Sections 2 through 7 of this report will cover the individual progress and specifications of adherence to the six minimum control measures required through the SWMP, including the Schedule B(2) permit requirements. The referenced control measures are as follows:

1. Public Education and Outreach
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention in Municipal Operations

Each of the referenced sections will include reporting on the City's suite of BMPs for the overall stormwater program.

Section 8 of the document covers the record-keeping and reporting efforts undertaken by staff for 2015/2016. Section 9 covers 2015/2016 annexations and expansion of the MS4, and Section 10 addresses progress toward meeting the conditions of Schedule B2(a) of the NPDES permit. Section 11 covers the activities associated with the TMDL Implementation Plan. Due to the delay with reissuance of the Keizer's Phase II permit, the TMDL Implementation Plan will be updated to include the most current conditions when the new permit is issued.

**Section 2 – Public Education / Outreach**

**2.1 BMPs**

- PE-1 Develop a Public Education Plan that addresses regional stormwater issues. Utilize the Mid-Willamette Outreach Group (MWOG) to develop products.
- PE-2 Utilize a statistical method to assess public awareness of stormwater issues
- PE-3 Utilize the annual consumer confidence report (CCR) to inform the public about stormwater related issues
- PE-4 Update the City’s website
- PE-5 Provide support to the Claggett Creek Watershed Council

**Table 2.1 – BMP Overview**

<b>BMP</b>	<b>Activity</b>	<b>Action</b>	<b>Measureable Goal Met Y/N</b>	<b>Results</b>
PE-1*	1. Develop a Public Education Plan that addresses regional stormwater issues.  2. Utilize MWOG to develop outreach products	Develop a plan that refines the focus for outreach on specific audiences with key messages  Participate in at least 8 meetings and host 2 events	Y  Y	A draft Public Education Plan has been developed  The Erosion Control Summit was held on 1/26/16. It continues to be a success.  MWOG hosted the Water Festival on 5/24/16 with 200+ elementary students
PE-2	Utilize a statistical method to assess public awareness of stormwater issues	This BMP was added to the first revision of the SWMP with the permit renewal package.	N	This BMP was not to be implemented until late in the new permit term.
PE-3	Utilize the annual consumer confidence report (CCR) to inform the public about stormwater related issues		N	The City’s Public Works Dept . An insert was not developed for the annual CCR
PE-4	Update the City’s website		Y	The City’s website was updated in 2015/2016. The 2014/2015 annual report, TMDL report, and WPCF

				annual report were posted to the website. Information was included covering outreach to schools, public interest groups and businesses interested in learning about stormwater management
PE-5	Provide support to the Claggett Creek Watershed Council	Attend meetings and activities	Y	Staff regularly attended watershed council meetings and helped them host a Watershed Discovery Night in conjunction with Earth Day activities.

\* Adaptive Management was applied to this BMP, and approved by DEQ in 2014/2015

**2.2 Additional Activities for Report Year 2015/2016**

Outreach materials are provided in Attachment A

The City of Keizer did not host a Public Services Fair or Howl-a-Palooza as has been done in previous years. Staffing challenges and work load created roadblocks for some activities, but new outreach activities were added to the annual program.

**Keizer Rapids Park Guided Hikes**

A Fall field trip was held for Keizer Elementary School. Activities included a VacCon demo, a station with the watershed model, and a nature hike. Emphasis was placed on the role of the riparian area as being a buffer for urban activities. 110 students participated.

Forest Ridge Elementary students toured Keizer Rapids Park on May 25, 2016. Topics included stormwater runoff, forest ecology, water quality, and erosion talks. The Oregon Department of Fish and Wildlife (ODFW) participated teaching fish biology and habitat. 68 students participated. See Fig 2.2.1

**Figure 2.2.1 – May 25, 2016 Event**



**Water Festival**

The MWOG group joined together to host a regional Water Festival this year. The event was held at the Keizer Civic Center and nearby Claggett Creek Park. This year MWOG hosted 200+ students from Grant and Salem Heights Elementary Schools. 4<sup>th</sup> grade students filtered through different sections throughout the day including, a riparian walk, stormwater relay game, riparian bingo, water quality testing, and macroinvertebrate study. We hope to see this event become an annual program. See Fig 2.2.2

**Figure 2.2.2 Water Festival**



### Mid-Willamette Outreach Group (MWOOG)

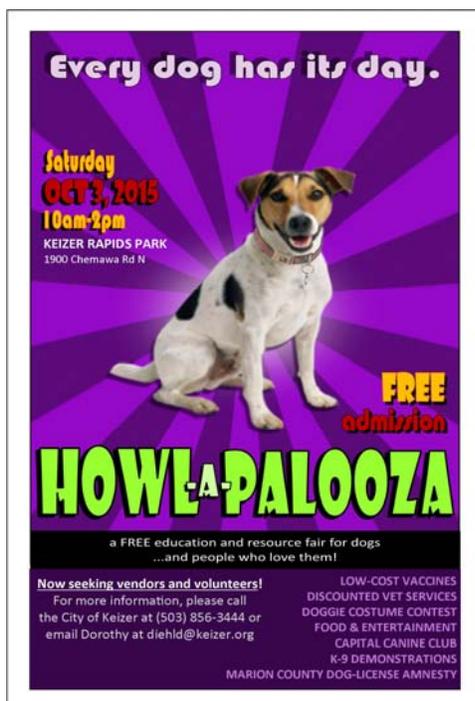
The Mid-Willamette Outreach Group first began meeting in 2011 and is regional group from the City of Salem, City of Keizer, Marion County, the Marion Soil and Water Conservation District, the City of Albany, and the City of Corvallis. The group meets on a regular basis and continues to expand activities within the region. The group met 8 times in 2015/2016 and 3 regional events were hosted by the group

Erosion Control Summit – The Erosion Control Summit was held on January 26, 2016. This was the 5th annual event hosted by MWOOG and held at the Keizer Civic Center. There were approximately 120 attendees and feedback from the event shows that participants view the summit as a valuable experience. Speakers included staff from DEQ, the City of Keizer, the City of Salem, Highway Fuel, Nathan Hardebeck from Northwest Environmental Training Center, and a representative from ACF West. The agenda for the 2016 event is included in Appendix A. The 2017 event is scheduled for January 24, 2017.

The Water Festival, is covered in the previous section and was a new MWOOG event.

Howl-A-Palooza was held on October 3, 2015 at Keizer Rapids Park. The event brought in approximately 350 participants. This is a popular event and provides the opportunity to promote overall community health by picking up pet waste. In addition to demonstrations, activities for the kids, and a costume contest, pet waste containers are given out, and there are several educational activities including the Capital Canine Club-pooper scooper activities. See Fig 2.2.3

**Figure 2.2.3 Howl-A-Palooza Poster**



The event was not held during October 2016. Our intent is to restart the event once the new permit has been issued and educational activities are evaluated in the new management plan document.

The MWOG group is also participating as part of a steering committee for a new, potentially statewide stormwater outreach group focused on Clean Waters and Streams. The group held invited potential stakeholders to an outreach forum on June 8, 2016. The meeting was held at the Keizer Civic Center. Approximately 30 people were in attendance. A second forum is scheduled for October 2016.

AVID Classes Keizer staff were invited to participate in a local program called Advancement Via Individual Determination (AVID) in 2016. The purpose of the program was to have professionals with science based backgrounds talk about their field of work to middle school students. Environmental staff were invited to speak a number of times through the late spring. Details of those presentations are as follows:

**April 7<sup>th</sup>-2** AVID classes at Claggett Creek Middle School, on Phytotechnology was the topic of the presentation. Staff also handed out 65 flyers to promote and get involvement from the students for the Claggett Creek Watershed Council Discover your Watershed. 65 students and 2 teachers were involved. Target Audience: Students/General Public

**April 22<sup>nd</sup>**- 3 AVID classes at Whitaker Middle School. 90 students were involved. Several teachers were also involved. Phytotechnology was the topic of the presentation. Target Audience: Students/General Public

**April 28<sup>th</sup>**,- 1 AVID class at Claggett Creek Middle School with 28 kids present. Phytotechnology was the topic of the presentation. Target Audience: Students/General Public

**May 26, 2016**- Career Connections presentation at McNary High, 12 students and counselors present, Phytotechnology presentation, water quality, stormwater pollutant removal via plant based technology. Target Audience: Students/General Public

**June 6, 2016**-AVID class for the 10<sup>th</sup> grade combined classes at Sprague High school, 65 students 2 teachers. Phytotechnology/horticulture presentation. Target Audience: Students/General Public.

**June 7<sup>th</sup>, 2016**-AVID class for the 6<sup>th</sup> and 7<sup>th</sup> grade classes at Houck Middle School. 70 Kids and 2 teachers were present. Phytotechnology/clean water careers presentation. Target Audience: Students/General Public

### **2.3 Appropriateness of the BMP / Effectiveness**

**PE-1** Development of the Public Education Plan will provide staff a clear path forward for future educational activities. This BMP is appropriate and effective.

The MWOG group is becoming more efficient and the activities more focused over time. This portion of the BMP is appropriate and effective.

**PE-2** Based on the outcome of the Phase II permit, this BMP may need to be revised.

**PE-3** Utilizing the City's CCR was a useful way to reach a large portion of Keizer residents. The Water Division needs to communicate with Environmental staff as to when material needs to be developed for the insert.

**PE-4** Staff needs to have more time to devote to fine-tuning this BMP. Although material is added to the site, it could be more fully expanded. This BMP is appropriate and effective.

**PE-5** Environmental staff continue to participate in Claggett Creek Watershed Council (CCWC) meetings and activities. This BMP is appropriate.

#### **2.4 Future Activities Planned for 2016/17**

The City will continue to implement an education and outreach program in subsequent years following the specifications of the new general permit.

**Section 3 – Public Involvement**

**3.1 BMPs**

- PI-1** Develop Stormwater Program Evaluation Methodology  
Utilize the Stormwater Advisory Committee (SWAC) for Program Review and Adaptive Management
- PI-2** Install 125 – 150 Storm Drain Markers Annually
- PI-3** Utilize Community Groups and/or Volunteers to maintain restoration Sites

**Table 3.1 – BMP Overview**

<b>BMP</b>	<b>Activity</b>	<b>Action</b>	<b>Measureable Goal Met Y/N</b>	<b>Results</b>
<b>PI-1</b>	Develop stormwater program evaluation methodology	BMPs will be evaluated by 1. <u>program implementation</u> , 2. <u>information collected</u> , 3. <u>evaluation</u> , and 4. <u>needs identification</u> . SWAC to review annually	Y	All BMPs were evaluated. Result reviewed and changes approved by SWAC in July 2015
<b>PI-2</b>	Install catch basin markers	Utilize community groups to install catch basin markers	Y	11/6/15 Chemeketa Biology Students 41 markers 5/9/16 McNary High School Students 13 markers 6/12/16 Forest Ridge Elementary 52 markers Total: 106
<b>PI-3</b>	Utilize community groups to maintain restoration sites		Y	See Section 11

**3.2 Additional Activities for Report Year 2015/2016**

While the City did not engage in large scale restoration activities this year, staff was able to take advantage of new opportunities to engage community members about riparian restoration activities and the importance of that work. The vision for the City is to develop a more comprehensive plan to address larger restoration opportunities.

### **3.3 Appropriateness of the BMP / Effectiveness**

**PI-1** This BMP is appropriate and effective. Using the methodology categories allowed staff to specifically identify tasks that weren't working or needed to be changed. The at-a-glance type format allows for quick identification of BMPs that need to be changed.

**PI-2** The City will need to determine if this activity is useful and effective. While the markers are useful for identification purposes, there has been no determination made as to if they deter illegal dumping.

**PI-3** The only significant restoration work that has occurred in recent years is at Keizer Rapids Park. Staff have determined that a restoration master plan needs to be developed before justifiable work can occur for this BMP. There are potential opportunities for the future on property adjacent to Claggett Creek Park

### **3.4 Future Activities Planned for 2016/2017**

Staff will look to the new permit to provide appropriate BMPS for Public Involvement in the future.

## Section 4 – *Illicit Discharge Detection and Elimination*

### 4.1 BMPs

- ID-1 Revise the IDDE Plan  
Conduct Annual Training
- ID-2 Develop Criteria for High Risk Areas
- ID-3 Link Information to GIS and Annually Update
- ID-4 Develop an Inspection and Inventory Plan for Privately Owned Stormwater Facilities
- ID-5 Analyze Inspection Data and Develop a Management Strategy

**Table 4.1 – BMP Overview**

BMP	Activity	Action	Measureable Goal Met Y/N	Results
ID-1	Revise the original IDDE Plan	Task Completed in 2013/2014	Y	Implementation of the new plan
	Conduct annual training	IDDE/Spill Response	Y	16 employees Training on 4/19/2016
ID-2	Develop criteria for high risk areas		Y	
ID-3	Link to GIS	Developed High Risk Tool Set	Y	Complete – compiled data will need infrequent maintenance
ID-4	Develop inspection and inventory plan	Inventory is expected to take several years	Y	133 taxlots were inventoried in 2015/2016
ID-5	Analyze inspection data and develop management strategy		N/A	Management strategy is not expected to occur until all inventory information has been collected

## 4.2 Additional Activities for Report Year 2015/2016

### IDDE Plan Revisions

The IDDE Plan was revised in 2013/2014. The Stormwater Operations and Streets Division Manager is responsible for implementation of the plan.

Training: Training occurred on 4/19, 2016 for 16 maintenance employees. The group reviewed the City’s Discharge Ordinance, violations of the ordinance, and City crew response. They defined an illicit discharge and covered field screening, detection and prevention. Spill Response training was included and covered clean-up as well as response. This training also included the use of video’s. WPCF Spill response was covered in this training as well.

### Outfall Inspections

Outfall inspections were completed in July and August of 2015. A total of 131 outfalls were inspected. The numbers for this activity are being refined as the City fine-tunes the inspection process. Currently, Maintenance personnel are inspecting all known outfalls annually.

### Develop Criteria for High Risk Areas

As it applies to ID-2, criteria has been established to help identify areas which may be prone to IDDE incidents. These include land use type, past history of IDDE incidents, hazardous material storage or use (SARA site locations from Keizer Fire Department database), and traffic levels. SARA site locations are noted in Figure 4.2.1

**Fig. 4.2.1 SARA Sites**

STATE FIRE MARSHAL REPORT 1 - LOCAL FACILITIES  
 =====  
 THIS REPORT LISTS ALL FACILITIES SURVEYED IN YOUR LOCAL AREA

NO = NO HAZARDOUS SUBSTANCES PRESENT  
 YES = HAZARDOUS SUBSTANCES PRESENT

<b>KEIZER FIRE DIST</b>			
<u>ie</u>	<u>Location Address</u>	<u>City</u>	<u>Facility ID No.</u>
PRECAST INC	1302 CANDLEWOOD DR N	KEIZER	073445
.ITY	5390 N RIVER RD	SALEM	117969
.ITY	3600 RIVER RD N	KEIZER	090558
.ITY	6494 WINDSOR ISLAND RD	KEIZER	090559
	4080 RIVER RD N	KEIZER	103058
RPORATION	3862 RIVER RD N	KEIZER	081635
	2715 TEPPER LN NE	KEIZER	020628

### Map High Risk Areas in GIS

This BMP is being implemented as designed. A GIS project was established and data is accessed to evaluate ongoing risk. Compiled data in the GIS project will need infrequent maintenance to remain current.

### Private Facility Inspection and Inventory

As was reported last year, the City of Keizer sent a letter to commercial property owners that were selected for inventory during the first year of the inventory. Staff then conducted the inventory, covering 133 taxlots. The remaining commercial property, which was selected for inventory during the second year of the program, were sent notification letters during the spring of 2016.

- 133 tax lots were inventoried during the FY 15/16.
  - 7 private storm drainage facilities were identified that **did not** connect to our MS4 or UIC systems. This includes VSFs, UIC and surface infiltration facilities.
  - 20 private storm drainage systems were discovered that provided water quality treatment and **did** connect to our MS4 and/or UIC system.
  - 85 private storm drainage systems were discovered that provided **no** water quality treatment and **did** connect to our MS4 and/or UIC system.
  - The remaining lots did not have any type of storm drainage system.
- All of the drainage systems identified above were captured via GPS and integrated into our GIS.
- A notification letter was sent to 174 commercial tax lots spring 2016.

### Spill Prevention and Response

The Spill Prevention and Response program was developed in 2013/2014. Training has occurred for field staff in conjunction with IDDE training. See Table 4.1

This year staff tracked and followed up on more incidents than in any prior year, due in part to increased interest by Keizer Fire and maintenance personnel to find and remedy spills. We received 34 spill-related incident reports from Keizer Fire, and 66 were logged from Keizer Public Works.

Incident tallies by Type and summaries of each incident are included in Appendix B.

Due to increased vigilance on the part of Keizer staff, most incidents were dealt with before any material moved from the original spill location. We are considering how best to handle incidents where there are repeat offenses, whether to utilize the Code Enforcement staff and how legally to notify, etc. When the new Phase II permit is issued, the IDDE requirements will result in changes to enforcement procedures.

### **4.3 Appropriateness of the BMP / Effectiveness**

**ID-1** The original ordinance developed in 2009 has been a useful document.

**ID-2** The revised IDDE Plan is up-to-date and in a new format that is more user friendly.

**ID-3** Environmental staff have acted as instructors for this year's activities which has significantly improved the effort.

**ID-4** Implementation of the plan is ongoing. Some portions of the initial plan have been effectively implemented during the permit term.

### **4.4 Future Activities Planned for 2016/2017**

The City anticipates the new General Phase II permit will be effective and activities will be related to meeting permit activities.

Enforcement actions are listed in Appendix B

**Section 5 – Construction Site Stormwater Runoff Control**

**5.1 BMPs**

- CS-1 Conduct Erosion Control Training for Public Works Personnel
- CS-2 Develop and Maintain an inventory of Active Construction Sites that Require a Construction Site Pollution Prevention Plan (CSPPP)
- CS-3 Revise the CSPPP and Erosion Control Ordinance
- CS-4 Develop a Separate Hotline for Erosion Control Complaints from the Public

**Table 5.1 – BMP Overview**

<b>BMP</b>	<b>Activity</b>	<b>Action</b>	<b>Measureable Goal Met Y/N</b>	<b>Results</b>
CS-1	Conduct erosion control training for Public Works personnel	This training included a brief overview of a typical site and applicable BMPs. Also a review of internal plans	Y	6/15/16 Training for 15 maintenance staff members. Topics included erosion process, factors, Keizer program elements, private projects, public projects, and BMPs for EPSC
CS-2	Develop and maintain an inventory of active CSPPP sites		Y	Staff provided plan review, permit issuance, and inspection on 20 new private development projects, 17 ROW permits, and 4 City of Keizer projects
CS-3	Revise the CSPPP and erosion control ordinance		Y	The ordinance was adopted by City Council on 12/1/14. Forms were simplified and are available online.

CS-4	Develop a separate hotline for erosion control complaints		Y	The City has an after-hours phone system which allows the caller to choose an option for streets/stormwater issues. A separate hotline has not been developed
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**5.2 Additional Activities for Report Year 2015/2016**

The City’s lead inspectors provided the bulk of the training for Public Works personnel. In addition to the training held on 6/15/16, 6 Public Works employees attended the Erosion Control and Stormwater Management Summit hosted by the MWOG group in January 2016.

Environmental staff added the tracking of right of way permits which were modified to include erosion control requirements. Staff also cleaned up the process for ‘self-regulating’ internal projects in regard to erosion control and pollution prevention. When a contractor is hired for a City project, the inspector deals directly with the City’s Project Manager to make certain the site is maintained according to regulations.

**Enforcement Response Plan**

As part of the revision made to the erosion control program in 2014, an enforcement response plan was developed. To date that plan has worked well, paired with the City’s Discharge Ordinance to provide adequate enforcement for relevant programs including Construction Site Run-off and Illicit Discharge Detection and Elimination. New permit language identified in the current draft MS4 Phase II General Permit requires much more specific enforcement response procedures. We will revise and move this BMP forward once the language is finalized and our permit is issued.

**Record-Keeping and Plan Management**

All new and existing CSPPPs are spatially managed through an ArcMap shapefile which shows the location and status of each permit. All CSPPPs are also managed through an excel spreadsheet and kept up to date with inspection information and status updates.

The City has provided DEQ full documentation of all components of the erosion control program and is seeking inclusion in the 1200-CN permit. Forms have been modified and submitted to DEQ for 1200-CN inclusion. The City is still waiting for DEQ on this long overdue item.

### **Erosion Control Ordinance Revisions**

Environmental staff have made revisions to the Erosion Control Ordinance. Those revisions were approved by City Council on December 1, 2014. All City of Keizer projects that disturb over 2000 sq ft are required to have an internal CSPPP developed and implemented. In addition, projects that disturb over 200 sq ft that are adjacent to a waterway must have a CSPPP.

#### **5.3 Appropriateness of the BMP / Effectiveness**

**CS-1** Annual training for Public Works employees is appropriate.

**CS-2** Maintaining an inventory of active CSPPP sites is appropriate and useful.

**CS-3** Revision of the erosion control ordinance and associated CSPPP was appropriate and will result in protecting water quality.

**CS-4** As was reported last year, the City currently uses a telephone system that allows the public to reach Public Works personnel 24 hours a day. The hotline referenced in BMP CS-4 has not yet been developed. Because of lean staffing resources it is difficult to determine if a hotline would actually make a difference in the response time for City staff. As was noted in last year's report, it may be premature for the City to have a separate hotline at this time. The Spill Response Plan and associated manual has a matrix for staff to utilize in the event of a non-routine event. Furthermore, staff is working with support agencies to make certain that Public Works personnel are contacted in the event of an emergency.

#### **5.4 Future Activities Planned for 2016/2017**

**CS-1** Annual training is expected to continue for Public Works personnel.

**CS-2** No changes are anticipated for this BMP

**CS-3** No changes are anticipated for this BMP

**CS-4** No changes are anticipated for this BMP

## Section 6 – *Post-Construction Stormwater Runoff*

### 6.1 BMPs

**DS-1** Revise Design Standards and Development Code

**DS-2** Implement the Revised Water Quality Standards for New and Re-development  
Conduct Plan Reviews, Inspections, and Enforcement

**DS-3** Conduct Annual Training for Program Components for Public Works Personnel

**Table 6.1 – BMP Overview**

<b>BMP</b>	<b>Activity</b>	<b>Action</b>	<b>Measureable Goal Met Y/N</b>	<b>Results</b>
DS-1	Develop ordinance to control runoff from new and re-development		Y	Staff is actively working on updating the existing Design standards
DS-2	Implement the Revised Water Quality Standards for New and Re-development		Y/N	The City is actively requiring portions of the updated information in the new Design Standards
	Conduct plan reviews, inspections, and enforcement for new development		Y	Plan review is ongoing
DS-3	Conduct annual training for program components for Public Works Personnel		Y	Training on 1/11/16 for 17 staff members. LID concepts, biofiltration, maintenance, seeding, structural repairs, rehabilitation.

### 6.2 Additional Activities for Report Year 2015/2016

The City of Keizer has not yet developed a comprehensive post-construction program. The existing Design Standards were adopted by City Council resolution and include references to Clean Water Services standards as well as Portland Bureau of Environmental Services. These references, and the ability of the Public Works Director to impose such requirements, has resulted in a substantial increase in the installation of low impact development elements into subdivision sized projects as well as commercial and retail projects.

The City has been moving forward with the requirement for Water Quality Treatment that was established through code as a reference to outside guidance documents. To move revision of Design Standards and Development Code forward, Environmental staff initiated a program that is working to develop a formal post construction program. This includes developing interim standards as well as identification of goals and standards to work toward preserving vegetation, reducing impervious surface and reducing runoff to surface water. This process began in March 2016 will continue through 2017.

- 15/16 FY: Environmental staff has had 14 meetings dedicated toward developing interim standards, developing goals/objectives, review of guidance documents and the development of an outline for a design manual.
- 15/16FY: Environmental staff has had 1 meeting with Community Development to coordinate interdepartmental efforts to achieve identified goals and objective

While the City currently implements plan review and inspections for water quality facilities being constructed, there is no formal process that accompanies a revision in Design Standards and Development Code.

Training – PowerPoint training for staff on 1/11/2016 included biological basics to total rehabilitation of a vegetated stormwater facility (VSF). Training also included major pollutant sources, LID concepts, vsf/design, metals removal, plant establishment, mulches, and much more.

### **6.3 Appropriateness of the BMP / Effectiveness**

**DS-1** The BMP as written is appropriate and effective

**DS-2** The BMP as written is appropriate and effective

**DS-3** The BMP as written is appropriate and effective

### **6.4 Future Activities Planned for 2016/2017**

Staff will continue to move forward with development of revised Design Standards and the requirements specified in the new Phase II permit.

## Section 7 – Pollution Prevention in Municipal Operations (Good Housekeeping)

### 7.1 BMPs

**OM-1** Utilize Public Works Personnel to Review Existing O & M Manual (a.k.a Good Housekeeping Manual)

**OM-2** Inspect 10% of the MS4 Annually (Contracted Activity)

**OM-3** Conduct Employee Training

**OM-4** Implement the Catchbasin Inspection Program

**OM-5** Conduct Street Sweeping

**Table 7.1 – BMP Overview**

BMP	Activity	Action	Measureable Goal Met Y/N	Results
<b>OM-1</b>	Utilize Public Works personnel to review existing O & M Manual	Revise the manual that was developed in 2011	Y	Complete. The manual was revised in 2014
<b>OM-2</b>	Video Inspection of Stormwater System	Contracted inspection with a goal of 10% of the system annually	Y	11% of the MS4 was inspected and cleaned. Cleaned footage was 38,687.8 ft A total of 32 dump truck loads of debris was cleaned from the storm lines
<b>OM-3</b>	Conduct employee training		Y	18 staff members present for training on 2/17/16
<b>OM-4</b>	Catch basin inspection program	Inspect structures, clean and develop a repair list	Y	2235 catchbasins inspected and 283 were cleaned. 275 manholes inspected and 27 cleaned. 16 catchbasin repairs
<b>OM-5</b>	Street Sweeping	This is a contracted activity	Y	1284 cubic yards of material was removed in 2015/2016

### 7.2 Additional Activities for Report Year 2015/2016

**OM-1** The Good Housekeeping Manual was updated in Spring 2014 and now contains pertinent UIC information. The manual includes a regulatory overview, inspection and maintenance protocol, structure design and function, record keeping and adaptive management, as well as a section on roles and responsibilities.

**OM-2** The City reached the goal for MS4 TV inspection in 2015/2016 (See Table 7.1) 38,688 feet, which represents 11% of the system was inspected and cleaned. This represented full utilization of a \$90,000 budget for the work. 32 dump truck loads of sediment was removed through this effort.

**Table 7.2 – Video Inspection Statistics**

TOTAL 2015/16 TV STATS		
Total Spent	\$89,184.80	99.1%
Total TV/Cleaned Footage	38687.8	11% of MS4
Overall Cost/Foot	\$2.31	Range \$1.96-\$2.79
Breakdown by Cost Type:	Total Cost	Ave Cost/Ft
Base Clean/TV	\$71,454.80	\$1.85
'Extra Cleaning Costs'	\$12,050.00	\$0.31
Dump Fees	\$5,680.00	\$0.15
Traffic Control	\$0.00	\$0.00

System Repairs – Repairs have been identified and prioritized as a result of the TV inspection program. 23 repairs were completed by staff in 2015/2016 of the 33 that were identified.

Costs:

- Materials: \$9,891
- Staff: \$11,396
- Equipment: \$9,060
- Total: \$30,347**

**7.3 Appropriateness of the BMP / Effectiveness**

**OM-1** The revision of the Good Housekeeping Manual was appropriate. Consistent training will hopefully result in increased usage by Public Works personnel.

**OM-2** This BMP is appropriate and effective. Because contract costs for inspection and associated cleaning work vary based on pipe diameter, amount of cleaning required, dump fees, and traffic control it is difficult to estimate the amount of contractual dollars needed each year to reach the 10% goal.

**OM-3** Employee training is effective and appropriate.

**OM-4** This BMP is effective and appropriate.

**OM-5** This BMP is effective and appropriate.

## Street Sweeping Quarterly Removal Totals – Annual Comparisons

	2013/2014	2014/2015	2015/2016
July-Sept	159	236	187
Oct-Dec	921	962	678
Jan-Mar	313	220	222
April-June	252	226	197
Total	1645	1644	<b>1284</b>

**7.4 Future Activities Planned for 2016/2017**

Continue existing BMPs and implement new conditions of the Phase II permit

## Section 8 – Record-Keeping and Reporting

### 8.1 BMPs

**RR-1** Develop an Electronic Stormwater Database (ArcGIS) to Specifically Identify Assets in Order to Track Stormwater Program Elements Including Repair and Maintenance Activity

**RR-2** Maintain Spatial Information for Private Stormwater Infrastructure. Add Spatial Information for SWMP Program Elements

**Table 8.1 – BMP Overview**

BMP	Activity	Action	Measureable Goal Met Y/N	Results
RR-1	Develop an electronic stormwater database (ArcGIS)		Y	This BMP is complete and staff is looking to expand the effort
RR-2	Maintain spatial information for private stormwater infrastructure.		Y	All known private connections and structures are now catalogued using a specific code

### 8.2 Additional Activities for Report Year 2015/2016

**RR-1** – Although this BMP is complete, staff is looking to expand it in an effort to keep up with technology as well as create efficiencies by accessing more resources. In spring 2016, Environmental staff worked with a consultant to develop a GIS work plan that outlines the migration of our data into a new geodatabase. Not only will this allow us to better access and leverage our data, it comes with a suite of resources that will enhance identification, tracking and analysis of stormwater assets.

Environmental staff continue to refine recordkeeping efforts for the Division. Ongoing GIS management accomplishment are too numerous to list, but an example of the applicable activities are noted in this subsection. The list below captures only a portion of the numerous data management and record-keeping activities undertaken by Environmental staff:

- Outfall inspection results updated
- Catchbasin inspections recorded in the database
- Grid maps updated on a quarterly basis
- Erosion control permits and status displayed in ArcMap
- Public and private water well data updated in GIS
- Marion County updates included in the system
- City of Salem updates included in the system
- Archived document file added to the Stormwater Drive and index developed

- Infrastructure corrections updated in the GIS system
- Repair work inventoried and prioritized to include backlog work
- Private inspection project has been added to GIS
- Assets have been reviewed to determine ownership (public or private) and maintenance responsibilities (public or private)

### **8.3 Appropriateness of the BMP / Effectiveness**

**RR-1** This BMP is appropriate and effective.

**RR-2** This BMP is appropriate and effective.

### **8.4 Future Activities Planned for 2016/2017**

The Environmental and Stormwater Divisions anticipate continuing the private facility inventory and inspection program as described in subsection 4.2. This activity will require adding and correcting information in the GIS system.

## **Section 9 – *Annexed Area / Expansion of the MS4***

### **9.1 Overview**

No annexation occurred in 2015/2016.

No major annexations are expected in the upcoming report year, but the City is expecting a large expansion in the next 2 to 3 years.

## **Section 10 – Progress Toward Schedule B2(a)**

### **10.1 Summary**

Schedule B2(a) of the NPDES permit states that the permittee must submit an annual report to the Department [DEQ] that will include “*the status of compliance with permit conditions, an assessment of the appropriateness of the identified BMPs, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and the measurable goals for each of the minimum control measures*” The sections of this report that pertain directly to established BMPs provide status of compliance and assessment of appropriateness. This section of the report addresses the City of Keizer’s goal of reducing discharges to the MEP.

As was discussed in Section 6, the City has been requiring post-construction LID practices in new and re-development although the redesign of City Design Standards are not complete at this time. However, the use of vegetated stormwater facilities or UICs are the standard for subdivisions and commercial development.

The City’s public education program has grown to cover new elements and partnerships. As is discussed in Section 2, Environmental Division staff have taken on new activities during the 2015/2016 report year. The Water School described in Section 2 is a program that was reinvented after several years of non-implementation by other agencies. In addition, the successes and continued growth of MWOG has been very useful for all of the agencies involved.

Although communication has improved between Stormwater and Environmental staff, there continues to be a significant gap in the understanding of the need to change practices and activities that are required in regulatory programs. Furthermore, although some progress has been made in seeing the permit as a City responsibility, it is still viewed as primarily a Public Works responsibility. As the City moves to almost 10 permitted years, more emphasis should be placed on the importance of this program within the City as a whole.

The City’s erosion control program has continued to be refined over the past year. The revised erosion control ordinance was adopted by resolution through Keizer City Council in December 2014. The revised ordinance provides more protection for waterways and refines the disturbance language. All documents have been revised and updated in order to provide a smooth transition to the 1200-CN program should that become an option that DEQ intends to develop.

Environmental staff have taken the lead on refining and adding new programs that will streamline field data collecting activities, record-keeping, and data retrieval activities. The effort to address efficiency and enhance record-keeping activities will serve the City well as we prepare to transition to a new General Permit.

## **Section 11 – TMDL Implementation Plan**

### **11.1 Summary**

The Environmental and Technical Division Program Manager for the City of Keizer has been closely involved with review of the pending draft Phase II permit. The City will be providing DEQ a revised TMDL Implementation Plan once the new permit has been issued and BMPs have been developed for new requirements

As has been the case with previous reports, this section highlights or are activities in addition to those that are reported at part of MS4 Phase II permit requirements

### **11.2 Specific Activities**

#### **Outreach Efforts**

The many of the outreach efforts and projects are described in Section 3 of this document. Environmental staff have made good progress in developing the overall outreach program over the past year.

Staff began drafting a Public Education Plan (PEP), but those efforts have been temporarily curtailed until issuance of the new permits.

A staffing change in 2015 has resulted in some positive changes to the public education efforts. More emphasis is being placed on reaching students, such as utilizing the AVID program described in Section 3.

The Mid-Willamette Outreach Group (MWOOG) has continued to meet and host programs with consistent messages for the general public. Members of MWOOG joined together this year to host a Water School at the Keizer Civic Center. 200+ students from local elementary schools enjoyed a day of activities focused around clean water. Students rotated through stations such as a riparian walk, a stormwater relay, and a fish dissection station. See Figure 11.2.1

**Fig 11.2.1 Water School Fish Dissection**



## Howl-a-Palooza

The TMDL Implementation Plan calls for promotion of the Capital Canine Club (CCC). A portion of this BMP is accomplished through the annual Howl-a-Palooza event. Howl-A-Palooza was held at Keizer Rapids Park on October 4, 2015. Attendance was estimated to be around 350. In addition to the CCC booth where 35 pledges and pictures were collected, staff provided direct outreach to kids through a relay game called the “Poop Scoopin’ Boogie” Members of the CCC are highlighted on the City of Salem website at: <http://www.cityofsalem.net/canineclub>

This event is hosted by Marion County, the City of Keizer, and the City of Salem. These agencies represent a portion of the MWOG group. The event includes a dog license amnesty in order to bring out a wide variety of community residents. Emphasis is placed on healthy pets and healthy communities to tie responsible pet ownership to the environment. It also includes a family friendly atmosphere to attract more participants. The highlight of the event is the costume contest. See Figure 11.2.1

Howl-A-Palooza is growing in popularity each year. However, due to staffing and resource limitations, the event was not held in October of 2016. We hope to see it return in spring or fall of 2017

**Fig 11.2.2 – Howl-A-Palooza**



**Guided Hikes Program**

Activities at Keizer Rapids Park for the guided hikes program are discussed in Section 3. In addition to those activities, the 5<sup>th</sup> graders from Forest Ridge Elementary school assisted with planting of the native plant garden at the Big Toy playground at Keizer Rapids Park on December 5, 2015. The students participated in a discussion about native plants and the environment and converting a nut orchard into a native plant community.

**Restoration Activities**

As has been covered in previous reports, restoration efforts within Keizer have been difficult to develop and maintain. Environmental staff have been interested in developing a Restoration Master Plan, but staffing shortages have made this difficult to accomplish.

September 10, 2015 – Staff spoke with the Claggett Creek Watershed Council in regard to existing Upper Claggett Creek restoration projects. The intent was to show the group how an overall restoration map could provide a means for connectivity of projects throughout the watershed. While the Council showed some early interest, they have not followed up with anything concrete in moving this opportunity forward

September 2015 – Staff treated Ludwigia in a lower pond, at Keizer Rapids Park which is seasonally connected to the Willamette River. This site has been set up for photo monitoring and the treatment seems to be successful.

Winter 2016-A review of the Mid-Willamette Watershed Alliance document, Habitat Restoration Guidance Report for Mill, Pringle and Claggett Creek was conducted for usefulness in master plan development

February 26, 2016 – McNary High School Biology students assisted with propagation actions for 350 willow, dogwood, currant and ninebark to be used for the May activity at Keizer Rapids Park

May-2016, planting 200 native cuttings around the perimeter of the lower pond at Keizer Rapids Park for shading/control of yellowflag iris. See Figure 11.2.3

**Fig 11.2.3 Lower Pond at Keizer Rapids Park**

May 14, 2016 – Claggett Creek Watershed Council - Invasive Removal/Willow planting conducted. 45 participants.

May 21, 2016 Chemeketa Community College Biology class - removal of Ivy at Wallace House park. 3 participants

### **Claggett Creek Watershed Council**

In addition to attending regular meetings and supporting Council member for restoration activities, staff also provided support for the Council's Discover Your Watershed night held on April 27, 2016. Council members felt the event was well attended. The event featured a photo contest and prizes, a film, a pruning demonstration, and numerous displays from such as Marion County, the City of Keizer, PGE, Marion Soil and Water Conservation District. Each participant received a native plant to take home.

### **2016/2017 Forecast**

As was noted in last year's report, staff has tried to work on enhancing existing programs and trying to forecast what will actually be required in the new Phase II permit. Staff has stayed closely involved with development of the draft permit and is anxious to move forward with a new focus.

The TMDL Matrix follows this section.

**TMDL Implementation Plan Matrix – Report Year 2015/2016**

**Pollutant: Bacteria**

*(Six Minimum Control Measures Listed at the End of Each Table)*

<b>BMP</b> <i>Shaded BMPs are included in the SWMP</i>	<b>Source</b> <i>What source of this pollutant is being addressed?</i>	<b>Strategy</b> <i>What is being done, or what will be done to reduce or control pollution from the source?</i>	<b>How</b> <i>Specifically, how will this be done?</i>	<b>Fiscal Analysis</b>	<b>Measure</b> <i>How will successful implementation or completion of this strategy be measured?</i>	<b>Timeline</b> <i>When will the strategy be completed?</i>	<b>Milestone</b> <i>What intermediate goals will be achieved and by when to know what progress is being made?</i>	<b>Status</b>  <i>For the purpose of the draft Second Matrix, the ‘Status’ column provides clarification for each BMP. Once approved by DEQ, the Status column will be used for yearly progress details.</i>
PE	1. Bacteria carried to waterways in storm runoff and piped system	a. Prevent domestic animal waste from reaching waterway	i. Stormwater booth at Public Works Week open house or Public Service Fair	Shared funding with MWOG agencies. Promotional items	Utilize CCC to document willingness to adopt new behavior	Annually	Track pledges and event participants	The annual Public Works Fair was not held in 2015/2016. As stated in last year’s report, this activity is not a priority for the Department and the BMP should be evaluated. The Capital Canine Club (CCC) continues to be promoted and has been a recognized program within the region. Members of the Mid-Willamette Outreach Group continue the regional program at events such as the Walk-n-Wag, and Howl-a-Palooza. 290 pet waste containers were given out at this event and 35 pledges were taken. The City of Keizer donated 53 pet waste containers with educational information to SalemDogs – a local non-profit, and 90 pet waste containers were donated to Marion County to go in new adoption baskets at the animal shelter.
PE			ii. Expand ‘doggie’ bag program in local parks and high pedestrian areas	Unknown. The first project will be fully funded by the Eagle Scout	Installation of new stations and monitor bags	Annually	Working with scout troops to design new bag stations	No progress occurred on this BMP in 2015/2016. The existing stations are being used and refilled by park users. Lack of staffing resources make this BMP difficult to expand
PE			iii. Promote Capital Canine Club for Clean Streams (CCC)	Staff time. Shared funding for promotional items	Track pledges and continue to expand program. Number of attendees.	Annually	Participate in 1 regional event per year (such as Howl-a-Palooza)	Howl-a- Palooza was held on Saturday, October 3, 2015 at Keizer Rapids Park in Keizer. Aprx 350 people were in attendance. 35 CCC pledges were signed. 200 ‘Mutt Mitt’ dispensers were given away, and 90 Keizer pet waste dispensers were handed out. This is a successful outreach event.
PE			iv. Develop pet waste study for Keizer to use for outreach	Staff time	Track annual progress and information gathered	2016	Planning efforts to commence in 2013	A draft study has been developed but little progress occurred during 2015/2016. Staff is honing in on regional partnerships and products that are required in the new Phase II permit
PE			v. Continue guided hikes by Stormwater staff to highlight environmental issues of concern along waterways.	Funded	Track number of participants, school groups, and events	Annually	Work with local teachers and partner with other agencies for participation.	110 students participated in a guided hike activity in Fall 2015. The students were from Keizer Elementary. 68 students from Forest Ridge Elementary toured Keizer Rapids Park on May 25, 2016. Other hikes have been scheduled for 2016/2017
PE			vi. Utilize City of Salem branding logo for outreach efforts	Funded	Track materials and events	Annually	Use on outreach material	The City did not produce a great deal of handout material in 2015/2016. The logo was used on the City’s general stormwater brochure, it is on the City’s website, it was used on a flyer for resident’s with vegetated stormwater facilities in their neighborhood. It is also used on any advertising for MWOG events by Marion County and the City of Salem (e.g. the Erosion Control Summit, and the CCC)
PE-4			vii. Add stormwater-related information to the City’s Website	Funded	Track information added or updated	Annually	Review annual updates	Annual reports for 2014/2015 for the NPDES Phase II permit, the WPCF Permit, and the TMDL yearly report were added to the website. Information was also added related to opportunities to participate in Public Education activities
PE		b. Public outreach covering bacteria issues and concerns	viii. Develop traveling display to be used in public settings	Staff time	Track locations and presentation material	Ongoing	Develop display material based on event and location	The display board was used at the Discover Your Watershed night on April 27, 2016
PI-2			i. Storm drain markers	Funded	Number of markers installed	Annually	100 markers installed annually	106 markers were installed by Chemeketa Community College Students, Forest Ridge Students, McNary High students on 11/6/15, 5/9/16, and 6/12/16 respectively
PI			ii. Public Review of TMDL Implementation Plan	Staff time	Document events	Annually		The Stormwater Advisory Committee reviewed all stormwater regulated programs on July 29, 2015 including the TMDL Implementation Plan

ID-4		b. Prevent human waste (from cross-connections), oil, grease, paint, and other pollutants from entering the storm system.	i. Inspect private facilities to determine condition	Funded	Track annual activities such as notification, inventory, and inspection	2016	Staff will provide notification and program overview to the public in 2014	The private inspection work was continued in 2015/2016. 133 taxlots were inventoried
ID-1			ii. Revise illicit discharges detection and elimination plan	Staff time	Track annual activity	2014/2015	Utilize maintenance personnel to assist with rewrite	The Illicit Discharge Detection and Elimination Plan was updated in 2013/2014. Environmental staff took input on from maintenance personnel on the new document.
ID			iii. Internal training for implementation of the new plan	Staff time	Track training	2014/2015	<del>Utilize maintenance personnel to take a lead role in training</del> Vs 2 – Environmental staff will lead training	This task was taken on by Environmental staff for 2015/2016. This was an effective change in the program. Staff are now receiving regular training in the following areas: Stormwater Operations and Maintenance, Technology and green infrastructure / LID. Emerging Technologies IDDE Spill Prevention and Response Erosion Prevention and Sediment Control UIC Operation and Maintenance Good Housekeeping in Operations and Maintenance and Facilities
ID			iv. Implement the new plan	Staff time	Enforcement actions	Ongoing	Document progress in annual report	An Enforcement Response Plan is in place for the erosion control program
			v. Annual TV inspection of the MS4	Funded	Track annual footage and identify illegal connections and repairs	Annually	10% of MS4 system per year	11% Was inspected in 2015/2016. Total footage was 38,687 ft. 32 dump truck loads of material was removed
ERP-1			vi. Develop Enforcement Response Plan	Staff time	Track implementation statistics	Annually	Draft document in 2014	An enforcement response plan has been developed for the erosion control program. The specifications for this BMP may be changed according to the requirements of the new Phase II General Permit

**Six Minimum Control Measures**

PE = Public Education

PI = Public Involvement/Participation

ID = Illicit Discharge Detection and Elimination (IDDE)

CS = Construction Site Runoff Control

DS = Development Standards (Post-Construction Runoff Control)

OM = Operations and Maintenance (Pollution Prevention/Good Housekeeping)

**City of Keizer**  
**TMDL Implementation Plan Matrix**  
*Proposed Revised Matrix*

**Pollutant: Mercury**

*(Six Minimum Control Measures Listed at the End of Each Table)*

<b>BMP</b> <i>Shaded BMPs are included in the SWMP</i>	<b>Source</b> <i>What source of this pollutant is being addressed?</i>	<b>Strategy</b> <i>What is being done, or what will be done to reduce or control pollution from the source?</i>	<b>How</b> <i>Specifically, how will this be done?</i>	<b>Fiscal Analysis</b>	<b>Measure</b> <i>How will successful implementation or completion of this strategy be measured?</i>	<b>Timeline</b> <i>When will the strategy be completed?</i>	<b>Milestone</b> <i>What intermediate goals will be achieved and by when to know what progress is being made?</i>	<b>Status</b>
PE-4			i. Add stormwater-related information to the City's Website	Funded	Track information added or updated	Annually	Review annual updates	Annual reports for 2014/2015 for the NPDES Phase II permit, the WPCF Permit, and the TMDL yearly report were added to the website. Information was also added related to opportunities to participate in Public Education activities
PE			ii. Utilize City of Salem branding logo for outreach efforts 'Clear Choices, Clean Streams'	Funded	Track materials and events	Annually	Use on outreach material in 2013/2014	The City did not produce a great deal of handout material in 2015/2016. The logo was used on the City's general stormwater brochure, it is on the City's website, it was used on a flyer for resident's with vegetated stormwater facilities in their neighborhood. It is also used on any advertising for MWOG events by Marion County and the City of Salem (e.g. the Erosion Control Summit, and the CCC)
PE			iii. Erosion Control Summit	Funded	Track attendees and information presented	Annually	Program developed for January 24, 2017	The Erosion Control Summit and Stormwater Management Summit was held 1/26/16.
PE-3			iv. Utilize the annual Consumer Confidence Report (CCR) to provide citywide outreach	Funded	Track content	Annually	Mailings scheduled for April/May on an annual basis.	The CCR was not mailed out in 2015/2016.
PI-2		a. Public involvement	i. Storm drain markers	Funded	Number of markers installed	Ongoing	Track annual activity starting in 2013	106 markers were installed by Chemeketa Community College Students, Forest Ridge Students, McNary High students on 11/6/15, 5/9/16, and 6/12/16 respectively
CS-3		b. Keep soil on site. Prevent material from entering catchbasins and waterways	i. Revise the existing erosion control ordinance	Staff time	City Council adoption of amendments	2013/2014	Begin work with City Legal Counsel in 2013	Complete. The ordinance was adopted by Keizer City Council on Dec 1, 2014
CS			ii. Internal training for field staff	Staff time	Record of meeting and content	Ongoing	Training schedule to be developed by staff	A training schedule has been developed by Environmental Staff and covers the following categories: Stormwater Operations and Maintenance, Technology and green infrastructure / LID. Emerging Technologies IDDE Spill Prevention and Response Erosion Prevention and Sediment Control UIC Operation and Maintenance Good Housekeeping in Operations and Maintenance and Facilities
CS			iii. Plan review, inspections, and enforcement	Staff time	Track staff progress	Ongoing	Develop enforcement response for the program	An enforcement response plan has been developed for the erosion control program
CS-4			iv. Establish hotline to receive complaints from the public	Funded	Develop tracking system	2014	Develop procedure for checking calls and responding	The after-hours phone system is still being utilized. No progress on this BMP
DS-1			v. Revise Design Standards and Development Code	Staff time	City Council adoption of revised documents	2016	Staff anticipates utilizing SWAC for review of this activity	Environmental Staff is currently working on development of revised stormwater Design Standards. 14 meetings were held in 2015/2016 on this subject and a draft LID manual is pending
DS-3			vi. Internal training for new development standards	Staff time	Completion of training	2016	Develop training schedule	17 staff members present for training on 1/11/16. The training focused on LID principles, design, function, and maintenance

DS-2			vii. Plan review, inspections, enforcement	Staff time.	Track staff progress	Ongoing	Plan review to be completed when revisions are complete	Plan review and inspections are conducted for sites with water quality features such as swales, or vegetated facilities
OM-1			viii. Revise the Good Housekeeping Manual	Staff time		2015	Utilize maintenance personnel for this activity	The Good Housekeeping Manual was revised during permit year 2013/2014. Primary changes addressed UICs and groundwater. Language has been strengthened to require regular inspections and recordkeeping
OM			ix. Internal training for new O & M practices	Staff time	Agenda and instruction content	Ongoing	Assist maintenance personnel with flushing plan	18 employees were involved in O & M training on 3/17/16
OM-4 REVISED			x. Catch basin cleaning	Funded		Ongoing	Annual inspect all catchbasins and clean those with 6" or more of debris.	2235 catchbasins inspected and 283 were cleaned. 275 manholes inspected and 27 cleaned.
OM-5			xi. Conduct street sweeping	Funded	Track progress	Ongoing	Sweeping on a monthly basis. This program is currently underway.	1284 cubic yards were removed in 2015/2016
ERP-1			vi. Develop Enforcement Response Plan	Staff time	Track implementation statistics	Annually	Draft document in 2014	An enforcement response plan has been developed for the erosion control program. Staff will evaluate this BMP to determine if individual plans should be developed for individual programs.

**Six Minimum Control Measures**

PE = Public Education

PI = Public Involvement/Participation

ID = Illicit Discharge Detection and Elimination (IDDE)

CS = Construction Site Runoff Control

DS = Development Standards (Post-Construction Runoff Control)

OM = Operations and Maintenance (Pollution Prevention/Good Housekeeping)

**City of Keizer**  
**TMDL Implementation Plan Matrix**  
*Proposed Revised Matrix*

**Pollutant: Temperature**

*(Six Minimum Control Measures Listed at the End of Each Table)*

<b>BMP</b> <i>Shaded BMPs are included in the SWMP</i>	<b>Source</b> <i>What source of this pollutant is being addressed?</i>	<b>Strategy</b> <i>What is being done, or what will be done to reduce or control pollution from the source?</i>	<b>How</b> <i>Specifically, how will this be done?</i>	<b>Fiscal Analysis</b>	<b>Measure</b> <i>How will successful implementation or completion of this strategy be measured?</i>	<b>Timeline</b> <i>When will the strategy be completed?</i>	<b>Milestone</b> <i>What intermediate goals will be achieved and by when to know what progress is being made?</i>	<b>Status</b>
PE-3	1. Solar radiation and sediment deposition that results in a change in stream profile.	a. Retain mature trees, native vegetation, and encourage tree planting and use of native species for bank stabilization	i. Utilize the annual Consumer Confidence Report (CCR) to provide citywide outreach	Funded	Track content	Annually	Mailings scheduled for April/May on an annual basis.	The CCR was not mailed out in 2015/2016.
PE			ii. Design a stormwater brochure to be handed out at meetings and events Revise annually	Funded	Track usage and events. Revise annually	Annually	Brochure completed by March of each year.	The existing brochure included in Appendix A has not been updated recently.
PE			iii. Develop new restoration projects in the upper reach of Claggett Creek to connect existing sites	Staff time. Materials and equipment	Annual progress	2015	Draft plan developed by 2013	Some work has been done on this BMP staff have met with the Claggett Creek Watershed Council to try and generate interest in developing a watershed restoration map with the hopes of seeing some connectivity in the future. There are some potential opportunities in the next couple of years for some new City owned riparian area
PE			iv. Develop a tree preservation ordinance.	Staff time	Document annual progress	2016	Draft plan by 2014	A draft tree preservation ordinance has been developed. Staff have been working to rejuvenate the tree issues with City Directors. There are at least 2 ordinances to be revised and staff will look to that in 2016/2017
PE		b. Public outreach covering temperature issues and concerns	i. Guided hikes at Keizer Rapids Park.	Staff time	Track events and participation	Annually	At least 1 event in 2013	110 students participated in a guided hike activity in Fall 2015. The students were from Keizer Elementary.  68 students from Forest Ridge Elementary toured Keizer Rapids Park on May 25, 2016.  Other hikes have been scheduled for 2016/2017
PE-4			iii. Interpretive signage in parks along waterways and in stormwater infiltration facilities	Staff time / design & construction funded	Number of signs installed and locations	2016	Storm staff will install 2 signs at Keizer Rapids Park in 2013	Interpretive signs have been completed and installed
PE-4			iv. Use website to provide stormwater education	Staff time	Track information and content	Ongoing		Annual reports for 2014/2015 for the NPDES Phase II permit, the WPCF Permit, and the TMDL yearly report were added to the website. Information was also added related to opportunities to participate in Public Education activities
PE-5			v. Participate in Claggett Creek Watershed Council meetings and projects	Staff time	Meetings attended and partner projects	Ongoing	Continue to assist with recruitment of members	Staff have attended most meetings in 2015/2016 and helped support the Discover Your Watershed night in April 2016, and restoration activities at Keizer Rapids Park
PI-3			v. Utilize volunteer groups for restoration work and maintenance	Staff time	Track events and activities	Annually	At least 1 event per year	See Section 11 of the Phase II report for more details.

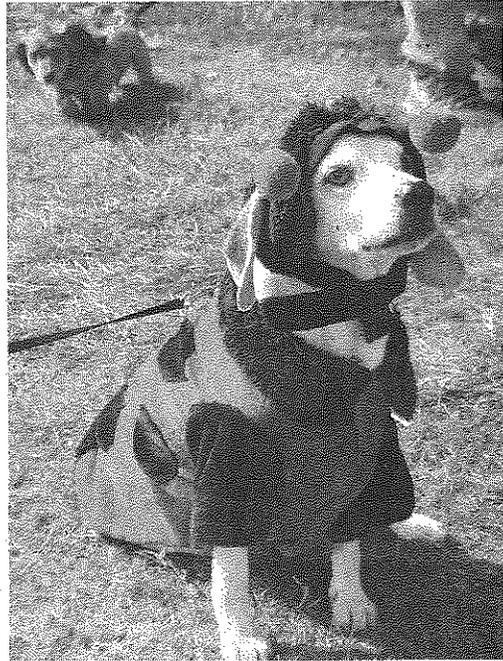
CS-3		b. Keep soil on site. Prevent material from entering waterways	i. Revise exiting erosion control ordinance.	Staff time	City Council adoption of amendments	2013	Draft language completed by early 2013	Complete. The ordinance was adopted by Keizer City Council on Dec 1, 2014
DS-1			ii. Revise Design Standards and Development Code to address Post-Construction requirements	Staff time. Public notice is funded	City Council adoption of revised documents	2016	Staff anticipates utilizing SWAC for review of this activity	Environmental Staff is currently working on development of revised stormwater Design Standards. 14 meetings were held in 2015/2016 on this subject and a draft LID manual is pending
ERP-1			iii. Develop Enforcement Response Plan	Staff time	Track implementation statistics	Annually	Draft document in 2014	An enforcement response plan has been developed for the erosion control program. Staff will evaluate this BMP to determine if individual plans should be developed for individual programs when the new permit is issued

**Six Minimum Control Measures**

PE = Public Education  
PI = Public Involvement/Participation  
ID = Illicit Discharge Detection and Elimination (IDDE)  
CS = Construction Site Runoff Control  
DS = Development Standards (Post-Construction Runoff Control)  
OM = Operations and Maintenance (Pollution Prevention/Good Housekeeping)

# APPENDIX A

## A howluva good time



Howl-a-palooza landed in Keizer Rapids Park Saturday, Oct. 3. Attendees turned out in costume and turned out in droves for the annual event that celebrates all things canine.

Top: Dean and Sandee Chambers' pups Louie, Manny and Vinny.

Above: Roxy, owned by Brenda Perkins, gets in on the costume action.

Left: Dina Muniz and Lulu

## Noms due for Crystal Apples

Nominations are now open for the 2015 Crystal Apple Awards.

All community members, students and parents are welcome to nominate any full- or part-time employee of Salem-Keizer Public Schools or Salem or Keizer private schools.

All nominations must be received by 5 p.m. on Friday, Oct. 9.

Nominations are accepted for three categories: teacher, administrator and support staff. District nominees must have been employed by Salem-Keizer Public Schools for at least three years prior to the current school year. The Crystal Apple Business Partnership Award is given to an organization that has made a significant contribution to education in the Salem-Keizer School District.

Nomination forms can be found at any school in the district, or downloaded from the Salem-Keizer Education Foundation website: [www.skeducationfoundation.org](http://www.skeducationfoundation.org).

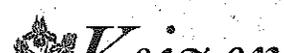
**WE ARE  
EVERYTHING  
EXCEPT  
OVERPRICED**

**Simple  
Cremation  
\$695**

*Inexpensive Burial  
and Funeral Options*

*Pre-Planning Available*

*On-Site Crematory*





# Claggett Creek Watershed Council

## Discover Your Watershed

Wednesday, April 27th, 2016

### Schedule of events:

**6:00-8:00** Booths, displays, activities, demos

In the Chemawa and Claggett Rooms: Kids activities, Fun and Games

In the McNary Room: Plant Pruning demonstration by Wilbur Bloom with Native plant displays and naturoscaping information

**6:20** City of Keizer Vector Truck cleaning demo in parking lot

**6:45** Awards Presentation— “Discover Your Watershed” photo contest

**7:05 UPRIVER**—Large screen showing *With Introduction and discussion with Filmmaker Jeremy Monroe*

Brought to you by:



## Storm Drain Marking

The CCWC installs Storm Drain Markers in Keizer to educate the community about their impact on water quality.

Stormwater runoff from houses, streets, and parking lots enters storm drains and is piped directly to local creeks untreated.

Storm Drain Markers remind residents that their activities have a direct impact on the local environment.



Do you want to preserve clean water  
for people and animals?

Do you want to help beautify your  
community?

Do you want to meet new people and  
have a great time?

**Join the  
Claggett Creek  
Watershed Council!**  
The CCWC meets on the second  
Wednesday of every month at the  
Keizer Civic Center. Please RSVP if it's  
your first meeting.

For more information please call  
503-383-1265 or e-mail  
[markcaillier@claggettcwc.org](mailto:markcaillier@claggettcwc.org)

Visit us on the web at  
<http://www.claggettcwc.org/>  
Or find us on Facebook!

# Claggett Creek Watershed Council

Protecting and  
promoting water  
quality and wildlife  
habitat in the Claggett  
Creek Watershed and  
beyond.

# CCWC

## Who are we?

The Claggett Creek Watershed Council (CCWC) is made up of citizens working to restore Claggett Creek to a healthy, safe natural environment that contributes to the overall quality of the community.

Claggett Creek flows through Salem, Keizer, and portions of Marion County. The main water course is Claggett Creek, but the watershed includes Labish Ditch and other water courses that flow into it. Claggett Creek is a tributary of the Willamette River.

The CCWC partners with the City of Keizer and other groups to organize projects that enhance the natural environment in the Claggett Creek Watershed and surrounding areas.

The CCWC is seeking new members who want to get involved in making the Claggett Creek Watershed a better place for people and wildlife!



## Ben Miller Family Park

### Streamside Restoration Project

In 2010, the bank at Ben Miller Family Park was severely eroded. Most of the plants there were invasive weeds like Himalayan Blackberry and Teasel. The CCWC helped the City of Keizer establish a restoration plot there by planting over 200 native plants!

The CCWC has also been helping with ongoing maintenance, including weed removal, plant care, and litter pick-up.

Before planting



Today



Today, the bank is well protected by a dense thicket of native plants which help keep the water clean and cool while providing habitat for wildlife.

## Invasive Species Removal

In the spring of 2012, hosted the first annual Invasive Species Removal at Keizer Rapids Park. All together, the volunteers helped remove over [150 cubic yards](#) of Scotch Broom!!!

The event has grown each year, with volunteers removing piles of Scotch Broom, Ivy, and Blackberry.

Contact us to get involved! (see back)

Local students and volunteers joined in the fun!



One of the huge piles of Scotch Broom removed by volunteers!

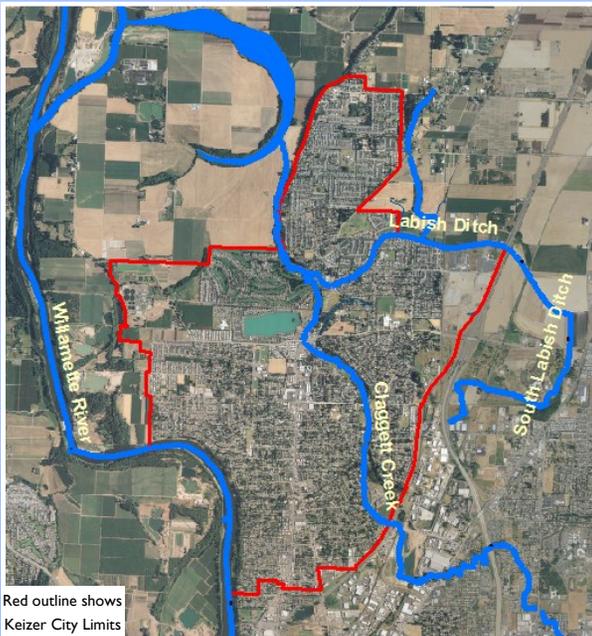


# Our Watershed

A watershed is the area of land that is drained by a particular waterway. The Willamette River watershed (also called the Willamette Basin) is the largest in Oregon. It covers over 11,000 square miles and 100 cities in the Willamette Valley. Over 16,000 miles of streams contribute to the Willamette River.

Keizer is part of the Willamette River watershed; Claggett Creek and Labish Ditch both contribute flow to the river. There are also a few large \*stormwater outfalls that discharge stormwater runoff from neighborhoods directly to the river.

## Keizer Waterways



\*See inside panel for info on stormwater.

# Precious Resources

A healthy watershed provides numerous benefits to its residents.



Clean rivers and streams provide recreational activities such as fishing, boating, swimming, wildlife watching, and relaxing. These stress-relieving activities are good for your physical and mental health!



The buffers of native trees and plants along waterways in a healthy watershed benefit the waterway—and you. According to the USDA, one acre of forest absorbs 6 tons of carbon dioxide and releases 4 tons of oxygen.



Healthy watersheds are vital to sport fishing, which is vital to the economy. Americans spent \$41.8 BILLION on sport fishing in 2011.



Homebuyers value healthy waterways. Even in lean economic times, property values tend to be much higher near clean waterways and areas with access to nature.



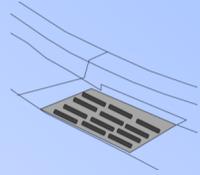
# Clean Water: A Matter of Choice

Information brought to you by  
the City of Keizer Public Works:  
Stormwater Division

503-390-3700



# Stormwater and You



In an urban environment like Keizer, stormwater runoff must be managed. Due to impervious surfaces such as roads, rooftops, driveways, and parking lots, water can't soak into the ground the way it does in undeveloped areas. Without a publicly-supported system of drains, pipes, ditches, and infiltration systems, the city would experience serious problems such as localized flooding and poor sanitation.

Most of the stormwater runoff that is collected is discharged directly to our local waterways — untreated. To protect water quality, we must all do our part to keep pollutants out of the stormwater system.

Read on to find out how you can help keep our waterways healthy for wildlife and people.



# What Have You Done For Your River Lately?

The river does a lot for us. Give something back!

Choose one of the following ways of protecting water quality, and stick to it!



Plant a tree! Add native vegetation to your property (or retain what's there), especially along waterways. Plants help keep the water cool, filter pollutants, hold the bank in place, absorb carbon dioxide, and produce oxygen!



Bacteria and parasites in pet waste can contaminate waterways and make people sick. Always clean up after your pet—even in your own backyard.



Take care of yourself AND the environment! Whenever you can, choose walking or riding a bike instead of driving.



Help keep waste out of the water by recycling what you can and properly disposing of what you can't.



In landscaping and gardening, take care to keep soil on the site. Excess dirt in our waterways clogs fish gills and buries important underwater habitat.



Grease, grime, and soap suds don't belong in the storm drain. Wash your car on your lawn or consider going to a commercial carwash -- they reuse the water!



## Benefits of Urban trees

Reduce Air Pollution

Reduce the impacts of stormwater runoff

Moderate temperatures

Lower air conditioning and heating costs.

Proven health benefits reduced blood pressure, improved overall emotional and psychological health.



For more information contact:

**City of Keizer**

**Planning Department**

**503-856-3441**

**930 Chemawa Rd  
Keizer, OR**

**97307-100**

## City of Keizer Significant Tree Preservation



## → What developers need to know

Section 2.309.04 of the City Development code provides for protection of "Significant Trees" or trees with a height of more than fifty (50) feet and /or having a trunk whose diameter is more than twelve (12) inches diameter at breast height (5 feet above ground level).

The intent is to preserve trees that provide significant environmental benefits to the citizen's of Keizer.



## Development Benefits of Preserving Trees

Preserving the tree on your property can actually increase it's value, studies have shown that healthy trees on residential property can increase the value up to 15%.

### Dollars and Cents impacts

Improved business. Businesses on tree lined streets show 12% higher income streams, which is often the essential competitive edge needed for main street store success, versus competition from plaza discount store prices

Tree shade can slow deterioration of street pavement, decreasing the amount of maintenance needed on parking lots and driveways.

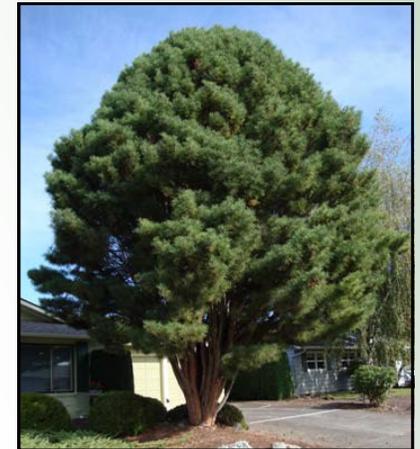
Trees properly placed around buildings can reduce air conditioning needs by 30 percent and save 20-50 percent in energy used for

## → Mitigating loss

If trees cannot be preserved they will have to be mitigated for onsite or replaced offsite at a 2 to 1 ratio. This can be expensive.

This ordinance applies to any trees removed up to 2 years ahead of the actual development so you should submit your tree plan ahead of any clearing activity.

Significant tree replacement is at the discretion of the Community Development Director and planting more trees may be necessary or additional mitigating efforts put required.



## Benefits of Vegetated Stormwater Facilities

Reduce the impacts of stormwater runoff

Moderate temperatures

Protect our streams and rivers from urban pollution

Minimize Keizer's impact on the communities downstream of us along the Willamette River.

Reduce the risk of flooding



City Maintenance workers and County supervised inmate work crews will from time to time do maintenance tasks on vegetated stormwater facilities in your neighborhood



For more information visit:

<http://www.keizer.org/>

**City of Keizer**

**930 Chemawa Rd  
Keizer, OR**

**97307-100**

Phone: 503-856-3444  
Fax: 503-393-9437  
E-mail: [akimoffm@keizer.org](mailto:akimoffm@keizer.org)

## Vegetated Stormwater Facilities

Care and maintenance





The water may pond in your street following a large rainstorm. This is normal and the water should subside within 36 hours of the rain ending.



Hardwood chip mulch conserves moisture and reduces weeds.



### Anatomy of a Water Quality Landscape



1. Capture and Treatment Area, where stormwater flows and the water ponds
2. Overflow Drain, not all water quality landscapes have one
3. Curb Opening, also called an inlet or outlet where stormwater can enter and exit.



A water quality landscape has been installed in your neighborhood. The plants and soil filter pollutants that the rain washes from the streets.

This polluted runoff is called stormwater. After soaking through the Vegetated Stormwater Facility, clean water then flows to the nearest stream.

#### Who maintains and cares for the landscape?

The City is responsible for looking after the water quality landscape as they are an important part of the City's stormwater system.

#### If you'd like to help, please:

- Pick up trash.
- Clear inlets of leaves and sediment (and place in your garbage) so stormwater can flow into the facility.

#### Please DO NOT:

- Spray herbicide or pesticides.
- Fertilize or trim plants.
- Replace or remove plants without City approval. The plants are specially chosen to work best for greatest stormwater management benefit. Any changes or additions may disrupt the function and crowd out desirable plants.



## **APPENDIX B**

## 2015/2016 Enforcement Actions

### IDDE REPORTING SUMMARY TABLES

#### PUBLIC WORKS IDDE – Total Combined PW Incidents

Automotive	16
Chemical	2
Construction	4
Food/Grease	6
Sediment	20
Sanitary Sewer	2
Vegetation	12
Waterwaste	4
Total Incidents	66

#### MS4 Incidents by Type

Automotive	13
Chemical	2
Construction	2
Food/Grease	6
Sediment	12
Sanitary Sewer	2
Vegetation	10
Waterwaste	4
Total Incidents	51

#### UIC Incidents by Type

Automotive	3
Chemical	0
Construction	2
Food/Grease	0
Sediment	8
Sanitary Sewer	0
Vegetation	2
Waterwaste	0
Total Incidents	15

#### KEIZER FIRE IDDE – Total Fire Incidents by Type

MVA - Automotive Spill	26
Chemical Spill	1
Motor Vehicle Fire	3
Portable Building Fire	1
Flammable Liquid Spill (Non-MVA Related)	3
Total Incidents	34

**2015/2016 Enforcement Actions**

**KEIZER PUBLIC WORKS IDDE INCIDENT REPORTING TABLE**

<b>Date</b>	<b>Location</b>	<b>Type</b>	<b>Description</b>	<b>Action</b>	<b>Follow-Up</b>
7/15/2015	Ulali and Keizer Station Blvd.	<b>MS4 - Automotive</b>	Staff was called by police dispatch to respond to a car accident; a small amount of oil (~ 6 oz) had leaked from the car onto the ground.	Staff cleaned up the oil with absorbent pads and clean sweep. No pollutant reached the storm drain.	No further issues.
7/20/2015	3850 5th Av. N.	<b>MS4 - Waterwaste</b>	Previous offender, see Incident # 36-2015. Staff found that the cleanout was surcharging every time the backwash pumps turn on (and overflowing into the street and catchbasin).	Staff recommended putting a screw down cleanout lid, and employee said they would advise the pool management.	Staff re-inspected, found no cleanout lid, so letter sent to owners advising them to cap the cleanout and to not run pumps simultaneously.
7/21/2015	5450 River Rd N	<b>MS4 - Food/Grease</b>	Minor oozing on concrete pad and visible substance staining to catch basin coming from cardboard trash compactor behind grocery store.	Placed bio bag in line of substance staining. Staff sent letter directing to place barrier or tray around/below the container, or get sealed.	Staff re-inspected and found no further leakage from the compactor.
7/24/2015	2715 Tepper Ln N	<b>MS4 - Vegetation</b>	Staff saw a truck dumping wood chips in the right-of-way. Staff was told BPA gave them permission to dump wood chips there (there were about 20 truckloads of wood chips)	Staff contacted the owner of the landscaping company and he said he would have the piles removed and stop dump there.	Upon staff re-inspection, the piles of wood chips had been removed.
8/12/2015	7187 Park Terrace Dr SE	<b>UIC - Vegetation</b>	Homeowner was washing lawn mower deck over a catchbasin.	Staff spoke with owner and explained why this is not an acceptable action. Owner understood.	No further issues.
9/4/2015	2272 Northtree Dr NE	<b>MS4 - Sediment</b>	Staff noticed mud and debris had flowed down the street from a gravel area in the driveway to a catch basin. A small amount of debris had reached the catch basin.	Staff placed a bio-bag in front of the catchbasin, then called Roto Rooter (offender) and had them bring a vac truck to the address and clean out the catch basin and clean all of the mess on the street.	No further issues.

## 2015/2016 Enforcement Actions

Date	Location	Type	Description	Action	Follow-Up
10/7/2015	950 Ivy Wy NE	<b>MS4 - Sediment</b>	Staff reported seeing a man hosing off a dirty tarp into the street. When lead staff arrived, the tarp was clean and there was a small amount off dirty water in the street. No water had reached the catch basin.	Staff explained the potential effects of putting sediment-laden water into the street. He gave other options (using a lawn area, bio bags, etc.)	No further issues.
10/13/2015	792 Cummings, 4235 River Rd., 500 Bever	<b>UIC - Construction</b>	Staff reported seeing concrete mix spilled onto the road at River and Manbrin. Staff determined that it had spilled from a Hertz rented mixer.	Staff swept up all of the concrete debris at three locations.	Hertz was notified and alerted not to overfill the mixers and to advise renters to drive slowly. Hertz said that they are purchasing lids to be placed at the ends of the mixers.
10/12/2015	River Rd. and Foothill Ct.	<b>MS4 - Automotive</b>	Police dispatch called staff to report vehicle accident and resulting oil spill. The fire department contained and begun cleanup process.	PW Staff assisted and all of the oil was contained and removed before reaching the storm system.	No further issues.
10/22/2015	Keizer Station	<b>MS4 - Chemical</b>	Staff noticed landscapers had over-scattered fertilizer out into the street. Upon further inspection, this was found along a long area up and down Ulali and Stadium streets.	Staff called the owner of the landscaping company and directed to have it swept up promptly. By the end of the day it had been swept up.	No further issues.
10/23/2015	4975 River Rd N	<b>MS4 - Sanitary</b>	Private Stormwater Asset Inventory discovered a storm drain connected to a sanitary manhole. This is an illegal connection which could result in sanitary spill in the event of a surcharge.	Staff contacted owners, and followed up with a letter, explaining that they need to plug the connection to the sanitary immediately, and then hook up legally to a stormwater or remove completely.	Later re-inspection confirmed that the catchbasin had been filled in, and pipe connection had been removed and grouted.

**2015/2016 Enforcement Actions**

<b>Date</b>	<b>Location</b>	<b>Type</b>	<b>Description</b>	<b>Action</b>	<b>Follow-Up</b>
11/2/2015	1897 Chelan (and on towards 18th St)	<b>MS4 - Automotive</b>	Citizen called to report oil sheen on the road from Chelan on towards 18th Street. Field Staff were asked to investigate.	Staff found that a car previously parked on the road had left a few oil drops which the rain caused to sheen. Staff cleaned up the sheen, minimal quantity.	No further issues.
11/2/2015	3555 River Rd.	<b>MS4 - Automotive</b>	Police dispatch called PW Staff about a car accident with small amount of oil spilled onto the ground.	Upon arrival, staff assisted fire department with clean up.	No further issues.
11/4/2015	3640 Cherry Ave.	<b>UIC - Sediment</b>	Hertz Rental was using a 4" pump to discharging turbid water from a manhole across their parking lot to a private catch basin connected to a catchbasin on Cherry Ave.	Staff talked to the manager to explain this was prohibited by ordinance. Also spoke with the owner later, and made contact for meeting up for private inspections.	Connect with the owner when private inspections take place at this property.
11/5/2015	992 Mistletoe Loop	<b>MS4 - Vegetation</b>	City street sweeping contractor reported a citizen putting large amounts of yard debris into the street.	Staff sent a letter advising owner that dumping yard waste into the street was prohibited by city ordinance.	No further issues.
11/12/2015	406 Marino	<b>MS4 - Sediment</b>	Staff reported piles of dirt had been excavated from a burned down house left uncovered, with no bio bags near catch basins, and mud tracked into the roadway.	Staff spoke with the homeowner and explained that he needed to cover the piles, straw line the perimeter, and clean the mud off the road. Staff placed three bio bags and advised where owner could buy more if needed.	Upon re-inspection, nearly all of the dirt had been removed, and the dirt in the street was gone.
11/12/2015	Wiessner & Verda Intersection	<b>MS4 - Automotive</b>	Keizer Fire Dispatch called staff to report a car accident caused a fuel leak that caught on catching on fire.	Staff responded, cleaned up what was left of the spill.	No further issues.
11/12/2015	259 Dorcas	<b>MS4 - Sediment</b>	Staff observed that mud had flowed down a curb about 100' from a driveway.	Staff spoke with owner and requested that the mud be cleaned up, and steps taken to prevent further dirt from entering the roadway.	Owner complied, no further issues.

**2015/2016 Enforcement Actions**

<b>Date</b>	<b>Location</b>	<b>Type</b>	<b>Description</b>	<b>Action</b>	<b>Follow-Up</b>
11/24/2015	Nottingham Dr. from Wheatland to River	<b>MS4 - Automotive</b>	Staff spotted oil drips along Wheatland Drive for a long distance.	Staff cleaned up the worst of the drips..	No further issues.
12/7/2015	163 Delta Ct.	<b>MS4 - Vegetation</b>	Report of a citizen raking leaves into the street, causing localized flooding (from leaves covering storm drain).	Staff investigated and found that the water had receded and there was no flooding. They moved the leaves away from the drains and requested a letter be sent.	Lead staff sent a letter to the tenant/landlord explaining that leaves must be bagged and/or disposed of properly in waste containers and not placed in the street. No further issues.
12/16/2015	5167 Courtlyn Ct.	<b>UIC - Sediment</b>	Staff reported mud tracked from muddy yard to the street. No one was home at the time.	Staff stopped by a second time later, then left a door hanger with contact information, explaining the issue and that adding rock to the yard parking area would stop the issue.	No further issues.
12/21/2015	5188 Wittenberg Ln NE	<b>MS4 - Waterwaste</b>	Staff noticed stream of steaming water coming into the street from a hedge. Smelled like chlorine.	Staff spoke with the hotel manager, explaining emptying pool water onto the street was prohibited; it should be disposed of in the sewer or onto a vegetated area. Manager said she'd tell the maintenance staff to cease right away.	Staff left contact information with the manager, and followed up with a letter to the owner (same address as the hotel).
12/1/2015	1212 Alder Dr.	<b>UIC - Sediment</b>	Staff reported mud tracking into the street from a contractor putting in a sewer service. Storm staff investigated and confirmed this.	Staff called the contractor and left messages advising of the problem, and instructing to clean up the mud, place bio bags around excavation and to cover or remove the excavated dirt.	It took a few days for the contractor to respond (was out of town, not active site). Contractor eventually remedied the issues but it took many days before fully resolved.
1/7/2016	3420 Willamette Dr.	<b>MS4 - Sediment</b>	Citizen reported mud on the side of the road in front of a property.	Staff investigated and did find some mud in the street. They cleaned up, and left the homeowner a door hanger explaining the issue, and about proper clean up when doing yard work.	No further issues.

**2015/2016 Enforcement Actions**

<b>Date</b>	<b>Location</b>	<b>Type</b>	<b>Description</b>	<b>Action</b>	<b>Follow-Up</b>
1/8/2016	5014 - 5048 River Rd	<b>MS4 - Food/Grease</b>	Staff observed residue in and around the catch basin behind the Dollar Tree. Upon further inspection, appeared someone had dumped food grade grease into a private catch basin connected to city system.	Staff spoke the manager at the Dollar Tree, and the cooks at the two restaurants nearby. None of them knew anything about grease being dumped in the catch basin. Staff then called the building owner and said it would need to be cleaned.	The owner called a roofer service which cleaned the catch basins and the line downstream of it.
1/22/2016	1227 Trent	<b>UIC - Sediment</b>	Staff reported a landscape company was moving dirt and getting dirt in the roadway.	Staff investigated, and talked with the foreman to stress the importance of keeping the dirt out of the right-of-way. Foreman said they would clean up at end of the day.	No further issues.
1/25/2016	5188 Wittenberg Ln NE	<b>MS4 - Waterwaste</b>	Staff noticed a hose draining hot steaming water on the grass between the building and the sidewalk near the catch basin, with some overspill.	Maintenance person said he understood that it was all right to dump the water from the hot tub as long as it was running over a vegetated area prior to going into the catch basin.	Staff reiterated that ANY discharge to the street was not allowed.
1/25/2016	169 Russett Dr.	<b>MS4 - Sediment</b>	Staff noticed a contractor removing a driveway and stacking the concrete on the edge of the street. Staff spoke with foreman, who said 22 driveways were being replaced.	Staff instructed in proper BMPs for erosion control (bio bags around catch basins, debris clean up, covering piles, etc.). Foreman said he would comply.	Upon re-inspection, there were no further issues.
1/27/2016	2715 Tepper	<b>MS4 - Sediment</b>	Staff reported trucks had been tracking dirt onto the road for about fifty feet.	Staff spoke with the railroad (where the incident took place) to request cleanup of the sediment. Staff placed bio bags at the catch basin closest to the issue.	No further issues.
2/2/2016	7544 Kayla Shae	<b>MS4 - Sediment</b>	Staff noticed dirt on the street in front of a house, left from a pile that was there earlier.	Staff spoke with home owner, who said a landscape company had put a new sod lawn in for him recently. Staff explained the need to clean up, and the homeowner said he would have the landscape company come out to clean it up better.	No further issues.

## 2015/2016 Enforcement Actions

Date	Location	Type	Description	Action	Follow-Up
2/2/2016	6734 Pierce Ct.	<b>MS4 - Automotive</b>	Staff discovered a puddle of oil on the street, not flowing and not near a catch basin, but was a sizable amount. Staff responded to the address and saw two large spots of oil that had soaked into the asphalt leaving a black stain.	Two cars appeared to have been worked on recently in front of the address. Staff spoke with owner, and explained the importance of catching the oil before it reaches the pavement and to use the proper oil absorbent materials if fluids leak on the ground. Owner understood and said she would do that in future.	No further issues.
2/9/2016	711 Chemawa Rd N.	<b>MS4 - Automotive</b>	Employee at the business was seen dumping soapy mop water down catch basin. Vegetated Stormwater Facilities were in the area and took some of the water.	Staff spoke with the owner, explaining that only rainwater is allowed in the catchbasins or VSFs. She said she understood. Some years ago the State Health Dept. told them it was not okay to dump their soapy water down the sink.	Reiterated that this behavior was prohibited by ordinance. No further issues.
2/10/2016	707 Laguna	<b>MS4 - Construction</b>	Staff observed a small amount of concrete residue washed down the street gutter, and had partially reached the catchbasin.	Staff left a detailed note on the door, to clean up the residue from the street and not wash out concrete into the street again.	Upon re-inspection the next day, staff found that the residue had been cleaned up.
2/16/2016	5207 Perry	<b>UIC - Automotive</b>	Staff observed small amount of oil in the street (nothing got into the catch basin).	Field staff responded to the site and absorbed all of the oil and properly disposed of it. They spoke with the tenant and explained why this is prohibited and explained how to catch oil before it spills.	No further issues.
2/17/2016	4424 18th Ave	<b>MS4 - Vegetation</b>	Staff reported moss and organic debris pressure washed into the street. None made it into a catch basin.	Staff investigated and spoke with the homeowner explaining the issue and instructing him to clean up all debris from the street. The owner complied.	No further issues.
2/18/2016	959 Delta Ct.	<b>MS4 - Vegetation</b>	Staff noticed a large pile of wood chips dumped in the street, nothing had made it into the catch basin.	PW Staff stopped by and left a door hanger explaining the need to move the pile out of the street soon and placed a bio bag in front of the catch basin.	The next day the homeowner called to confirm he had cleaned up all of the wood chips on the street.

## 2015/2016 Enforcement Actions

<b>Date</b>	<b>Location</b>	<b>Type</b>	<b>Description</b>	<b>Action</b>	<b>Follow-Up</b>
2/18/2016	112 - 114 Delta Ct. N	<b>MS4 - Sediment</b>	Staff noticed a large muddy yard and mud is being tracked onto the roadway.	Staff left a door hanger explaining the need to spread straw or some kind of ground cover to keep soil from eroding.	
2/18/2016	4120 River Rd	<b>MS4 - Automotive</b>	Vehicle accident caused small anti-freeze spill; none had reached the catch basin.	Staff applied clean sweep to the anti-freeze and placed an absorbent pad under the vehicle.	No further issues.
3/1/2016	936 Moneda	<b>MS4 - Automotive</b>	Resident had used kitty litter to soak up a spill, but left it all and the rain soakage caused a mess. Some of the residue did reach a catch basin.	Staff cleaned up the mess and spoke with the homeowner about the importance of cleaning up spills and absorbent material.	No further issues.
3/1/2016	1907 Chelan	<b>MS4 - Vegetation</b>	Staff received complaint from homeowner about another owner feeding large amounts of peanuts to the crows and the shells were ending up in the storm system.	Staff confirmed large amounts of shells were in street and nearby catch basin. Staff left a door hanger explaining that placing waste/debris in the street was prohibited.	
3/8/2016	Parkmeadow and O'Neil area	<b>MS4 - Automotive</b>	Staff reported sheen of oil, probably hydraulic oil that was spread along a gutter for several blocks.	Staff cleaned the spill, and then called the suspected company to have their trucks checked for leaks.	No further issues.
3/21/2016	4820 River RD N	<b>MS4 - Food/Grease</b>	Staff observed a bar employee dumping a mop bucket into a catchbasin on Dearborn. Staff told the employee to stop, but he said his manager directed him to do this.	Staff spoke with the Manager and explained that dumping liquid waste into the storm system was prohibited. Along with some environmental education, let the manager know future dumping could lead to fines. Manager said he would meet with his staff to ensure waste water was directed to a sanitary connection.	Staff followed up with a letter documenting the meeting with the manager, and reiterating that evidence of further dumping would result in elevated enforcement. NOTE: See 6/3/2016
3/23/2016	4915 Fillmore St N	<b>UIC - Sediment</b>	Staff discovered a catch basin had been covered over with fill from construction on a lot. Concrete contractors were then using the area as a wash out area, not realizing there was a grate underneath.	Staff had the contractors block the catchbasin immediately, and move the washout area. Homeowner will maintain bio bags as move forward with landscaping.	Staff re-inspected the area over time as part of the Erosion Control permit inspection process.

**2015/2016 Enforcement Actions**

<b>Date</b>	<b>Location</b>	<b>Type</b>	<b>Description</b>	<b>Action</b>	<b>Follow-Up</b>
3/25/2016	1182 Lydia	<b>UIC - Automotive</b>	Citizen reported an oil leak from a car on the street. This is a UIC area with Vegetated Stormwater Facilities (VSFs) lining the street.	Staff spoke with the car owner to put oil pads down, and preferably park in his driveway rather than leak on the street. Not a significant spill, but a little residue may have reached the VSF. Inlets on the VSF were due to be replaced, which will remove any contaminated sediment.	No further issues.
3/31/2016	1512 Leewood	<b>UIC - Sediment</b>	Citizen reported a chemical smell and some liquid running into the catch basin.	Contractor was using a sump pump to get rid of the water in crawl space. Staff directed contractor to use bio bags and clean up and properly dispose of residue when finished. A neighbor had been spot spraying weeds (the chemical smell reported).	No further issues.
4/6/2016	4020 Gary St.	<b>MS4 - Automotive</b>	Citizen reported antifreeze in a driveway. No catchbasins in the area, spill has not moved outside the area. The house appeared abandoned.	Staff responded and applied Cleansweep to antifreeze to absorb it.	No further issues.
4/8/2016	1605 Lockhaven Dr NE	<b>MS4 - Food/Grease</b>	Marion County reported a compactor outside a school cafeteria was leaking fluid into a nearby private catch basin.	Staff spoke with custodian, who said they'd already spoken with the trash company about getting it sealed. Staff instructed to keep the area clean and consider a barrier underneath. Also encouraged cleaning out the (private) catchbasin.	No further issues.
4/13/2016	Lacey St., Willow Lake, Chemawa, Four Winds, Leeward.	<b>UIC - Vegetation</b>	Staff noticed a trail of liquid down several roads and ending up at Loren's Sanitation. It was already soaked into the pavement and not able to be picked up. None of it made it to catch basins or VSF's.	Staff called Loren's and they said it was from a yard debris container they had hauled off. It was not oil, it was water and organic material.	No further issues.
4/13/2016	4594 18th Av	<b>MS4 - Vegetation</b>	Staff noticed a pile of bark dust that was dumped on the sidewalk in front of a house.	Staff spoke with the owner explaining that this not only blocked pedestrian traffic but could move into the street and create a storm water problem. The owner said that it would be removed soon.	No further issues.
4/14/2016	1473 Lydia	<b>UIC - Automotive</b>	Loren's sanitation reported a garbage truck blew a hydraulic hose, and most of the five gallons of hydraulic oil ended up on the street. Some also went into the adjacent VSF.	Staff assisted Loren's in cleanup of the road VSF.	No further issues.

## 2015/2016 Enforcement Actions

Date	Location	Type	Description	Action	Follow-Up
4/21/2016	2345 Tynel Ct.	<b>MS4 - Vegetation</b>	Staff noticed homeowner pressure washing a driveway and debris had been washed out into the street near a catch basin.	Staff explained the need for bio bags around the catch basin below the driveway, and all of the debris needs to be cleaned up. Staff provided bio bags.	Re-inspection found that the debris was all cleaned up.
4/25/2016	1180 Manzanita	<b>MS4 -</b>	Staff noticed that water flowing down the alley. The water was coming from a pond in the back yard of the house. The homeowner had hired someone to drain the pond. No chemicals had been added to the pond.	Staff explained that the pond needs to be drained to the sanitary sewer or to a large vegetated area on the property to allow to percolate.	No further issues.
5/5/2016	3809 5th av.	<b>MS4 - Vegetation</b>	Staff noticed piles of debris next to the curb line. None of the debris had moved to nearby catch basins.	Staff contacted the homeowner, who had ground some stumps and raked the debris to the curb. Staff explained that putting debris in the street was not allowed, and it needed to be removed.	Owner complied, no further issues.
5/12/2016	1100 block Summerbreeze Ct	<b>UIC - Sediment</b>	Dirt pile found in the road as a result of contracted landscaping work.	Staff went out and spoke with the contractor, and had it cleaned up.	No further issues.
5/16/2016	1183 Meadowridge St.	<b>UIC - Sediment</b>	Staff noticed pile of dirt dumped on the street. A landscape company was renovating the lawn and is using the soil. No soil made it to a catch basin.	Staff explained the importance of keeping this material off of the street and the owner said they would have cleaned up by the end of the day.	No further issues.
5/24/2016	5584 Klicitat	<b>MS4 - Sediment</b>	Citizen reported a large pile of dirt in the street. Staff found a very large (30 yards) pile of fill dirt dumped on a tarp on the side of the road near a catch basin. No dirt had reached the catch basin.	Staff spoke with the owner and explained the issue of dumping dirt on the road. The owner said that the dirt would be moved by the end of the day. Staff left bio bags placed around the catch basin.	Re-inspection found the dirt had been removed from the street and all of the debris had been swept up.
5/26/2016	Intersection of Mcleod and Lockhaven	<b>MS4 - Automotive</b>	Keizer Dispatch reported a vehicle that had dropped a five gallon bucket of what appeared to be hydraulic oil in the street. The material had not reached the nearby catch basin.	PW Staff responded and applied clean sweep and placed absorbent pads to clean up the oil. They also placed a small boom around the nearby catch basin.	No further issues.

**2015/2016 Enforcement Actions**

<b>Date</b>	<b>Location</b>	<b>Type</b>	<b>Description</b>	<b>Action</b>	<b>Follow-Up</b>
6/3/2016	4820 River RD N	<b>MS4 - Food/Grease</b>	Citizen reported seeing bar employee washing out what looked like a grease trap into catch basin.	THIS IS A REPEAT OFFENSE (See 3/21/2016). Staff went out with Code Enforcement and spoke with manager. Manager posted signs saying anyone caught washing out any liquid or waste to street or catch basin will result in \$500 fine & immediate dismissal.	<b>Next Violation will be \$500 citation</b>
6/2/2016	1256 Candlewood Dr NE	<b>UIC - Construction</b>	Catch basin inspections outside Advantage Precast site had concrete slurry in the sumps. Checked the catch basin across the street and the manhole, also found concrete slurry.	Staff spoke with the owner about the illicit discharge of slurry from his site to the public system. Even the private catchbasins onsite needed to be cleaned and new catch basin protections installed. The owner said he would have his staff take care of it within two weeks.	Re-inspection found all but one catchbasin was cleaned. That was brought to owner's attention, and subsequently cleaned.
6/21/2016	4580 Stinnet Ln	<b>MS4 - Sanitary</b>	Citizen reported a sewer manhole lid was off and leaking. Inspection found it to be a City of Salem sewer manhole, the lid was in place but the sewage was to the top and seeping around lid. The manhole sits in a low on the east side of Claggett Creek approximately 80' from the creek.	City of Salem Vac truck was dispatched, as well as Salem Environmental Services. City of Salem will run the sewer line to release blockage and cleaned up around manhole.	No further issues.
6/22/2016	1045 Laurel Ridge Loop	<b>MS4 - Chemical</b>	Staff observed granular fertilizer up and down the gutter of the street next to a house. None had reached the catch basin (dry weather).	Staff spoke to the homeowner and she said landscapers and been out recently to fertilize. Staff called landscaper and directed that it be cleaned up and not repeated in future.	Re-inspection found the site clean and no further issues.
6/23/2016	295 - 297 Northridge Ct. N	<b>MS4 - Vegetation</b>	Staff found a large pile of bark dust in the street. Nothing had made it to the catch basin.	Staff left a note explaining the need to remove it right away, and placed a bio bag at the catch basin. The owner responded and said it would be spread (and cleaned up) shortly.	No further issues.
6/23/2016	5236 Todd Ct.	<b>MS4 - Sediment</b>	Staff found a large pile of sand in the street and a large pile of dirt in front of the house where the lawn used to be. Nothing had left the site so far.	Staff spoke to the homeowner and the owner said it would be removed very soon. Staff also placed a bio bag near the pile.	Re-inspection found that the homeowner had cleaned up, no further issues.

**2015/2016 Enforcement Actions**

<b>Date</b>	<b>Location</b>	<b>Type</b>	<b>Description</b>	<b>Action</b>	<b>Follow-Up</b>
6/23/2016	6375 River Rd NE	<b>MS4 - Construction</b>	Staff observed a worker washing a small batch concrete mixer into the catchbasin.	Staff stopped the worker and told him he could not wash out into the street or catchbasin. Worker said he couldn't understand (language barrier) but stopped. Staff stopped the incident before much wash water reached the catchbasin.	No further issues.
6/22/2016	5048 River Rd N	<b>MS4 - Food/Grease</b>	Grease container made a mess/spill in parking lot behind the establishment.	Staff spoke with the establishment, who cleaned up the grease with absorbent. Reported the incident and clean up to the owner of the building as well.	No further issues.

**2015/2016 Enforcement Actions**

**KEIZER FIRE IDDE INCIDENT REPORTING TABLE**

<b>Incident Date</b>	<b>Type</b>	<b>Incident Address</b>	<b>Action Taken</b>
7/8/2015	Flammable Liquid Spill	4756 13th AVE N	Reported car fire (no fire). Occupant had been using Laquer thinner; a small amount was spilled and accidentally ignited with a cigarette lighter.
8/11/2015	Motor Vehicle Fire	4187 Arnold ST NE	Extinguished engine compartment fire from extended driving on flat tire.
8/16/2015	Flammable Liquid Spill	Wheatland RD N & Foothill CT NE	Small fuel leak controlled with absorbent pad while owner waited for tow truck.
8/24/2015	MVA - Automotive Spill	4505 River RD N	Non-injury MVA with fluids down. Removed a small amount of windshield washer fluid. No threat to storm drains.
8/25/2015	MVA - Automotive Spill	3862 River RD N	Non-injury MVA. Removed leaking antifreeze from roadway. No threat to storm drains.
8/28/2015	MVA - Automotive Spill	3420 Cherry AVE NE	Called to injury MVA and removed debris and small spill from roadway. No threat to storm drains.
9/13/2015	MVA - Automotive Spill	6160 Ulali DR NE	Approx. 1 gallon of antifreeze on roadway, approx. 1 cup of oil in parking lot. Removed fluids, no threat to storm drains.
10/30/2015	MVA - Automotive Spill	1050 Lockhaven DR NE	Rear end MVA with debris and a small amount of fluids. Swept and used absorbent pads to remove fluids. No threat to storm drains.
10/30/2015	MVA - Automotive Spill	3615 River RD N	Removed fluids from center lane and leaking vehicle on tow truck in heavy rain with sheen on roadway. Used rice hull ash on area approx. 25'x100' and contacted public works for assistance with cleanup. Built dam around storm drain and protected from run off.
11/2/2015	MVA - Automotive Spill	Cherry Ave NE & Sam Orcutt WAY NE	Reported spill from MVA, cleaned up fluids with ultrasorb & pads.
11/11/2015	Motor Vehicle Fire	4710 Verda LN NE	Fire caused by fuel leak / dripping onto manifold. No spill reported
11/16/2015	MVA - Automotive Spill	Windsor Island RD N & Chemawa RD N	MVA, antifreeze leaking into yard. Placed pads under leak. No spills from 2 other vehicles involved.
12/2/2015	MVA - Automotive Spill	4915 River RD N	Clean up of approx. 1 gallon of coolant from a non-injury MVA.

**2015/2016 Enforcement Actions**

<b>Incident Date</b>	<b>Type</b>	<b>Incident Address</b>	<b>Action Taken</b>
12/4/2015	MVA - Automotive Spill	5890 River RD N	Non-injury MVA w/antifreeze and oil dripping from pickup, absorbent pads and ultrasorb placed & made dam for the runoff. Public works notified.
12/10/2015	MVA - Automotive Spill	Chemawa RD N & River RD N	Non-injury MVA, one vehicle leaking a small amount of antifreeze. Absorbent pads & ultrasorb used to make dam for runoff.
12/13/2015	Chemical Spill	930 Chemawa RD NE	Family found vehicle with box of chemicals contained liquid mercury, potassium perchlorate and magnesium metal powder (all containers intact) in deceased relative's home. Informed where to dispose of them. Consultation with SFD Hazmat Capt. who recommended they call the Marion County Recycling station for disposal site. They also had dirty syringes and prescription meds to dispose of and were directed to the appropriate facilities.
12/17/2015	Motor Vehicle Fire	River RD N & Dearborn AVE N	4-door pickup with heavy fire of engine compartment, extinguished. Small amount of gasoline leaked. Heavy rain impeded cleanup.
12/26/2015	Portable Building Fire	1035 Dearborn PL NE	Portable toilet on fire. Extinguished with tank water, no spill reported.
1/20/2016	MVA - Automotive Spill	River at Promenade	Anti-freeze removed, no threat to storm drains
2/20/2016	MVA - Automotive Spill	Lockhaven DR NE & Chemawa RD NE	Arrived to a motorcycle down over storm drain leaking fuel and a 4dr sedan leaking antifreeze. Used absorbent to catch minor leak from vehicle and placed absorbent under the motorcycle that was leaking fuel. KZP would not let us move the motorcycle until pictures were taken. Could not Keizer Public Works, no one answered. Once allowed, moved the motorcycle which stopped the leak hazard.
3/12/2016	MVA - Automotive Spill	Cherry Ave. NE at Clearview Ave. NE	About 2 cups antifreeze removed from roadway, no waterway or storm drain threatened.
3/19/2016	MVA - Automotive Spill	6450 Keizer Station Blvd NE	Small amount of windshield washer fluid removed from roadway, no waterway or storm drain threatened.

## 2015/2016 Enforcement Actions

<b>Incident Date</b>	<b>Type</b>	<b>Incident Address</b>	<b>Action Taken</b>
3/29/2016	MVA - Automotive Spill	4190 River Road N	Small spill removed from the roadway, no waterway or storm drain threatened.
4/28/2016	MVA - Automotive Spill	Chemawa Road NE & Keizer Station Blvd	Small spill, picked up with kitty litter, no threat to storm drain or waterway
4/29/2016	MVA - Automotive Spill	River Road N & Evans Avenue NE	Approx. 1/2 gallon of antifreeze/oil. Cleaned from roadway, no threat to storm drain or waterway
5/9/2016	MVA - Automotive Spill	4925 River Road N	Less than 1 gal. of windshield washer fluid removed from roadway, no storm drains threatened.
5/25/2016	MVA - Automotive Spill	4915 River Road N	Brake fluid leaking and removed with absorbent, no storm drains threatened.
5/28/2016	MVA - Automotive Spill	Brooks Ave at Alder Dr NE	1/2 quart of antifreeze and oil removed from roadway with ultrasorb, no storm drains threatened.
5/31/2016	MVA - Automotive Spill	New Terrace Dr at Wheatland Rd N	Contents of radiator leaked into gravel area, Keizer Public Works notified.
6/7/2016	MVA - Automotive Spill	Shoreline Drive N at Chemawa Road N	Removed 1/2 cup of anti-freeze from roadway, no threat to storm drains.
6/12/2016	Flammable Liquid Spill	5188 Wittenberg Lane NE	Vehicle in parking lot leaking gasoline, pin hole in fuel tank patched and towed to repair shop. Cleaned up, no threat to storm drains.
6/15/2016	MVA - Automotive Spill	Verda Lane NE at Wiessner Drive NE	Anti-freeze down in the roadway removed; no threat to storm drains.
6/16/2016	MVA - Automotive Spill	4060 River Road N	1/2 qt anti-freeze removed; no threat to storm drains.
6/24/2016	MVA - Automotive Spill	1605 Lockhaven Drive NE	Spill in roadway. KPW called out to mitigate the spill.