

City of Keizer, Oregon

ANNUAL REPORT

PERMIT YEAR 2 – 2008 / 2009

STORMWATER NPDES PERMIT #102904

October 28, 2009



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**Certification Regarding the City of Keizer
NPDES Municipal Stormwater Annual Report 2008 / 2009**

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

ACWA	Association of Clean Water Agencies
APWA	Association of Public Works Agencies
BMPs	Best Management Practices
CCR	Consumer Confidence Report
CFR	Code of Federal Regulations
City	City of Keizer, Oregon
CS	Construction Site Standards
CWA	Clean Water Act
DEQ	Oregon Department of Environmental Quality
DLCD	Department of Land Conservation and Development
DSL	Oregon Department of State Lands
DS	Development Standards
DWPA	Drinking Water Protection Areas
EFU	Exclusive Farm Use
EPA	Environmental Protection Agency
ERU	Equivalent Residential Unit
ESA	Endangered Species Act
FTE	Full Time Equivalent
FY	Fiscal Year
GIS	Geographic Information System
IDDE	Illicit Discharge Detection and Elimination
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
OAR	Oregon Administrative Rules
ODFW	Oregon Department of Fish and Wildlife
O & M	Operation & Maintenance
ORS	Oregon Revised Statutes
PE	Public Education
Permittee	City of Keizer
PI	Public Involvement and Participation
PNCWA	Pacific Northwest Clean Water Association
PY	Permit Year
REPA	Regional Erosion Prevention Awards
RR	Record Keeping and Reporting
SWAC	Stormwater Advisory Committee
SWMP	Storm Water Management Plan or Program
TMDL	Total Maximum Daily Load
UGB	Urban Growth Boundary
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey



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 National Pollutant Discharge Elimination System (NPDES) program. In 1990, the Environmental Protection Agency (EPA) developed regulations for stormwater discharges that were applicable to entities that own and operate municipal separate storm sewer systems (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, the Department of Environmental Quality (DEQ) has delegated authority from the EPA for the NPDES program.

As a result of the new NPDES Phase II requirements, the City of Keizer established a citizen's advisory committee 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 Stormwater Management Plan (SWMP) and a stormwater utility fee.

After filing an application for an NPDES Permit, the City of Keizer was notified in a letter dated March 12, 2007, that the public review process for the Phase II Municipal Separate Storm Sewer System (MS4) permit for the City had been completed by the Department of Environmental Quality (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.

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 Permit Year 2 (PY2) Annual Report for the City of Keizer. **The City of Keizer does not rely on another government entity to satisfy any of the permit obligations.** The Environmental Program Coordinator is responsible for the implementation or coordination for the best management practices (BMPs) listed within the SWMP. With that in mind, the Environmental Program Coordinator does not supervise field personnel and is responsible for the regulatory components of the Stormwater Program. The Public Works Superintendent supervises field staff. Components of the established SWMP BMPs are the specific responsibility of field staff such as enforcement activities and internal training of other maintenance personnel. At present, maintenance personnel lack the overall program experience necessary to fully absorb those duties. The Environmental Program Coordinator anticipates ongoing assistance to field personnel with the requirements and natural resource issues related to stormwater and water quality.

Under the provisions of Schedule C of Permit No.102904, the permittee is required to submit a storm sewer system map with outfalls and waterbodies that receive stormwater discharges, for Permit Year 1 (PY1). That task was completed and submitted with the PY1 Annual Report in 2008. For the purposes of accuracy, a revised map is attached in this report reflecting the most current information available at this time. Section 13 covers revised information on Keizer's stormwater system and waterways.

1.3 Contents

As is the case with the PY1 Annual Report, the introduction found in this section serves as background documentation for the stormwater program for the City of Keizer and covers permit requirements. Section 2 will discuss progress of the program as a whole and the evolving effectiveness strategy. The effectiveness strategy is designed to provide a means to evaluate the program elements and control measures.



Sections 3 through 8 of this report will discuss the individual progress and specifications of adherence to the six Minimum Control Measures required through the Stormwater Management Plan (SWMP). 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

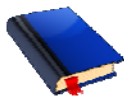
Sections 9 through 12 cover those other components required through the permit that were not previously mentioned such as record-keeping, SWMP review, and enforcement actions for PY2. Section 13 is an updated overview of the storm sewer system and the waterways which receive stormwater from the City of Keizer. Section 14 is a discussion on progress towards reducing discharges to the maximum extent practicable (MEP) under Schedule B2(a) of the NPDES Permit. Section 15 is included to capture other noteworthy actions or activities that do not fall easily within other Sections of this report. Finally, a Program Overview Matrix for PY2 is provided at the end of this report. The table is intended to provide an overview of progress to date of those measureable goals listed in the SWMP. As was indicated earlier, a revised storm system map is attached.

Those sections of the report that pertain to the minimum control measures will be formatted consistently with the following subsections:

Overview
Tasks Completed
Effectiveness Summary
SWMP Revisions / Future Tasks

The intent of this layout is to provide a less demanding review of progress, documentation, and specifications related to each control measure.

Finally, as a convenience for DEQ staff, a copy of the Year 2 Report for the TMDL Implementation Plan is attached.



Section 2 – Program Overview / Effectiveness Strategy

2.1 Program Overview

As a precursor to the following report, the City of Keizer has made some significant strides with implementation of the SWMP despite limited resources. The Annual Report for Permit Year 2 documents successes and short comings in the overall program to date. The Environmental Program Coordinator acts as the City's lead for program implementation with significant support from other stormwater staff. The Public Works Department continues to work towards development of a comprehensive plan for protection of water quality. Furthermore, the Public Works Department will be requesting additional staff resources for budget year beginning July 2010.

Overall, progress for outreach and educational activities has been successful and the City has been able to develop creative activities that are not outlined in the SWMP. Stormwater personnel has emphasized outreach to the community for this permit year and anticipates that general knowledge of water quality issues within the community will increase as a result.

Those BMPs that have yet to be completed according to schedule are time intensive in nature as is found with ordinance development. The City has utilized short term temporary employees to assist with program implementation, but those employees have been directed towards other regulatory directives such as Underground Injection Control (UIC) compliance. With only one full time employee tasked with implementation of the program as a whole, meeting goals will continue to be a concern.

2.2 Program Effectiveness Strategy and Discussion

The Stormwater Management Plan (SWMP) developed as a requirement of the NPDES Permit is a sound document and meets the intent of the six Minimum Control Measures. After completion of Permit Year 1, it has become very apparent that the BMPs established for Permit Year 2 were perhaps too aggressive and time intensive. The Environmental Program Coordinator was able to easily meet the timeline for PY1, but with a goal of two new ordinances and a new Operations and Maintenance Program, it has been impossible to stay on course with current staffing levels. As the City of Keizer moves towards a second permit, thorough consideration of tasks, staffing, and timelines will need to be carefully evaluated.



In regard to program effectiveness, Stormwater staff is moving forward with collecting information from the community regarding general water quality knowledge. (See Appendix A) The questionnaire has been sent throughout the community in the *City of Keizer Quarterly Newsletter*. The current issue was mailed in October 2009 and as such, definitive results have not yet been tallied. The *Keizer Quarterly* is available online as well. Residents have been directed to submit the questionnaire electronically, send it in with their monthly water bill, mail it directly to the City, or drop it off at the reception desk in the Civic Center.

The questionnaire was developed to 1) provide general information about stormwater, 2) to gather information about how the residents of Keizer utilize local waterways, and 3) to gather information about general knowledge of water quality. The Environmental Program Coordinator anticipates that the results of this survey will facilitate the development of programs that truly target the needs of the community.

Finally, the Annual Reporting Requirements listed under Schedule B(2)a of the Permit states that the annual report must contain: *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*. Each section which pertains to a Minimum Control Measure will provide the appropriate information for this particular requirement. Progress towards reducing the discharge of pollutants to the MEP will be discussed in Section 14 of this report.



Section 3 – *Public Education and Outreach on Stormwater Impacts*

3.1 Overview

Minimum Control Measure #1, as described in the NPDES MS4 Phase II rules, requires the City of Keizer to implement a public education program to distribute educational materials to the community. The rule includes the opportunity to implement other outreach activities regarding the impact of stormwater on local waterbodies.

The three BMPs listed in the SWMP for Minimum Control Measure #1 are as follows:

PE-1 Preparation of a water bill insert. The intent of the BMP as stated in the SWMP description is to utilize an annual mailing such as the drinking water Consumer Confidence Report (CCR) that will reach all households. (Implementation for Permit Year 2)

PE-2 Requires the City to utilize local Channel 23 to provide stormwater quality related education. Furthermore, stormwater related information is to be added to the City's website on an annual basis. (Implementation for Permit Year 1)

PE-3 Requires participation in the Claggett Creek Watershed Council meetings. (Implementation for Permit Year 1)

Copies of outreach materials are included in Appendix B.

3.2 Tasks Completed

As was stated in Section 2 of this report, stormwater staff has put substantial effort into outreach activities during PY2. All of the BMPs listed for this measure have been completed and the program is developed to the extent that outreach will continue to be implemented for each year of the current permit period.

For BMP PE-1, City staff utilized the drinking water Consumer Confidence Report (CCR) to reach the residents of Keizer for detailed stormwater information. While an article appeared in last year's report related to stormwater, the current CCR, which was mailed in May 2009, included a full page insert directed towards stormwater issues. The Public Works Department has not eliminated the possibility of using a utility bill insert for future mailings; however, the CCR reaches all residents including those in apartments and other multi-family housing.

Starting in May 2009, Channel 23 began running RiverSmart segments on stormwater taken from the EPA Outreach Toolbox. Additional activities for Channel 23, under BMP PE-2 included



promotion of the annual Public Works open house, and actual filming of the open house. Stormwater activities associated with the open house are provided below under 'additional education activities'.

The stormwater website was expanded during PY2 to include:

- The NPDES PY1 Annual Report
- The TMDL Implementation Plan Annual Report
- The Stormwater Discharge Ordinance (Illicit Discharge Detection and Elimination)
- A flyer related to the discharge ordinance that offers information about dumping yard debris in waterways.

BMP PE-3 calls for City participation in the Claggett Creek Watershed Council (CCWC). The CCWC was inactive during the PY1 time period. The Environmental Program Coordinator stated in the PY1 Annual Report that City participation would occur if the council reconvened.

During the fall of 2008, discussions began at a regional level regarding the possibility of forming a watershed umbrella group that would provide support to smaller local groups. Those regional meetings involving representatives from the City of Keizer, the City of Salem, Marion County, the Soil and Water Conservation District, and active watershed council members resulted in formation of a revitalized CCWC.

The watershed council has established monthly meetings although participation is relatively limited at this point. The Environmental Program Coordinator has attended several meetings and coordinated with individual members on potential projects. A draft brochure was completed and provided to the group for recruitment purposes. A document was developed providing the group with basic information about the appropriate time of year for planting, basic permitting issues that may apply, and a guideline for activities that are suitable for various times of the year. (See Appendix B) One small planting project occurred at Claggett Creek Park. The Environmental Program Coordinator was on hand to discuss the benefits to water quality associated with such activities.

Additional Educational Activities

The Environmental Program Coordinator developed a new program this year that was unveiled for the annual Public Works open house in May 2009. The KP3 or Keizer Pet Poop Patrol is a pledge based program using pets from City staff for program promotion. Photo's were collected from the City Mayor, Council members, working K-9 dogs, and family pets. These photos were displayed on a large poster board with information about water quality issues associated with pet waste, and encouraging viewers to "take the pledge to always pick-up after your pet, even in your own backyard". The incentive for those who pledged was a doggie bag container suitable for clipping to a leash. 65 pledges were collected from the community. In addition, as was the case with last year's open house, low filler dog food samples were given away.



Brochures were available covering general stormwater issues, rain garden installation techniques, and environmentally safe landscaping tips. The traveling display board covered storm drain marking projects, the importance of riparian vegetation retention, the effect of animal feces on water quality, and the impacts of erosion.

Stormwater staff designed a display for this event around the VacCon truck. Pictures of the storm drain were mounted on poster board to illustrate what a catchbasin looks like before, during, and after cleaning. To further emphasize what can be captured in a catchbasin, the Environmental Program Coordinator made a sculpture of everything removed from a large basin in a Keizer neighborhood.





In addition to the annual open house, stormwater staff utilized the City's booth at the Marion County Fair to promote water quality minded activities. The KP3 display gathered another 45 pledges from attendees.

Other educational activities included:

- Use of the traveling display board at the ribbon cutting open house for Keizer's new Civic Center, and at the Marion County Fair in June
- Three stormwater articles for the *Keizer Times*
- An article for the City of Keizer *Quarterly Newsletter*
- A donation of three trees to the Boys and Girls Club. A poster contest held in August 2009 was the exchange for the donation and will be discussed in the PY3 report.
- A presentation to the Gubser Neighborhood Association in October 2008
- A presentation to the McNary Condo Owners Association in October 2008
- A revised 2009 Stormwater Brochure

3.3 Effectiveness Summary

The Environmental Program Coordinator has attempted to provide educational information to the public whenever possible and outside the BMPs listed in the SWMP. As the program evolves, analysis of what materials are useful should become more apparent.

As was discussed earlier in Section 3, the use of the CCR for a citywide mailing reaches more households than a utility mailing would due to delivery to all addresses including multi-family. Stormwater staff received a number of positive comments on the addition of an insert devoted entirely to stormwater. In addition, utilizing a known utility to educate the public about stormwater helps the community to recognize stormwater as a utility as well.

The annual Public Works open house is an excellent opportunity to reach a large portion of Keizer's residents. The event is held after business hours which results in a more diverse audience. Utilizing large photographs of the storm system is particularly effective based on comments from the attendees. Furthermore, the catchbasin sculpture seemed to be of particular interest to attendees. Attendance for this event ranges between 500 to 700 visitors.



The KP3 program has received very good feedback. Residents enjoy seeing familiar names associated with the pictures on the poster. Each picture has the name of the pet with the last name of the associated staff member. The Environmental Program Coordinator contributions are shown as 'Ruby' Sagmiller, 'Lucy' Sagmiller, and so on. KP3 is promoted as a healthy family program with City staff as the founding members. In addition, Public Works staff has received a great deal of positive feedback about the incentive item given away. This program links well with the development of the off leash dog park at Keizer Rapids Park.

The Environmental Program Coordinator feels that the effort made towards public outreach and education has exceeded what would be expected from the program at this point given existing resources.

3.4 SWMP Revisions / Future Tasks

BMP PE-1 No SWMP revisions are planned for this BMP. The City anticipates using the CCR, Public Works open house, and display board to provide stormwater related information to the public in PY3

Stormwater related newspaper articles promote inquiries from the public and gives the Public Works Department an opportunity to offer more detailed information on any number of pertinent stormwater issues.

BMP PE -2 Public Works staff has not utilized this BMP to the full extent. Staff hopes to put more emphasis on this tool in PY3. No SWMP revisions are planned for this BMP.

BMP PE-3 The Environmental Program Coordinator will continue to provide guidance to the Claggett Creek Watershed Council as time allows. Throughout the past year the group has put an emphasis on highly visible projects rather than those that may have more impact on water quality. The City's Stormwater Division will try to engage the group for higher quality projects.



Section 4 – *Public Involvement/Participation*

4.1 Overview

Minimum Control Measure #2, Public Involvement and Participation, is intended to utilize interested citizens and community groups to help educate other residents about preventing stormwater pollution. There are three BMPs for this control measure in the City of Keizer SWMP which are as follows:

PI-1 Public participation in establishment of a funding source. (Implementation for Permit Year 1) - **Complete**

PI-2 Public participation in ordinance development. This BMP specifies establishment of an ordinance for the Illicit Discharge Detection and Elimination (IDDE) Program, an ordinance for the construction site runoff control program, and an ordinance for stormwater quality-related standards for new development. (Implementation for Permit Year 2 and Permit Year 3 respectively)

PI-3 Storm Drain Markers/Door Hangers. This BMP specifies involvement of community groups to implement storm drain marking on an annual basis. (Implementation for Permit Year 2 through Permit Year 5)

4.2 Tasks Completed

The funding source for the Stormwater Program was created in 2007 through coordination with a citizen's Stormwater Task Force and the Keizer City Council. Stormwater fees were established and billing began in 2008. As is stated in Subsection 4.1, this BMP, PI-1 has been completed as established for the current permit period.

As was reported in the PY1 Annual Report, a Stormwater Advisory Committee (SWAC) was formed in 2008 in accordance with BMP PI-2. The SWAC initially included two members of the development community, a member of the business community, a representative from the City of Salem, a representative from Marion County, two Keizer citizens, the City Mayor, two City Council representatives, a member of the Siletz Tribe, and a non-voting member of the Planning Commission. Representation has changed somewhat over the past year which will be discussed in subsection 4.3 and 4.4.

The SWAC held 7 meetings during PY2. They were successful in assisting City staff with development of a Stormwater Discharge Ordinance (see Appendix D in Section 5) that was adopted by City Council in March 2009. Although the construction site runoff control ordinance

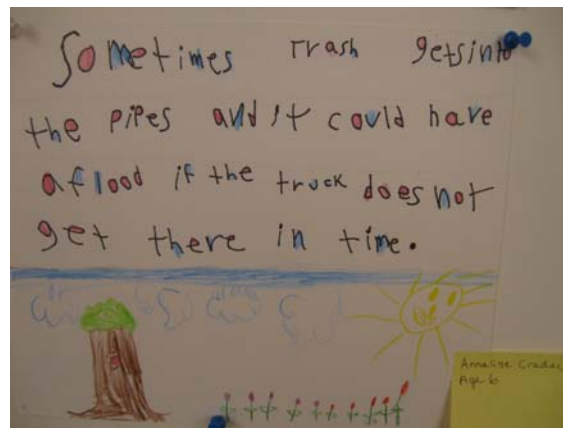


was to be completed during PY2, the Environmental Program Coordinator was unable to develop the necessary materials to complete that task during the established time period. However, the group began initial discussions directed towards program development early in 2009.

BMP PI-3 was initiated in PY1 with the purchase of storm drain markers and the coordination of the first installation project which took place in August 2008. This particular project was reported in the PY1 Annual Report. A total of 87 markers were installed.

With an eye towards the next project, City staff donated trees to the Keizer campus of the Boys and Girls Club. The intent was to utilize the students for the second installation project to commence in June 2009. As stormwater staff started coordinating the installation project a decision was made to adjust the project as the students were too young to undertake this particular activity.

Although the students were not involved in storm drain marking, City staff utilized them for a poster contest which took place in August 2009. A more detailed accounting of that project will be provided in the PY3 Annual Report.



The artist for this poster, age 6, correctly identified the purpose of the VacCon truck.

In May 2009, stormwater staff began working with several local Girl Scout groups to install storm drain markers in July 2009. Although the actual project did not occur until August 2009, 120 markers were installed by Scout Troops 10005, 10805, 10806, 10270, and 10314. The girls involved were working towards earning a 'Water Drop' badge.

The Girl Scouts met with City staff to discuss the impacts of stormwater on the community and surface water. The girls were asked to design drawings that could be incorporated into a brochure to be handed out to the neighbors. Stormwater staff designed an additional brochure to be distributed in the neighborhood for the August event. (See Appendix C)



4.3 Effectiveness Summary

For the most part two of the three BMPs, PI-1 and PI-3, for Minimum Control Measure #2 have been met or an ongoing process has been established. For PI-3, staff appreciates having the opportunity to work with youth who often add a new perspective to environmental education. Engaging younger residents affords an opportunity to educate the adults involved with the activity as well.

The advisory committee organized under PI-2 has a strong core group. However, attendance has been sporadic from some of the committee members. The Environmental Program Coordinator has brought this issue forward to the group, but no effective resolutions have been found. The City of Keizer has numerous committees and boards. Many of the SWAC members attend several City related meetings throughout the month and an extra meeting can become a time related issue with individuals that are over-extended. City staff will move forward with the existing members while continuing to recruit for additional members. However, the Environmental Program Coordinator does not anticipate any new volunteers given past recruitment efforts. See Subsection 4.4 for an alteration in the meeting schedule.

As was stated in subsection 4.2, the SWAC had 7 meetings in PY2 which is short of the measureable goal referenced in the SWMP. The final meeting for PY2 was held in April 2009. The meeting was dedicated to construction site runoff regulations and a review of the City's TMDL Implementation Plan for the Willamette. Staff has proposed that the group go to quarterly meetings rather than monthly meetings. The Environmental Program Coordinator is unable to generate meeting material, facilitate, correspond, and organize the group for monthly meetings given the other tasks assigned for regulatory stormwater issues. In addition to the NPDES MS4 program, the Environmental Program Coordinator is also responsible for the TMDL



Implementation Plan and is the lead on establishing Underground Injection Control (UIC) compliance. The latter has been a relatively new time-intensive task that has required substantial research and planning.

4.4 SWMP Revisions / Future Tasks

Adaptive management is being utilized to modify BMP-2.

BMP PI-1 is complete. The Public Works Department will strive to endorse additional resources in order to meet permit requirements.

BMP PI-2 The SWAC has reconvened as of September 2009. The group hopes to have the Construction Site Runoff ordinance completed during PY 3. The Environmental Program Coordinator does not anticipate that the completion of the Post Construction Runoff Control program will be complete as assigned in PY3.

Given the time investment for facilitation of 8 meetings per year, as is indicated in the measureable goal for this BMP the Environmental Program Coordinator will set a goal of 4 quarterly meetings to be held as a group. To supplement the intent of 8 meetings without a drain on staff time, the Environmental Program Coordinator will distribute information electronically to the group between quarterly meetings. Electronic activity will be tracked to document committee involvement.

BMP PI-3 has been established with 2 full projects having been implemented in the last two years. While the measureable goal of 100 markers installed was met for PY 2 with the Girl Scout project, staff assigns the project based on the community group. Using a younger group does not necessarily mean a large number of markers will be installed. However, using a group of young people does allow for unique outreach activities. Staff would like to utilize adult groups for next year's projects in order to cover more ground.

One project that staff will try to establish is a storm drain marking project that will utilize the City of Keizer City Councilors. The Public Works Department has been fortunate enough to have two volunteers that are currently field-truthing stormwater assets. In an effort to provide them with an activity worthy of resume reference, staff has suggested that they develop a storm drain marking project for City Council. While this project is very much in its infancy, we hope that the elected officials will be open to utilizing their standing in the community to educate their constituents.



Section 5 – *Illicit Discharge Detection and Elimination*

5.1 Overview

There are four BMPs listed in the SWMP for Minimum Control Measure #3, Illicit Discharge Detection and Elimination (IDDE).

ID-1 Development of an ordinance to prohibit illicit discharges (Implementation for Permit Year 2) - **Complete**

ID-2 Specifies development of an IDDE Plan including outfalls inventory map (Implementation for Permit Year 1) **Complete**

ID-3 Training for City staff to implement the Plan (Implementation for Permit Year 2)

ID-4 Implementation of the IDDE Plan (Implementation for Permit Year 2)

5.2 Tasks Completed

Stormwater staff has made good progress for Minimum Control Measure #3. The Stormwater Discharge Ordinance under BMP ID-1 was developed by staff and the Stormwater Advisory Committee (SWAC). The document provides penalties for illegal dumping and connections to the stormwater system and waterways in the City of Keizer. (See Appendix D) Furthermore, the ordinance provides some protection for waterways by prohibiting the removal of vegetation without City review and submittal of an approved replanting plan. The ordinance was adopted by the Keizer City Council in March 2009 and became effective on April 15, 2009.

The Illicit Discharge Detection and Elimination (IDDE) Plan was developed in PY1 in accordance with BMP ID-4. A full year after development staff can report that the Plan is a useful document that has helped provide a solid path for inspection and prioritization of problematic outfalls. The Environmental Program Coordinator and the Stormwater Field Supervisor reviewed the Plan in June 2009. Slight adjustments were made in order to streamline the process. Although a citywide outfall inspection was proposed every other year in the original document, the Plan has been adjusted to reflect an annual outfall inspection. Staff feels that because the program is new, it will be helpful for staff to conduct annual inspections for the remainder of the permit period.

Under BMP ID-3, refresher training was scheduled to occur every year including PY2 as was listed in the PY1 Annual Report. The refresher training has not yet occurred after the initial



training session. The Environmental Program Coordinator is working with other Public Works staff to establish a regular training schedule for this BMP. While there is general agreement that training should occur, staff has yet to develop a sound schedule. The Public Works Department will continue to work on meeting the intent of this BMP.

5.3 Effectiveness Summary

The Environmental Program Coordinator is pleased with the Discharge Ordinance created under the specifications of BMP ID-1. The ordinance provides penalties to deliberate offenders, and also allows some creative remediation action for those violators whose behavior may not be swayed by a monetary penalty. Furthermore, the ordinance allows some protection for local waterways. Residents are not allowed to remove streamside vegetation that will leave the bank subject to erosion. The ordinance language allows removal of invasive vegetation with an approved replanting plan. Such a plan will be reviewed by the Public Works staff, specifically, the Environmental Program Coordinator.

The ordinance has allowed Public Works staff to start the process of informing violators that there can be significant penalties for illicit discharges to the storm system. Furthermore, in one case, the City was able to abate an ongoing problem that was only recognized due to the language in the ordinance that allows inspection on private property. Staff feels like the ordinance is a solid document that will be very useful for its intended purpose.



Maintenance staff has not been provided a detailed overview, or training for the contents, of the Discharge Ordinance. It will become a much more useful document when the maintenance staff understands there are established penalties for violations they may be exposed to throughout a work day.

As stated in subsection 5.1, the IDDE Plan has been reviewed internally. Although staff has experienced some growing pains with implementation of the document, it becomes much more useful as time goes on. Annual outfall inspections will help staff to keep an eye on what's going



on upstream in the pipe, and it is the opinion of the Environmental Program Coordinator that field staff are quickly absorbing the contents of the Plan and how it applies to their daily activities.

Under ID-3, a priority needs to be placed on regular refresher training for Public Works staff as well as other City staff. Unfortunately, failure to establish a regular routine to date allows potential violations to go unnoticed or unreported. The Environmental Program Coordinator is actively exploring options for assisting field staff with meeting goals such as appropriate training for maintenance personnel.

5.4 SWMP Revisions / Future Tasks

No revisions are necessary for this section of the SWMP.

BMP ID-1 The Stormwater Discharge Ordinance has been adopted.

BMP ID-2 The IDDE Plan has been developed and has been reviewed internally. The major change includes an annual inspection of all outfalls for the remainder of the permit period unless determined otherwise. Furthermore, staff is working towards a more efficient tracking process.

BMP ID-3 The appropriate City staff has been notified as to the importance of regular training on implementation of the Plan. Public Works staff have discussed the importance of bringing this BMP up to date. A refresher training is tentatively planned for November 4, 2009.

BMP ID-4 The IDDE Plan is being implemented. Problems identified in the field are being added to the schedule for additional inspections throughout the year.



Section 6 – Construction Site Stormwater Runoff Control

6.1 Overview

Minimum Control Measure #4, Construction Site Runoff Control, contains four BMPs designed to reduce pollutants in any stormwater runoff to the permittee's small MS4 from construction activities.

CS-1 Development of a construction site runoff control ordinance. Select a guidance manual. (Implementation for Permit Year 2)

CS-2 Train City employees regarding construction site controls (Implementation for Permit Year 2)

CS-3 Conduct plan reviews, inspections, enforcement (Implementation for Permit Year 3)

CS-4 Establish hotline to receive complaints from the public (Implementation for Permit Year 1)

6.2 Tasks Completed

The Stormwater Advisory Committee (SWAC) last met in April 2009 for PY2. The Stormwater Discharge Ordinance required under Minimum Control Measure #3 was adopted by the Keizer City Council in March 2008. With that task completed the SWAC turned towards evaluating the choices for a construction site runoff ordinance.

Very little progress has been made for BMP CS-1. The Environmental Program Coordinator is not interested in promoting an existing ordinance from another municipality that is not suitable for Keizer. As such, a significant amount of research is required to bring a program to the group that can be administered within the City. At the April 2008 meeting, the Environmental Program Coordinator recommended that the group go to a quarterly meeting schedule in order to allow adequate staff time for gathering material.

The City has selected several guidance manuals that may be suitable for developers and builders in Keizer. The Environmental Program Coordinator will make a recommendation to the SWAC and allow them to choose the appropriate document.



Field personnel have had some preliminary training for erosion control issues under BMP CS-2. The Stormwater Field Supervisor and one Municipal Utility Worker attended a two day workshop in April 2008. No additional training has occurred for maintenance personnel.

The Environmental Program Coordinator has had the ability to provide some enforcement for development within Keizer that was regulated under a 1200-C permit. The Sonic Restaurant Company had some erosion issues with their new business in Keizer. After coordination with DEQ, City staff worked directly with the contractor on site to see that stockpiles were stabilized, tire wash facilities were installed at equipment entrances, and sediment control fence was installed where needed.



BMP CS-3 is not scheduled for implementation until PY3. However, given the projected timeline for the development of the ordinance and program as a whole, staff does not anticipate that this BMP will be implemented until 2010/2011, PY 4.

Finally, as was indicated in the PY1 Annual Report, the City is currently using the after-hours telephone system to notify appropriate City staff in regard to water quality complaints. This phone system is in effect 24 hours a day and provides callers with an automated message that offers a telephonic selection for drinking water, streets, stormwater, or other Public Works emergencies. The Environmental Program Coordinator will recommend the establishment of a separate hotline with completion of the Construction Site Runoff Ordinance or as the program becomes more fully developed.



6.3 Effectiveness Summary

Given what has been provided under Subsection 6.2 the effectiveness summary for this Minimum Control Measure is very limited. As has been stated in early sections of this report, the existing City staff has difficulty implementing large scale projects due to current work load and limited stormwater staff.

The Environmental Program Coordinator anticipates using an altered version of the EPA Stormwater Pollution Prevent Plan (SWPPP) as a permit for development activities. The SWAC has not reached consensus on a regulated disturbance size at this point. Staff hopes to develop a streamlined version of an educational type permit for minor disturbance such as driveway replacement and patio installations. The SWAC met on September 22, 2009 and will work towards approving a small project erosion and sediment control permit and a draft ordinance by January 2010.

An emphasis on adequate training for field personnel will need to become a priority. Current maintenance staff has had little formal training on the impacts of construction site runoff in regard to water quality. In order to communicate effectively with the public, basic knowledge needs to be retained. Staff is looking at possible training opportunities for Public Works maintenance personnel.

6.4 SWMP Revisions / Future Tasks

BMP CS-1 Completion of this BMP is not expected until late in Permit Year 3

BMP CS-2 While regular training for maintenance personnel has proven to be difficult to fully implement, a proposed training schedule has developed for Permit Year 3. Some of the scheduled training will include erosion control issues. See Section 15, page 44.

BMP CS-3 Completion of this BMP is not expected until Permit Year 4. The City will utilize a certification program such as the Oregon Department of Transportation (ODOT) Certified Environmental Control Inspector (CECI) program for the appropriate personnel. Certification is expected to be obtained by PY 4.

BMP CS-4 As was indicated in Subsection 6.2, the after-duty phone is currently used for water quality issues after hours. (See Subsection 6.2 for a detailed description) Staff anticipates that a separate hotline will be established with completion of the Construction Site Runoff Ordinance.



Section 7 – *Post-Construction Stormwater Management in New Development and Redevelopment*

7.1 Overview

There are three BMPs associated with Minimum Control Measure #7 in Keizer's SWMP related to post-construction stormwater management.

DS-1 Development of an ordinance to prevent or minimize pollutants from new and re-development projects (Implementation for Permit Year 3)

DS-2 Train City staff for the newly developed standards (Implementation for Permit Year 3)

DS-3 Implementation of the new regulations developed under DS-1 (Implementation for Permit Year 4)

7.2 Tasks Completed

The Stormwater Advisory Committee (SWAC) will be assigned the task of assisting City personnel with post-construction stormwater management ordinance. The advisory committee is currently working towards development of the Construction Site Runoff ordinance. That task is expected to be completed in PY3. The Environmental Program Coordinator will next direct the committee towards completion of the Post-Construction ordinance. Staff does not anticipate completion of this ordinance until Permit Year 4.

7.3 Effectiveness Summary

There are no findings to be reported at this time.

7.4 SWMP Revisions / Future Tasks

BMP DS-1 There are no revisions planned for this BMP.

BMP DS-2 There are no revisions planned for this BMP.

BMP DS-3 There are no revisions planned for this BMP.



Section 8 – *Pollution Prevention in Municipal Operations*

8.1 Overview

There are four BMPs listed in the City of Keizer SWMP for Minimum Control Measure #6 which addresses pollution prevention in municipal operations.

OM-1 Development of a water quality sensitive O & M program (Implementation for Permit Year 2)

OM-2 Train City employees regarding revised O & M practices (Implementation for Permit Year 2)

OM-3 Conduct catchbasin cleaning

OM-4 Conduct street sweeping

8.2 Tasks Completed

Preparation for the development of an Operations and Management Program under BMP OM-1, has been ongoing since fall 2008. Unfortunately, little progress has been made. The Environmental Program Coordinator has solicited the input of the Public Works Field Supervisors for this task. As has been stated a number of times in this report, long term, time intensive projects have been difficult for the Environmental Program Coordinator to complete due to limited staff. Furthermore, the City has operated on a complaint driven basis for many years. As such, developing regular inspection schedules, training sessions, and inventories appears as a significant increase in work load from the initial view. On a positive note, there has been some progress in the final months of Permit Year 2. Most of the field supervisors have come up with a preliminary list of water quality issues as they pertain to each Public Works Division. The Environmental Program Coordinator will need to put those comments into a useable format so that the group can move forward with the planning effort.

A 'Municipal Stormwater Pollution Prevention' DVD training kit was purchased from Excal Visual last in year as a means to provide maintenance workers with a foundation for good housekeeping practices. The DVD has not been shown to City staff at this point. The Environmental Program Coordinator edited a quiz for maintenance staff to take to record overall understanding once the DVD has been viewed. In an effort to meet the intent of BMP OM-2,



this introductory effort is designed to be the initiation for what staff hopes to be a comprehensive training effort in municipal stormwater pollution prevention. Public Works staff will have to work closely together to develop a training program that is effective and meaningful for personnel.

BMP OM-3, catchbasin cleaning, commenced in July 2008. Stormwater field staff cleaned 430 catchbasins in PY2. The City has been broken into 4 quadrants in order for staff to easily meet the measureable goal of cleaning 25% of the City's catchbasins annually. Work began in the southwestern portion of town in an older portion of town which may have had more accumulation of material in the system. The Stormwater Field Supervisor is making good progress on tracking this portion of the program.



As was reported in the PY1 Annual Report, street sweeping is an ongoing activity for the City of Keizer under BMP OM-4. Utilization of Wheat LLC is of great benefit to the City in that this is a local business that is aware of special situations that occur within our neighborhoods. Public Works staff is able to communicate on short notice with the company in the event of an emergency or special need. Stormwater staff anticipates that this BMP will continue to become more productive as time goes on.



The following data is the total debris removal from the street sweeping program by quarter for PY2:

September 2008	87 Yards
December 2008	786 Yards
March 2009	322 Yards
June 2009	223 Yards

8.3 Effectiveness Summary

BMP OM-1 and OM-2 are well behind schedule. The Environmental Program Coordinator initiated the project by referencing the *ORACWA Stormwater Toolbox for Maintenance Practices*. The intent was to provide a process for development of the program. As the group tried to move through the process it became clear that this was not the most appropriate tool for Keizer staff. As was noted in Subsection 8.2, the overall approach may have been perceived as a time intensive work load issue and was not received enthusiastically. Preliminary research indicates that many Phase II agencies in Oregon have adopted other programs developed outside the organization. This process is not suitable for Keizer.

The Environmental Program Coordinator recognizes the need to develop a sound, defensible program that staff is willing to implement. As such, the group has taken a step back and will start with basic education. Overall program development is not expected to be completed until perhaps Permit Year 4.

As was stated in Subsection 8.2 catchbasin cleaning is being completed according to schedule. Public Works field personnel are now utilizing GIS maps to identify catchbasins that have been cleaned. These maps are also used to identify repair needs for existing structures. As information is gathered, a prioritization plan will be developed for repair work. The Environmental Program Coordinator continues to work towards a more formal tracking process and will assist field personnel with the information most useful for the program. Maintenance personnel have gained significant practical experience in their second year of cleaning.

As was reported in the PY1 Annual Report, street sweeping is an ongoing activity for the City of Keizer. Utilization of Wheat LLC is of great benefit to the City in that this is a local business that is aware of special situations that occur within our neighborhoods. Public Works staff is able to communicate on short notice with the company in the event of an emergency or special need. Stormwater staff anticipates that this BMP will continue to become more productive as time goes on.



8.4 SWMP Revisions / Future Tasks

BMP OM-1 This BMP is expected to be completed in PY 4. As was covered in Subsection 8.3, the Environmental Program Coordinator has taken a step back and will work towards educating the group as to what activities are pertinent in this program. While the development of the plan is overdue, staff is moving forward. In the PY 1 Annual Report, staff indicated that data from the California Stormwater Quality Association (CASQA) would be evaluated to determine if the material was appropriate for Keizer. At this point, that document does not appear to be suitable for Keizer.

BMP OM-2 This BMP is expected to commence in PY 3 and continue on an annual basis both with new material and refresher training. . In order to ensure training is being completed, a proposed training schedule for maintenance personnel has been developed and is located in Section 15 of this report, on page 44. The City has purchased the Municipal Stormwater Pollution Prevention DVD training kit from Excal Visual which will be viewed by maintenance personnel in PY3.

BMP OM-3 No SWMP revisions are planned for this BMP. City assets are not formally inventoried, however, two volunteers are locating catchbasins within the City which are being added to the City's GIS system. Staff anticipates that there are more catchbasins than have been recorded in recent documents. As such, quarterly cleaning will need to increase to meet the 25% goal.

Stormwater staff has developed ArcMap field maps in order to allow personnel cleaning catchbasins to identify any problems found in the field. The intent is to gather needed repair data which will serve as the foundation for future restoration activities. Staff expects that this new tracking element will commence in PY3 and will become an ongoing goal of the overall program.

BMP OM-4 No SWMP revisions are planned for this BMP. City staff will continue to collect quarterly removal totals.



Section 9 – Record Keeping and Reporting Overview

9.1 Overview

The City of Keizer has included BMP RR-1 and RR-2 in the SWMP to address the record keeping and reporting requirements of the NPDES MS4 Phase II program and to ensure that information collected during the implementation of the SWMP is accessible to City staff. BMP RR-1 states that the City will track compliance and prepare annual reports. BMP RR-2 states that the City will link SWMP information with GIS.

Until substantial effort is taken to incorporate stormwater assets, especially pipe, into GIS the City will not have the ability to consistently respond as quickly as possible to emergencies that impact waterways via the MS4 system. The City almost exclusively utilizes as-builts, Marion County maps developed prior to incorporation, or personal knowledge to verify existing infrastructure. With that in mind, the City has had the opportunity to add a substantial amount of UIC data to the GIS system. This data will be of benefit to the MS4 program.

9.2 Tasks Completed

Permit Year 2 saw significant increases in record keeping activities from an electronic perspective. With the onset of a required City response to Underground Injection Control (UIC) compliance, the Public Works Department gathered limited funds to hire a temporary technical stormwater employee to assist with gathering registration data and mapping water well information in ArcMap. Although funding for this employee only lasted a few short months, she accomplished quite a lot for the Public Works Department. The GIS work was almost completely linked to UIC compliance; however, some of the work that was done can be utilized by the MS4 program.

Starting in July 2009, the Public Works Department again set aside limited funding for a temporary technical stormwater employee. This new individual is tasked to assist with ongoing UIC program implementation. However, the Environmental Program Coordinator has been able to use this individual to help with general stormwater program development. She has been instrumental in development of educational material and is adding MS4 data to the GIS system. Staff expects that all catchbasins will be added to ArcMap by late fall 2009. In addition, the stormwater outfall data has been updated and refined in the system. A new waterway map has been developed and is being submitted with this report. The Environmental Program



Coordinator hopes to utilize her to improve field tracking activities and assist with a more 'user-friendly' process for tracking BMP progress.

With the previous in mind, little improvement has been made in tracking stormwater field activities. As is shown in Table 11.3, there are a number of complaints or water quality calls for which staff has failed to follow-up in a timely manner. The Stormwater Field Supervisor is over-extended, being charged with Streets duties as well as Stormwater. He does the majority of all incident tracking, and has not yet developed a completely fail-proof system. With the intent of developing a more efficient process, a new form and filing system is being discussed that will shift some of the workload. While the Stormwater Division as a whole is over-burdened, the deficiencies have been identified and the group is attempting to resolve those deficiencies.

The Environmental Program Coordinator has not been successful at efficiently tracking BMP implementation for the SWMP. Unfortunately much of what is captured in this report and for ongoing activities is poorly filed electronically or maintained by memory. As was stated above, staff hopes to utilize the temporary stormwater technical employee to develop a process to quickly capture and record noteworthy activities.

9.3 Future Tasks

The Environmental Program Coordinator continues to work towards expanding the use of the City's GIS system. Some progress has been made in helping decision makers to understand the importance of properly managing data and continuing to add new information to this valuable resource. With that in mind, the City will need to continue to create funding for technical staff to manage existing data or run the risk of having a database that does not provide current information.

The Environmental Program Coordinator has recommended the addition of a full time employee to fully manage the City's GIS system. The addition of this position would allow asset information to be easily accessible. The current practice of utilizing as-built drawings for the storm system does not allow a quick response to potential violations or water quality emergencies.



Section 10 – Annexed Area / Expansion of MS4

10.1 Summary

The City of Keizer encompasses an area of approximately 7 square miles. Development has expanded to the UGB throughout most of the incorporated area with little undeveloped property remaining within the City.

There were no annexations to the City of Keizer in Permit Year 2. The Community Development Department for the does not anticipate any new annexations in Permit Year 3 and is not aware of any pending actions for the remainder of the year. Given the City of Keizer is nearly built-out, an urban growth boundary expansion may occur sometime within the next 2 to 3 years.

The City has not expanded the MS4 system in the past year.



Section 11 – *Enforcement Actions*

11.1 Summary

The Stormwater Discharge Ordinance was adopted by the Keizer City Council in March 2009. (See Section 5) This new ordinance has provided the City the legal ability to impose penalties for illegal dumping to the stormwater system. While this ordinance is only one of several to be completed, it has given staff an opportunity to reach a more diverse percentage of the population with expectations regarding local water quality. Education about the impacts of contaminants being discharged to the system is useful, but having the ability to fine a violator is more appropriate in some cases.

11.2 New Procedures (plans, coordination)

The Construction Site Runoff ordinance was to be completed in Permit Year 2. Although that goal was not met, staff anticipates that the ordinance will be adopted in Permit Year 3. This second stormwater related ordinance will be developed by the Environmental Program Coordinator with assistance from other City staff and the Stormwater Advisory Committee (SWAC). The SWAC has had relatively limited time to review options for construction site runoff, however Public Works staff has made a concentrated effort to provide them with examples of potential violations within the community that they would not normally be aware of. Photos of poor maintenance activity are forwarded to the group via email as is appropriate.

11.3 Number of Responses and Complaints

For Permit Year 2, there were a total of 15 recorded water quality or stormwater related calls to which the City responded. With the new ordinance in place, and as the City learns more about stormwater concerns, it has become very apparent that the number of calls and complaints will increase.

As has been covered in Section 9, a great deal more effort needs to be placed on tracking and responding properly to complaints. Some of this was due to the absence of a regulatory document to impose penalties on violators. However, general internal knowledge about the necessity to respond and track violations is crucial if the program is to be successful. While Public Works staff is moving forward with some mandatory compliance, there is a good deal of work yet to be done. Consistency needs to be emphasized. The Department as a whole should continue to stress, and follow-through with expected actions involving water quality.



Table 11.3 Water Quality / Stormwater Complaints

Date	Complainant	Violations Address	Description	Action Taken	Follow-up
07/2/09	Neighbor of 5525 Patrick Ln	5525 Patrick Ln	Fish carcasses dumped in catchbasin	City of Salem assist. Catchbasin cleaned. Debris contained in catchbasin	Notified homeowner of system function.
07/9/09	Anonymous	Commercial Complex on River Rd and Wittenburg	Plugged grease trap in restaurant resulted in sewer overflow at cleanout.	Contacted property owner. Required immediate remediation.	Owner responded with private contractor to complete repairs and resolve grease trap issues.
07/17/09	Bruce Johnson	1101 Chemawa Rd NE Commercial property	Sewer backing up and forming puddle in driveway	Salem called and determined that it was a private issue	Working with City of Salem to enforce repair through existing agreement and Salem Revised Code
08/11/08	Rebecca Donaldson	5859 Waterford Way – neighbor to the north	Neighbor applied pesticide to lawn and around home. Heavy irrigation resulted in runoff to neighbors. New puppies ingested standing water and had to be euthanized	R. Donaldson provided resource information and state website. Civil action	No water entering the catchbasin on the street
08/14/08	Elizabeth Sagmiller	7267 Parkterrace	Gray water substance coming out of rain drain and entering catchbasin. Strong smell of Chlorine	Made contact with homeowner. He said he will contact someone to make the correction.	He will let City know when appropriate repair has been made and connection to the sanitary sewer has been completed.
<u>08/26/09</u>				Correction has not been completed. Property owner said he will connect to sanitary clean out in the front of his property.	Mailed 2 nd letter. No verification that problem has been resolved.



08/15/08	Bill Lawyer	Unknown / not recorded	Noticed hose running from pool into catchbasin	Made contact with owner and provided proper education	Homeowner indicated he will use the sanitary sewer cleanout in the front yard.
09/30/2008	Anonymous	C & E Auto Body	Painter was washing paint brushes on pavement	Made contact with owner and told him that activity needs to take place in the sink	Property owner agreed to proper practices
10/01/08	Stormwater crew	Unknown / not recorded	Oil spill under car at intersection	Salem Environmental Services called and responded	Salem will call to follow up
11/17/08	City of Keizer	Avalon Meadows	Contractor had piles of dirt and bark dust along curbs in new subdivision	Took pictures and spoke to General Contractor. Told him stockpiling in street was not acceptable	Follow up. All piles removed from street
11/25/08	Bill Lawyer	930 Chemawa Rd NE	Landscapers dumped a pile of dirt along curb to be used in landscaping at new Civic Center	Contractor contacted, bio bags installed around catchbasins and dirt removed from street	
12/01/2008	Elizabeth Sagmiller	930 Chemawa Rd NE	Barkdust being placed in bioswale with overflow during heavy rain	Contractor told to stop work. Overflow protected	Design changes need to made
02/24/09	Guy Griffithson	1089 Parkmeadow (neighbor)	Private pool discharging to public property – City park	Owner was contacted, letter mailed with DEQ guidelines.	
03/30/09	City of Salem	Phil Bay Insurance	Sewer overflow from cleanout behind insurance building was entering storm system.	Salem responded. Testing occurred. No public access so no media notification	Learned about directional flow given stormwater system isn't mapped in newer areas of town.
03/31/09	City of Salem	Unknown / not recorded	Young man using a machine that ground off layer of sidewalk then pressure-washing to the storm drain	Made him aware of new ordinance and spoke to property manager about issue	Property manager purchased bio bags and placed around catchbasins



06/09/09	City of Keizer Public Works staff	River Rd. – new Sonic Restaurant location	No erosion control on site	Staff took photos. Environmental Program Coord contacted DEQ to verify 1200-C Spoke to General about installing controls	Second site visit – improper installation. Spoke with General again. Third inspection controls were installed properly.
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Section 12 – Internal Review Process and Findings

12.1 Summary

According to the provisions of the City's NPDES Permit #102904, *the permittee must conduct an annual review of its SWMP in conjunction with preparation of the annual report required under condition B(2)*. The Environmental Program Coordinator facilitated a meeting with City staff on September 10, 2009. City of Keizer staff in attendance included the Public Works Director, the Public Works Superintendent, the Stormwater Field Supervisor, Stormwater Technical staff, and the Associate Planner with the Community Development Department.

In addition to providing the group an overview of Permit Year 2 activities, a spreadsheet was distributed with those activities scheduled for Permit Year 3. Given current concerns over staffing levels, the group was encouraged to brainstorm on activities that would provide significant impact but would not be too time intensive. The participant developed a thoughtful list of potential opportunities for Permit Year 3.

For the most part the group feels that SWMP is sound and that limited adaptive management activities are practicable at this time. Utilizing the group to brainstorm for creative outreach opportunities was very beneficial.

The Environmental Program Coordinator has requested a change to the measurable goal for BMP PI-2, which specifies facilitation of 8 meetings per year for the Stormwater Advisory Committee (SWAC). Per an email exchange with Chris Bayham, DEQ Willamette Basin Stormwater Specialist for the Western Region, agreement has been reached on this issue. Quarterly meetings will be held with the SWAC. In order to fully meet the intent of BMP, staff will communicate with the SWAC electronically between quarterly meetings. Electronic activity and content will be tracked in order to verify that this goal is being met.



Section 13 – Storm Sewer System and Waterways

13.1 Summary

As was indicated in Section 1, a revised storm sewer map, showing the location of all outfalls and associated waterbodies which receive discharges from the City of Keizer stormwater system is provided at the end of this report. The City has three perennial waterways which receive stormwater from the MS4 including Claggett Creek, Labish Ditch, and the Willamette River.

According to the PY1 report, *“Claggett Creek enters Keizer from Marion County and the City of Salem to the south. This waterway transects the City of Keizer flowing to the northwest. Claggett Creek exits the UGB to the northwest of the City, at McNary Golf Course, and then follows the UGB north where it enters Clear Lake, an apparent meander scar of the Willamette River. Clear Lake is connected to the Willamette through one or more drainage”*. Claggett Creek travel entirely through Keizer for approximately 3 miles and then flows northward, just outside of the UGB for a mile prior to discharging to Clear Lake.

“Labish Ditch enters Keizer from the east and originates in Marion County well outside of the City’s Urban Growth Boundary. Flow in Labish Ditch is augmented through the extensive use of drainage tiles in exclusive farm use (EFU) zoning in the county. The majority of this portion of the county is actively farmed. Labish Ditch is also fed by South Labish Ditch which flows from within the City of Salem and perhaps Marion County. This portion of the ditch intersects Labish Ditch just outside of the eastern City boundary and then flows to the west through the City of Keizer”. Labish travels along the UGB for about a mile (one side of the ditch is Marion County and the other is the City of Keizer) The waterway flows for another mile entirely through Keizer to the confluence with Claggett Creek.

The Willamette River lies on Keizer’s southwestern boundary and actually flows away from the western portion of the City as it moves north. Approximately 2 miles of the Willamette River flow directly adjacent to the City boundary.

As was discussed in the PY1 Annual Report, there are a number of intermittent drainages in or around Keizer. Upon further examination of aerial maps, historic data, and contour lines, It appears that there is one large drainage that originates north of Keizer.



The isolated drainage that runs from Bob Newton Family Park and south along Trail Avenue was most likely an extension of the much larger system to the north. The two systems are no longer connected given development. The majority of the larger drainage is outside of Keizer although tributaries extend into the UGB. The land use in this part of Marion County is primarily Exclusive Farm Use (EFU). The larger drainage is dry most of the year and flow is associated primarily with precipitation. However, some portions of this system are wet, but not necessarily flowing, for the majority of the year. The City does have at least 4 outfalls that discharge to this larger drainage in the county. Staff anticipates that knowledge of this system will increase over time as it is routinely inspected.



Section 14 – *Progress Towards Schedule B2(a)*

14.1 Overview

Schedule B2(a) of the NPDES Permit states that the permittee must submit an annual report to the Department 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.

Overall, the City is making good progress with reaching the community in regard to water quality issues associated with stormwater. City staff is actively working with other regional agencies to share ideas and reach common goals. Keizer actively seeks out water quality minded practices for some new development. The City has a new Silver LEED Certified Civic Center, pervious pavement has been utilized in sections of the City, and curb cuts are utilized in some planter strips.



The City of Keizer has learned a great deal through this first permit period and although there have been significant successes, there is room for improvement. One of the most difficult tasks will be changing internal practices and attitudes, and transferring the concept of new goals to



those groups and agencies that have had a long term relationship with the City of Keizer. City staff has talked about the need to change existing contract language to reflect more water quality minded practices. The City sees the need to address environmental issues, but transferring the recommendations to an on the ground activity is a challenge. More emphasis needs to be placed on the correct installation of green infrastructure. A solid schedule for inspection and repair needs to be developed.

While the City has developed a process for investigating and responding to water quality / stormwater complaints, field staff is not consistently tracking or responding promptly to water quality issues. This may be due in part to a perception that small issues do not have significant impacts, or that these activities are perceived as an excessive workload. Ultimately, more emphasis needs to be placed on the importance of stormwater and the requirement to respond immediately.

14.2 Future Tasks

City staff is unfamiliar with quickly utilizing new technology for repairs or emergency action. As is undoubtedly the case with many new Phase II communities, when faced with a challenge, deferring to the familiar course of action is a much more comfortable response.

One such emergency action was the Westridge Court slope failure which occurred in June 2008. The incident occurred along an old meander ridge for the Willamette River adjacent to Claggett Creek. Fortunately, none of the debris reached the waterway. The riparian corridor is deep and well developed in the area.

The Environmental Program Coordinator contacted DEQ and DSL in regard to the issue. A wetland delineation was completed by a contracted wetland scientist who also submitted an overview of what was found in the riparian area adjacent to the slide. DEQ expressed concern over the repair action in regard to water quality and potential heat issues associated with installation of a hard surface repair structure. DSL did not require a permit as a result of less than 50 cubic yards of wetland alteration.

The Environmental Program Coordinator recommended terracing and installation of new vegetation to stabilize the slope, however, the outcome has been a reconstructed steep slope of angular rock that does not allow for replanting other than at the toe of the slope. Some discussion occurred about replanting among the various contractors involved with the project, but the slope was reconstructed as originally planned. This action was most likely a combination of the urgency to have the project completed in a timely manner, and unfamiliarity with the value of utilizing vegetation to stabilize slopes.



Due to a discussion with DEQ that indicated the City would be replanting new vegetation on the disturbance site, staff is now proposing a mitigation project off-site that will enhance a section of Claggett Creek. The proposal for this activity is included in Section 15 of this report.

Public Works staff has discussed the issue internally and have moved forward with stabilization of the toe of the slope. Straw was installed to prevent sediment movement and the City is working towards establishing some native vegetation at the toe during the fall of 2009. A more detailed accounting of the planting plan will be provided to DEQ in the future. Staff is not expected to meet with the supplier until the first week of November. Planting specifications and a species list will be included with correspondence related to the proposed mitigation site as that project unfolds.

The Environmental Program Coordinator would like to discuss possibilities and expected actions with the City Engineer in order to facilitate a green discussion from the onset on engineered projects. Furthermore, staff will continue to promote water quality design and repair techniques when solicited.



Section 15 – *Other Activities*

15.1 Summary

The purpose of this Section of the PY2 Annual Report is to document those actions or activities that are not applicable to the content of other portions of this report. There are **four** primary topics that will be discussed in the following Subsection.

15.2 Specific Activities

Inland Shores

Inland Shores is a private community in Keizer that includes single family homes, a small commercial center, condominiums and apartments. The site is approximately 125 acres in size with the primary feature being an abandoned aggregate pond that encompasses approximately 50 acres. The community is built around this feature - Staats Lake. The community has a system of private streets, other municipal infrastructure and a stormwater system. There is no direct connection between Claggett Creek and the lake. All stormwater, with the exception of nonpoint runoff, flows into the private system and then to Keizer's MS4.

City staff was approached by three members of the Inland Shores Homeowners Association during the fall of 2008. Their request was for services provided to the rest of Keizer which is funded by the stormwater fee such as catchbasin cleaning and street sweeping.

After several meetings with the group, the City has agreed to add Inland Shores to the regular routine for catchbasin cleaning. Staff is working with legal counsel to develop a memorandum of understanding (MOU) that is being designed to serve as a template for other private communities that wish to enter into a similar agreement with the City.

Staff feels this action is important in that there is general understanding that the Inland Shores stormwater issues are ultimately part of Keizer's issues. The City cannot provide street sweeping service due to the configuration of the street system, but is working with the existing contractor to define a reasonable service and fee for their neighborhood. Catchbasins will be inspected and cleaned on a revolving basis. Repairs to the pipe system will not be provided with this service as the system was not originally designed to City standards.



West Labish Water Control District

In 2008 the Environmental Program Coordinator first became aware of an agency called the West Labish Water Control District who plays a role in moving water from agricultural land in Marion County to the City of Keizer. This group actively manages the western flowing portion of Labish Ditch to remove water from fields that are often saturated and unsuitable for certain crops. The water control district removes vegetation from the ditch every summer with equipment such as a flail arm mower. The result of many years of this activity has resulted in a waterway with very steep, unstable banks. Little or no native vegetation exists. The ditch runs adjacent to the Keizer UGB with Keizer residents on one side and Marion County on the other. Marion County has not opposed maintenance activities in this portion of the waterway.



In August 2008, the Environmental Program Coordinator first began receiving complaints from Keizer residents about the mower stripping all vegetation from the ditch and damaging vegetation on the Keizer portion of the waterway. In following up with local representatives it appeared that there was little interest in developing a relationship that would satisfy the needs of the water control district and still meet water quality standards.

In July 2009, the Environmental Program Coordinator again began receiving complaints about the devastation to the ditch at the hands of the West Labish Water Control District. Marion County had actually completed the maintenance activities for the year. Initial discussions with



County staff showed little hope of reaching some sort of agreement about retention of some vegetation, cleaning mowing debris from the ditch, or properly notifying Keizer of the activity prior to work being completed. As a result of the early meetings with Marion County staff, the City was able to engage the West Labish Water Control District and enter into a discussion about long term maintenance activities.

The water control district contends that they are mandated to promote flow. Initially their stand was that the maintenance activities were not at all detrimental to water quality. With some initial effort, and much conversation, it appears that the water control district is willing to coordinate with Keizer for some type of potential alteration to the ditch that will allow for flow but replace some vegetation and potentially slow water down. The Environmental Program Coordinator knows this activity will not be completed short term nor with few dollars. However, having the ability to have a civil conversation about progress for the area is considered a significant success.

In an effort to reach the water control districts concerns about Keizer's role in water quality, 'No Dumping' signs have been placed on barricades that block the sewer easement Keizer maintains on the County portion of the ditch. Furthermore, staff has notified Keizer property owners that about the waterway, disposal of yard debris in or along the ditch is prohibited under the new Stormwater Discharge Ordinance.

A meeting has been tentatively scheduled for November to discuss next steps with the West Labish Water Control District, the City of Keizer, Marion County, and the City of Salem.

Westridge Court

As was mentioned in Section 14, the City of Keizer initiated a slope repair on Westridge Court in Keizer. The slope failure was the result of a broken stormwater line that displaced material in the ridge. The incident was adjacent to the wide riparian corridor of the lower reaches of Claggett Creek. Prior to failure, the slope was vegetated with a canopy of big leaf maple and understory of some natives such as snowberry with a substantial distribution of Himalayan blackberry.

The slide displaced approximately 4000 square feet of vegetated slope. Approximately 1000 to 1300 cubic yards of material moved downslope. Fortunately, the riparian corridor was not substantially impacted. The repair work included replacement of the damaged stormline which was reconnected to the intact line running under the riparian corridor that discharges to Claggett Creek. As was discussed in Section 14, there is some soil available at the toe of the new slope to complete minor planting, but the majority of the project will not be suitable for any type of quality restoration project.



View from top of slope looking out across riparian corridor 6/13/09



View looking down slope failure. Covered due to potential precipitation.



Given the response to the slope failure was not in keeping with Schedule B2(a) of the NPDES Permit, the City is proposing a mitigation effort. *The City is aware that this type of proposal will not be an acceptable response to future activities that potentially violate the conditions of the permit.* We anticipate that new practices will be absorbed as a result of this particular issue.

Restoration Overview

The City is proposing to mitigate the disturbance site at Westridge Court at a minimum of 1.5:1. The new project site should be a minimum of 6000 square feet, but once the site has been fully evaluated, the footprint may be expanded to fit existing conditions. The restoration project will occur in a riparian area of Claggett Creek, upstream of the slope failure, which is currently an undeveloped City park. The location of the proposed mitigation project is suitable in that temperature can be addressed, future park development will not impact the mitigation effort, and the stream corridor is currently degraded with inadequate shading.



The proposed project site is dominated by reed canary grass and Himalayan blackberry. There are some old orchard type trees on site which provide little resource value. The area appears to have a functional wetland onsite which has a direct connection to Claggett Creek. As such, enhancement to the wetland would also be of benefit to water quality in the creek.

Given the timing of this proposed project, it will not be practical to start work until 2010 or later. The Marion Soil and Water Conservation District, Riparian Conservation Action Program, is interested in starting the planning process in 2009 / 2010 and is likely to partner with the City on



this project. The City of Keizer would like provide DEQ a detailed scope for this project when the appropriate information has been gathered.

One issue of concern with the site is that the current access is through an apartment complex. The City's legal counsel is working to obtain an easement for the property. The project will not be feasible unless an easement is acquired. In the event that this task is not completed in a timely manner, a secondary site will be selected and a proposal developed for DEQ.

Training Schedule for Permit Year 3

As was noted throughout this report, regular stormwater training for City maintenance personnel has been a short-coming in the overall program. In order to make this task a priority for Permit Year 3, the Environmental Program Coordinator has developed the following schedule. A minimum of 10 training events will be held.

November 2009	Illicit Discharge Ordinance review	All maintenance personnel
January 2010	Stormwater 101 (pollutants & regulations)	All maintenance personnel
February 2010	Service vehicle outreach material <i>Stormwater outreach material is being compiled for all service vehicles</i>	All maintenance personnel
February 2010	Municipal Operations dvd and test <i>O & M Training</i>	All maintenance personnel
March 2010	Clackamas Water Environment School	Stormwater personnel
March 2010	Construction site runoff basics	All maintenance personnel
April 2010	Construction runoff intermediate <i>This may include requirement of the ODOT Certified Environmental Control Inspector (CECI) certification</i>	Stormwater personnel
May 2010	Operations and Maintenance	All maintenance personnel
June 2010	Open (tbd)	Stormwater personnel
June 2010	Construction Site Runoff Ordinance	All maintenance personnel

City of Keizer
Program Overview Matrix – Permit Year 2 (2008/2009)

MEASUREABLE GOALS	PROGRESS	ASSESSMENT/APPROPRIATENESS	STATUS	COMMENTS
#1 Public Education				
PE-1 <i>Prepare an educational mailing that will reach approximately 12,500 residents.</i>	COMPLETE Utilized annual Consumer Confidence Report (CCR) for drinking water. Mailed to all residents, including multi-family units	The measurable goal for this BMP is appropriate.	COMPLETE for Permit Year 2	Utilization of the CCR actually reaches more
PE-2 <i>Broadcast stormwater-related educational information over the local access channel two to four times per year. Information on the website will be updated on an annual basis.</i>	COMPLETE Permit Year 1 Annual Report, TMDL Implementation Plan, Stormwater Discharge Ordinance posted. Resource list updated.	The measurable goal for this BMP is appropriate.	COMPLETE for Permit Year 2	In order to utilize this tool more efficiently, staff hopes to run PowerPoint presentations previously developed for stormwater related issues.
PE-3 (PY-1) <i>City will attend and proactively participate in monthly watershed council meetings on an on-going basis</i>	(See Comments)	The measurable goal for this BMP is appropriate. The watershed council is in its infancy. Staff provides support as time allows.	Stormwater staff attends meetings as time allows.	Participation will continue as time allows. Staff is copied on all minutes and Council email. Staff is working with the regional group for sound watershed enhancement projects.
#2 Public Involvement				
PI-1 <i>Establish a funding mechanism within the first permit year.</i>	COMPLETE	The measurable goal for this BMP is appropriate.	COMPLETE in 2007	The funding mechanism is established for the MS4 stormwater program. The existing fee should be evaluated to determine if the funding is adequate to fully implement the conditions of the Permit through the established time period.

PI-2 (PY-2) <i>Public Involvement process necessary to establish an ordinance for Illicit discharges, and construction site runoff in PY2, and new development standards in PY3. Facilitate 8 citizen's meetings</i>	Illicit Discharge Ordinance COMPLETE Construction Site Runoff Ordinance NOT COMPLETE New Development Standards NO PROGRSS Facilitate 8 Citizen's meetings NOT COMPLETE (Adaptive Management proposed for PY3)	Recruitment for the advisory committee has not been successful and attendance at meetings is limited. Staff has proposed 4 meetings per year with electronic communication in between meetings. The advisory group is agreeable to this change.	Ongoing. The next meeting is scheduled for January 2010	The advisory committee is working on the construction site runoff ordinance.
PI-3 (PY-2) <i>Involve enough groups in mark 100 storm drains/year and to distribute educational material to 250 residents</i>	COMPLETE	The measurable goal for this BMP is appropriate.	Ongoing. The next project is tentatively scheduled for May 2010	Satff hopes to encourage the mayor and City Council to complete the next project.
#3 Illicit Discharge Detection (IDDE)				
ID-1 (PY-2) <i>Illicit Discharge Ordinance in PY 2</i>	COMPLETE		COMPLETE	
ID-2 (PY-1) <i>Develop IDDE Plan</i> <i>Complete Outfalls Inventory and Map</i>	COMPLETE COMPLETE – Map updated in PY2	The measurable goal for this BMP is appropriate	COMPLETE	
ID-3 (PY-2) <i>Train Employees to Implement the IDDE Plan</i>	NOT COMPLETE for PY2	The measurable goal for this BMP is appropriate	Refresher training needs to be scheduled on a regular basis	Initial training occurred. No follow-up training has occurred to date. Staff is working to schedule refresher training
ID-4 (PY-2) <i>Investigate all stormwater outfalls for illicit discharges. Document findings</i>	COMPLETE	The measurable goal for this BMP is appropriate	COMPLETE	Outfalls have been identified and annual inspection of all outfalls are planned for the permit period.
#4 Construction Site Runoff Control				
CS-1 (PY-2) <i>Construction Site Runoff Ordinance</i>	NOT COMPLETE	The measurable goal for this BMP is appropriate. The SWMP scheduled development of 3 major programs in PY2. The timeline was unrealistic for limited stormwater staffing.	Pending	The advisory committee is working on the ordinance. Staff does not anticipate completion earlier than late PY3

CS-2 (PY-2) <i>Train Employees – Construction Site Controls</i>	NOT COMPLETE	The measurable goal for this BMP is appropriate See CS-1	Pending	Given the program has not been fully developed, formal training has not occurred. Preliminary training is being coordinated for PY3
CS-3 (PY-3) <i>Plan Review, Inspections, Enforcement</i>	NO PROGRESS	The measurable goal for this BMP is appropriate See CS-1	No progress	The ordinance and overall program have not been completed. This BMP may not be complete until PY4
CS-4 (PY-1) <i>Establish hotline by the end of permit year 1</i>	(See Comments)	The measurable goal for this BMP is appropriate See CS-1	pending	The City is currently using the after-hours duty phone for water quality complaints after business hours. Staff anticipates a separate hotline with program development.
#5 Post-Construction Runoff Control				
DS-1 (PY-3) <i>New / Redevelopment Runoff Control Ordinance</i>	NO PROGRESS	The measurable goal for this BMP is appropriate	No progress	Development standards are not set for implementation until PY3. These BMPs may not be completed until PY4
DS-2 (PY-3) <i>Train Employees – New Development Standards</i>	NO PROGRESS	The measurable goal for this BMP is appropriate	No progress	See DS-1
DS-3 (PY-4 & 5) <i>Plan Reviews, Inspections, Enforcement</i>	NO PROGRESS	The measurable goal for this BMP is appropriate	No progress	See DS-1
#6 O & M / Pollution Prevention				
OM-1 (PY-2) <i>Develop Water Quality Sensitive O & M Program</i>	PENDING	The measurable goal for this BMP is appropriate	pending	Initial planning is underway. This program has been time intensive. Staff anticipates full development by PY4

OM-2 (PY-2) <i>Train Employees – Revised O & M Practices. Conduct refresher training.</i>	NOT COMPLETE	The measurable goal for this BMP is appropriate	Pending	See OM-1
OM-3 (PY-2) <i>Catchbasin Cleaning</i>	COMPLETE	The measurable goal for this BMP is appropriate.	COMPLETE - ongoing	
OM-4 (PY-1) <i>Street Sweeping</i>	COMPLETE	The measurable goal for this BMP is appropriate.	COMPLETE - ongoing	