

## **City of Keizer Total Maximum Daily Load (TMDL) Implementation Plan**

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

The Oregon Department of Environmental Quality (DEQ) issued the Willamette Basin TMDL as an Order in September 2006. The Environmental Protection Agency (EPA) approved the TMDLS on September 29, 2006. *As part of the Willamette TMDL, DEQ developed a Water Quality Management Plan (WQMP) to describe the overall framework for implementing the Willamette Basin TMDL. The WQMP includes a description of activities, programs, legal authorities and other measures for which DEQ and other designated management agencies (DMAs) have regulatory responsibility.*

*A DMA is ‘a federal, state or local governmental agency that has legal authority of a sector or source contributing pollutants, and is identified as such by the Department of Environmental Quality in a TMDL.’ TMDL implementation activities will be carried out under existing regulatory authorities, programs and water quality restoration plans as well as by TMDL implementation plans that certain DMAs will develop in fulfillment of the requirements of this TMDL.”*

DEQ has named the City of Keizer as a Designated Management Agency. The DMA designation gives the City legal authority over the source(s) that contribute pollutants from approximately 4480 acres within the Keizer city limits to the Willamette River. Source(s) may include water from Claggett Creek, Labish Ditch, the in-ground stormwater system, and overland flow. The Willamette River flows for approximately 2 miles along the southwest portion of the city limits.

Established TMDLs, City of Keizer stormwater planning and project implementation, and this Implementation Plan are designed to assist with water quality restoration efforts being conducted by a number of communities within the Willamette Basin. These activities are designed to comply with established water quality standards and help restore beneficial uses, such as drinking water supplies and water contact recreation to the Willamette for current and future generations. The specific pollutants of concern, which are addressed in this Implementation Plan are 1) temperature, 2) bacteria, and 3) mercury.

The TMDL Implementation Plan and Keizer’s MS4 Permit function concurrently to address the in-ground system and non-point source pollutants. However, temperature is not considered to be a ‘stormwater’ pollutant in the Willamette Valley and therefore is not addressed within the Phase II NPDES permit requirements. Temperature is a TMDL parameter so the City of Keizer has included it in the Implementation Plan.

### **Background and Implementation Plan Goals**

The City of Keizer is located in Marion County adjacent to the City of Salem. Keizer incorporated in 1982 and currently has a population of approximately 35,500. The form of government consists of 7 elected officials with a City Administrator overseeing all City operations.

The Public Works Department was created in 1985 and currently provides a variety of services through 4 divisions, Parks, Streets, Water, and Stormwater, the newest division. Sanitary sewer service, which includes maintenance and repair work, are provided by the City of Salem through an intergovernmental agreement. Salem's wastewater treatment plant serves Keizer, Salem, Turner and other outside users in Marion County. Maintenance and treatment of that system are reported under the City of Salem regulatory permits.

The foundation of the new Stormwater Utility has secured funding and staffing for stormwater operations. This new program will allow City staff to implement new programs, put more emphasis on public outreach, provide internal training, implement new maintenance activities, and closely track ongoing stormwater activities to determine progress and track trends for future decision making. At present stormwater infrastructure includes approximately 54 miles of pipe, 1560 catchbasins, 425 manholes, and 80 outfalls.

The intent of this Plan is to function in concert with the City's Phase II MS4 Permit, # 102904. The six minimum control measures being addressed are:

1. Public Education (PE)
2. Public Involvement (PI)
3. Illicit Discharge Detection and Elimination (IDDE) (ID)
4. Construction Site Runoff Control (CS)
5. Development Standards (Post-construction Runoff Control)
6. Operations and Maintenance (Pollution Prevention/Good Housekeeping) (OM)

The matrices, marked Appendix A, provide specific programs, projects and practices reflected in this plan and address the components of the TMDL Implementation Plan.

### **Water Quality Assessment**

The City of Keizer encompasses approximately 7 square miles. The southern most boundary of the City abuts the City of Salem. Infill has been consistent and therefore the city limits extend almost to the Urban Growth Boundary throughout the community. Most of the area is flat and low lying. The majority of community lies within the historic floodplain of the Willamette River or Claggett Creek. There is one pond of significant size within Keizer, Staats Lake which is an abandoned aggregate mining site. The area is residentially developed and there are no stormwater outfalls to the lake. Water in the feature is groundwater.

Claggett Creek and Labish Ditch transect the City with approximately 3 miles of Claggett Creek flowing through the city. Claggett Creek originates southeast of the Keizer city center in Marion County outside of the Salem city limits. Claggett Creek flows through a portion of the City of Salem before entering Keizer. Labish Ditch flows from the northeast and again originates in Marion County. Labish Ditch joins Claggett Creek just north of the center of Keizer and from

there enters the Willamette River through the Clear Lake system northwest of town. Labish Ditch has a small tributary that originates in the City of Salem and joins the main stem of Labish in Marion County prior to entering the City of Keizer.

The City of Salem has approximately 66 miles of waterway that flow directly to the Willamette or north towards Keizer. Mill Creek, a major tributary in the Willamette Basin, flows from the southern portion of Marion County through Salem and discharges to the Willamette River approximately 2 miles south of the southern boarder of Keizer. Mill Creek is listed as essential salmonid habitat and occurs on the 303(d) List. Those designations are discussed in the following paragraphs.

According to the Oregon Department of Fish and Wildlife (conversation with Wayne Hunt, ODFW Fish Biologist, 3/7/08) Claggett Creek is, or may be utilized by juvenile spring Chinook salmon and steelhead which are both federally listed species. Cut throat trout utilize Claggett Creek as well as other native resident fish such as sculpin, speckled dace, and shiners. The lamprey eel is also present which is current a state sensitive species. Labish Ditch enters Claggett Creek at the McNary Golf Course. A fish barrier does not exist at that confluence so Labish may provide habitat for those species found in Claggett Creek. Finally, the Willamette River downstream of Keizer's urban waterways also supports those fish species listed as occurring within Claggett Creek. The Willamette River is designated as essential salmonid habitat.

*Essential salmonid habitat is defined as the habitat necessary to prevent the depletion of native salmon species (chum, sockeye, Chinook and Coho salmon, and steelhead and cutthroat trout) during their life history stages of spawning and rearing. The designation applies only to those species that have been listed as "Sensitive, Threatened or Endangered" by a state or federal authority.*

DEQ has established TMDLs for elevated temperature, mercury, and bacteria levels throughout the Middle Willamette Subbasin. According to DEQ, *water in this subbasin is warmer than is necessary to protect salmonid rearing and spawning.* There are elevated bacteria levels in this portion of the Willamette Basin as well. *People can become sick if they ingest water that is contaminated with bacteria when they are swimming, recreating or in contact with the water.* Finally, *the Willamette has fish consumption advisories due to elevated levels of mercury found in some fish species.* While temperature, bacteria, and mercury are the pollutants of concern, the City of Keizer recognizes its responsibility to respond to all water quality issues within its boundaries and to receiving waters downstream.

Claggett Creek appears on the 2004/2006 303(d) List which refers to Section 303(d) of the Clean Water Act (CWA). Review of the List indicates that a portion of the water quality issues may be connected to agricultural practices outside of urban boundaries. However, the City of Keizer is a residential community and those pollutants that are simply categorized as pesticides, fertilizers, and insecticides can also be linked to residential yard maintenance. The portion of Claggett Creek that flows through the City of Salem is primarily located within an industrial zoning region of town. Labish Ditch has not been added to the 303(d) List. The term 'ditch' is colloquial and although the waterway has been extensively modified, it is a perennial waterway. Regardless of present Listing status, as was mentioned previously, the City of Keizer is presenting this Plan as a means to address water quality issues associated with stormwater regardless of formal regulatory status. Implementation of sound programs within the community play an important role in addressing water quality within the Willamette Basin. The City of Keizer anticipates establishing

beneficial programs that will address additional pollutants should they become problematic in Claggett Creek or other local waterways.

E. Coli standards are exceeded in Claggett Creek year round. The City was incorporated in 1982 and as such, has been able to keep the in-ground storm system fairly free of cross connections and other maintenance type problems. E. Coli in this case can almost certainly be linked to farming activities outside of the City Limits, hobby farms, and domestic animals within the community.

### **Management Strategies**

The City of Keizer TMDL Implementation Plan management strategies are displayed in a concise format in **Appendix A**. The City's overall approach will focus on 1) updated and expanded public outreach and education, 2) more detailed tracking activities, and 3) an upgraded maintenance program. However, as was stated above, the overall management strategies reflect the specifications in the City of Keizer SWMP. In addition, the City has responded to water quality concerns from the public informally as a matter of quality customer service. City staff will work towards developing a more formal internal process for follow-up on these issues within the within the time frame of this Implementation Plan. An overview of each listed parameter and associated management strategies are discussed below. It should be noted that this report is a general overview of that information provided within the matrices in Appendix A. There can, and will, be water quality benefits for different pollutants associated with one particular BMP. For example, development and implementation of an erosion control ordinance will address elevated mercury levels, but may also be of benefit to temperature due to bank stabilization & tree planting or preservation of shading along waterways.

The City of Keizer will be developing a 'water quality operations guide' for the development of the new Keizer Rapids Park which is adjacent to the Willamette River. This large regional park will be developed in phases and with each phase stormwater staff will have the opportunity to review and comment on proposals for the park. City staff will actively look for opportunities for public outreach in this park that address all of the target pollutants as well as general stormwater information. This park will also provide an excellent outdoor location for stormwater education.

### **Bacteria**

As was provided earlier, bacteria in Claggett Creek and Labish Ditch can be linked primarily to agricultural land use and domestic animals. Surface water in the Willamette Valley also provides extensive habitat for water fowl and unmaintained areas are utilized by rodents. Outreach will occur for the latter issues as time allows.

The City of Keizer currently uses 'doggie stations' in City parks. At present there are 7 stations in 7 out of 14 parks. However, the City has funds in place to expand this program starting in 2008. The current number of stations is due in part to the lack of a Parks Master Plan prior to 2008. This document was completed in January 2008 and has provided additional dog stations in established parks as well as those parks that will be developed. Parks staff will coordinate with stormwater staff for locating new facilities.

Under the TMDL Implementation Plan, the City will add additional interpretive signage in parks with an emphasis on those parks near waterways and the Willamette. Stormwater staff will be updating the Public Works website to include more information on the hazards of pet waste in local waterways. A stormwater booth at the annual National Public Works Week celebration will include promotional items such as dog waste bags, and City staff is coordinating with local

businesses to supply high quality dog food that results in less pet waste. Finally, Stormwater staff will be developing a pet waste program that focuses on the backyard rather than publicly occupied places.

Mercury

The City of Keizer plans to minimize potential mercury impact by focusing on public education, internal training for field staff, and adoption of applicable code. Public Works staff has reviewed storm drain markers and have chosen a product. City staff is collaborating on design and text for the new markers.

Staff will put substantial effort into providing resources for the development community, such as handout materials, established design techniques, and resource guides. The City is in the process of developing an erosion control ordinance. Coordination will be ongoing with legal counsel and internal staff to ensure enforcement capabilities as well as consistency with land use code. Internal training will be ongoing for Public Works field staff. They will be utilized to provide outreach when possible and also to alert the appropriate staff when violations occur.

Finally, stormwater staff participates on the Regional Erosion Prevention Awards (REPA) committee. Representatives from a number of jurisdictions within the Willamette Basin implement an awards program for the development community that recognizes those that are using good erosion control techniques.

Temperature

The City of Keizer has been innovative about making sound choices that protect riparian vegetation. An overflow channel was recently constructed on Labish Ditch that made use of native vegetation, provided green space for the community, and alleviated potential flooding hazards.

Another water quality oriented project was the Claggett Creek restoration project which occurred in a City park along approximately 2000 feet of waterway. The City of Keizer partnered with the Claggett Creek Watershed Council for removal of invasive vegetation, installation of native species in the riparian corridor, water, and the irrigation system.

For the purpose of this plan, City staff will emphasize the retention of native vegetation both along waterways and in upland areas. An insert for the April/May 2008 water bill has been developed which focuses on how water temperatures increase and the importance of fish as an indicator species. In addition, a brochure has also been completed that will be available for customers in City Hall and will also be handed out at public venues such as neighborhood meetings. Stormwater staff is in the process of developing a traveling display board that can be placed in schools, City Hall, and other public areas. This display will have several topics that can be changed periodically. Categories such as salmonids, stream morphology, riparian vegetation and invasive vegetation will be available. At present the board is being utilized to provide stormwater program updates to the community members that utilize the City Council chambers.

For the future, Public Works staff will be working to identify at least 5 possible restoration sites along Claggett Creek where native vegetation can be installed to provide shade and bank stabilization. At least one of those areas will be reconstructed with other sites prioritized for the future.

### **Performance Monitoring**

Each strategy in the Implementation Plan, and specifically itemized on the attached matrices, will be reviewed annually and data entered in the matrix column marked 'Status'. This form offers an efficient means for quickly reviewing program progress.

As was stated earlier, the formation of the Stormwater Utility and additional staff will pave the way for Keizer's proposed water quality programs. An emphasis on outreach, maintenance activities, and proper tracking will provide the baseline for making internal changes, expanding successful projects, and/or program review. The City's new Stormwater Program Manager will rely on community feedback, internal planning, coordination with adjacent jurisdictions, and participation in organized committees to keep programs current and updated.

### **Plan Review, Revision, and Reporting Requirements**

The City of Keizer is required to establish a process whereby the TMDL Implementation Plan is reviewed annually. For those projects, practices, or plans (listed in Appendix A) that are to be completed later in the 5 year process, City of Keizer staff will provide interim progress updates in the annual report providing detailed progress on each item.

The City of Keizer will review and evaluate the Plan every five years following DEQ approval of the final version of the Implementation Plan. Submittal of the attached matrix during annual review will include updates and progress in the 'status' column. In addition, a report will be completed covering the findings for the review period. If the report indicates that the Plan is not adequate to meet the pollution reduction goals, the City of Keizer will provide a description of how the Plan is to be modified. Annual reporting for the TMDL Implementation Plan will be concurrent with the annual reporting timing established by DEQ for the MS4 Permit.

The City of Keizer will review and revise (adaptive management) this Implementation Plan in its entirety every 5 years. Revisions, additions, or restructuring will be coordinated with DEQ at that time. Adaptive management will be used to address any *proposed* TMDL revisions or reevaluations in the future.

### **Evidence of Compliance with Land Use Requirements**

All of the strategies listed in this Plan and attached matrix are consistent with the City of Keizer's land use plans. The documents have been reviewed by Community Development staff for consistency with local and statewide land use laws. Any revisions to the Plan will include a review for land use compatibility with the City's Community Development staff. In addition, stormwater staff will be working directly with the Community Development in developing ordinances, coordinating efforts in Keizer Rapids Park, and confirming land use when developing operations plans and the illicit discharge elimination plan.

### **Program Funding**

The City of Keizer has an established Stormwater Utility. The community fee rate is based on impervious surface for residents and commercial enterprises within Keizer. The fee was established to help the City move forward with implementation of the SWMP which includes, but is not limited to, hiring stormwater staff, maintenance of the system, and providing outreach opportunities and materials to the residents of Keizer.

### **Public Involvement for the TMDL Implementation Plan**

The TMDL Implementation Plan will be made available to the public. The City of Keizer Stormwater Manager will be presenting it to the Gubser Neighborhood Association on April 17, 2008. City of Keizer staff plans to bring the document before the Planning Commission in June 2008 with a recommendation for City Council approval. If DEQ has not provided final approval of the Plan within the internal timeline for the Planning Commission meeting set for June, we will move it forward until time allows staff a place on the agenda. Once the Planning Commission has recommended approval, the City Council will have the opportunity to review the Plan. Finally, the report will be available on the City of Keizer website once it has been approved.

As is provided in the SWMP, the six minimum control measures include a public involvement component, a portion of which is directed towards ordinance development. The City of Keizer will be moving forward with organizing a stormwater advisory committee (SWAC) for involvement in development of the illicit discharge ordinance (ID), the post-construction runoff control ordinance (DS), and the construction site runoff control ordinance (CS). This group will also have access to the TMDL Implementation Plan and will be available to provide review and comments. The organization of the group will be approved by City Council and members will represent a broad range of the community.

### **Conclusion**

The content of this report and attached matrices are intended to meet the requirements for the TMDL Implementation Plan. All of the strategies outlined are consistent with City of Keizer regulations. As was stated earlier in this report, the TMDL Implementation Plan is established to function in concert with the specifications of the Stormwater Management Plan. The six minimum control measures addressed in that document are reflected in this Plan and the attached summary matrices. This document has, or will be, reviewed by management staff for accuracy. The City's Stormwater Utility and Public Works budget makes funding for proposed strategies possible.

It is our understanding from a meeting with Rachel Burr, Willamette Basin Stormwater Specialist for DEQ, on February 25, 2008, that this document is considered a draft until DEQ has had the opportunity to review and comment. However, the City of Keizer will implement the proposed Plan as though it were a final version until DEQ has responded. DEQ received the first draft of this document on March 12, 2008. DEQ staff has provided notification that the TMDL Implementation was submitted prior to the April 1, 2008 deadline.

**City of Keizer  
TMDL Implementation Plan Matrix  
March 2008**

**Pollutant: Bacteria**

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

<b>SWMP BMP</b>	<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-1	1. Bacteria carried to waterways in storm runoff and piped system	a. Prevent domestic animal waste from reaching waterway	i. Stormwater booth at National Public Works Week celebration in May	Funded	# of surveys filled out and promotional items given away	Annually	May 19, 2008 event is scheduled and being planned	
			ii. Expand 'doggie' bag program in local parks	Funded	Check bags at scheduled intervals	2011	Currently working with Parks staff and park board for sites and message content	
			iii. Design a pet waste program with 'backyard focus'	Staff time	Community feedback.	2010	Research, and draft study completed by 2009	
			iv. Identify 'hobby farms' within the UGB. Contact residents with educational information.	Staff time	Track properties, owners, and contact dates	2011	Property location and owner list complete by 2010	
			v. Add additional interpretive signage in Parks near Willamette River and other waterways Utilize new off leash area at Keizer Rapids Park	Funded	Design and installation of signs	2011	Identify appropriate locations by 2008	
			vi. Prepare a resource list for the public. Stormwater links to include local, educational, and regulatory resources	Staff time	Post on website. Use as handouts at community events	2009	Template completed by 2008	

PE-2			vii. Add stormwater-related information to the City's Website	Staff time and web design training – funded	Website counter	2008 / Ongoing	Preliminary information has been drafted	
PE		b. Public outreach covering bacteria issues and concerns	viii. Develop traveling display to be used in public settings	Funded	Track locations and presentation material	2008	Initial display material designed and reviewed by May 2008. First display in Council Chambers and then to Public Works open house in May	
PI-3			i. Storm drain markers	Funded	Number of markers installed	2009 / Ongoing	Storm Drain marker has been chosen and will be ordered in 2008	
PI			ii. Public Review of TMDL Implementation Plan	Staff time	Track presentations, events, etc	Ongoing	Present to Planning Commission for recommended approval by City Council	
ID-1		b. Prevent human waste (from cross-connections), oil, grease, paint, and other pollutants from entering the storm system.	i. Develop ordinance to prohibit illicit discharges	Staff time and public notice – funded	City Council adoption	2009	Draft ordinances are being selected for committee review	
ID-2			ii. Develop illicit discharges detection and elimination plan	Staff time	Internal review, comments, and feedback from staff	2008	The City presently has two draft examples. Other options will be explored.	
ID-3			iii. Internal training for implementation of plan	Staff time	Track training topics and dates.	2009	Training schedule being developed	Started in 2008
ID-4			iv. Implement the plan	Staff time	Track violations and complaints	2009 / Ongoing	N/A	

**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 – 2008 / Final

**City of Keizer**  
**TMDL Implementation Plan Matrix**  
**March 2008**

**Pollutant: Mercury**

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

<b>SWMP BMP</b>	<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		a. Public outreach covering mercury issues and concerns	i. Prepare a resource list for the public. Stormwater links to include local, educational, and regulatory resources	Staff time	Post on website. Use as handouts at community events	2009	Template completed by 2008	
PE			ii. Develop traveling display to be used in public settings	Funded	Track events and presentation material	2008	Initial display material designed and reviewed by May 2008.	
			iii. Develop handout materials for contractors. Diagrams and resource lists.	Funded	Track number given away	2008/2009	Staff is reviewing field manuals. Preliminary draft ready for internal review in 2008	
			iv. Coordination internally for development and educational opportunities at Keizer Rapids Park.	Staff time	Utilize educational opportunities directed towards bank stabilization, native species, and development actions	Ongoing	Initial boat ramp design review in 2008	
PI-3		a. Public involvement	i. Storm drain markers	Funded	Number of markers installed	2009 Ongoing	Storm Drain marker has been chosen and will be ordered in 2008	
CS-1		b. Keep soil on site. Prevent material from entering catchbasins and waterways	i. Develop ordinance to control construction site runoff	Staff time	City Council adoption	2009	DLCD/DEQ example being reviewed. Other drafts considered and will be brought to the Stormwater Advisory Committee (SWAC)	
CS-2			ii. Internal training for field staff	Staff time	Record of meeting and content	2008 Ongoing	Training schedule being developed	

City of Keizer

TMDL Implementation Plan – 2008 / Final

CS-3			iii. Plan review, inspections, and enforcement	Staff time	Track staff progress	2010	Coordination with Community Development in 2008 for potential fee increase	
CS-4			iv. Establish hotline to receive complaints from the public	Funded	Develop tracking system	2008	Develop procedure for checking calls and responding	
DS-1			v. Develop ordinance to control runoff from new development	Staff time. Public notice is funded	City Council adoption	2010	Staff anticipates utilizing SWAC for this action	
DS-2			vi. Internal training for new development standards	Staff time	Completion of training	2010		
DS-3			vii. Plan review, inspections, enforcement	Staff time. Additional positions funded	Track staff progress	2010		
OM-1			viii. Develop a water quality sensitive O & M program	Staff time	Compare with other jurisdictions and conduct internal review	2009	Development and design to be coordinated with field staff	
OM-2			ix. Internal training for new O & M practices	Staff time	Agenda and instruction content	2009	Preliminary discussions underway	
OM-3			x. Catchbasin cleaning	Additional staff funded. Vector truck funded	Track number of catchbasins cleaned	2008 Ongoing	25% of City catchbasins cleaned annually. High priority cb cleaned annually	
OM-4			xi. Conduct street sweeping	Funded	Track progress	2008 Ongoing	Sweeping on a monthly basis. This program is currently underway.	

**Six Minimum Control Measures**  
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OM = Operations and Maintenance (Pollution Prevention/Good Housekeeping)

**City of Keizer  
TMDL Implementation Plan Matrix  
March 2008**

**Pollutant: Temperature**

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

<b>SWMP BMP</b>	<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-1	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. <b>Prepare a water bill insert for citywide mailing.</b>	Funded	Track number of inserts sent	2009	Mailings scheduled for 2008. Draft is complete.	
			ii. <b>Design a stormwater brochure to be handed out at local meetings, and events</b>	Funded	Track usage and events	2009	Preliminary design complete. 2008 brochures for open house in May.	
			iii. <b>Identify 5 project sites along Claggett Creek for native tree and shrub planting</b>	Funded	Review aerials, make site visits, coordinate with adjacent property owners	2011	Review of sites. Develop decision matrix for high quality sites.	
			iv. <b>Implement planting of one or more of the project sites including public participation</b>	Funded	Use internal review to determine most suitable site.	2012	Implement planting. Develop maintenance schedule/	
PE		b. Public outreach covering temperature issues and concerns	i. <b>Prepare a resource list for the public. Stormwater links to include local, educational, and regulatory resources</b>	Staff time	Post on website. Use as handouts at community events	2009	Template completed by 2008	

			ii. Develop traveling display to be used in public setting covering the impacts of increased water temperature. Display can be changed periodically to cover other stormwater issues such as mercury, and bacteria	Funded	Track locations and feedback	2008	Initial display material designed and reviewed by May 2008. First display in Council Chambers and then to Public Works open house in May 2008	
			iii. Interpretive signage in parks along Claggett Creek and the Willamette. Signs may also be installed along other water features if appropriate	Staff time / design & construction funded	Number of signs installed and locations	2010	Storm staff will coordinate locations with Parks staff for locations along Willamette and other water features.	
PE-2			iii. Utilize local Channel 23 to provide stormwater education	Staff time	Track programs and content	2008 / Ongoing	Work with field staff to develop program - underway	
PE-3			iv. Participate in Claggett Creek Watershed Council	Staff time	Meetings attended and topics covered	2008 / Ongoing	<i>The Claggett Creek Watershed Council is not meeting at this time. Staff will attend neighborhood association meetings until the council reconvenes. City staff is currently involved in a reorganization effort with Marion County and the City of Salem</i>	
			v. Tighten existing City code to emphasize retention of 'native' vegetation Explore existing code for addition changes that are not time intensive	Staff time	Keep record of code updates and changes	2009 Ongoing	Initial meetings with Community Development staff are underway	

			vi. Internal education for field staff directed towards retention of trees along waterways and temperature issues	Staff time	Track presentation content and dates	Ongoing	Training schedule being developed	
CS-1		b. Keep soil on site. Prevent material from entering waterways	i. Develop ordinance to control construction site runoff	Staff time	City Council adoption	2009	DLCD/DEQ example being reviewed. Other drafts considered and will be brought to the Stormwater Advisory Committee (SWAC)	
DS-1			v. Develop ordinance to control runoff from new development	Staff time. Public notice is funded	City Council adoption	2010	Staff anticipates utilizing SWAC for this action	

Six Minimum Control Measures

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