2010

CITY OF CANBY

TOTAL MAXIMUM DAILY LOAD (TMDL) IMPLEMENTATION PLAN

Submitted to:

Karen Font Williams
Northwest Region
Water Quality
Department of Environmental Quality
2020 SW 4th Ave., Suite 400
Portland OR 97201

Submitted by:

City of Canby
182 N. Holly Street
Canby, Oregon 97013

July 30, 2010

Prepared by: Darvin Tramel
Wastewater Treatment Supervisor
City of Canby

Table of Contents

Introduction and Background

Section 1

1.1 Introduction

The following document will serve as the City of Canby's TMDL Implementation Plan. The implementation of this document and plan is intended to meet or exceed the requirements as described in the Willamette and Molalla River Total Maximum Daily Load (TMDL) issued by DEQ as an Order on September 21, 2006 for the Willamette River and December 8, 2008 for the Molalla River. In order to comply with the Order all Designated Management Agencies (DMA's) were required to submit a Water Quality Management Plan (WQMP), 18 months after the Order was issued.

A DMA is a "federal, state or local governmental agency that has legal authority of a sector or source of contributing pollutants, and is identified as such by the Department of Environmental Quality in a TMDL. The City of Canby was recognized as a DMA in both the Willamette and Molalla TMDL. Because the City of Canby has two basins within its jurisdiction, the 18 month window to submit a WQMP started following the issuance of the Molalla TMDL. The Water Quality Management Plan for the City of Canby is due on January 31, 2010.

A Water Quality Management Plan is one of the 12 TMDL elements called for in the TMDL rule. OAR 340-042-0040-(4)(l) states:

> *(l) Water quality management plan (WQMP). This element provides the framework of management strategies to attain and maintain water quality standards. The framework is designed to work in conjunction with detailed plans and analyses provided in sector-specific or source specific implementation plans.*

TMDLs, associated implementation plans and activities are designed to restore water quality to comply with water quality standards. In this way designated beneficial uses, such as aquatic life, drinking water supplies, and water contact recreation, will be protected.

This plan is organized into seven sections. This first section introduces the Plan followed by the second section which gives a brief overview of the TMDL program and describes each of the three major pollutants addressed in the 2006 Willamette Basin TMDL and the 2008 Molalla-Pudding Subbasin TMDL for (Temperature, Bacteria, and Mercury). Section three provides an overview of the City of Canby (Point Source and Non-Point Source) contributions to the differing subbasins within Canby's jurisdiction. Section four describes the City water quality efforts to date, and points out where gaps exist in addressing TMDL parameters. Section five is the Implementation Strategies and activities the City plans to develop in order to address TMDL issues. Section six includes the implementation matrix which outlines the schedule, funding and strategy for how the plan will be implemented and measured. The final section identifies how the TMDL Implementation plan will be monitored, the reporting requirements and how the plan meets statewide land use goals.

The overarching goal of this Implementation Plan is to minimize or, wherever possible, eliminate heat, bacteria, and mercury contributions to surface waters within the jurisdictional control of the City of Canby. Through a multi-faceted approach of incentives, land use mechanisms, public operations, partnerships, and education this plan targets specific sources of contamination within the city's jurisdiction.

1.2 Background

The City of Canby is located in the North Willamette Valley within Clackamas County, about 25 miles south of Portland and 30 miles north of Salem. Canby is a community of approximately 16,000 residents that lies adjacent to the Middle Willamette River at mile post 33 and has recreational parks and residential areas located along the lower reaches of the Molalla River located at approximately mile post 03. The City limits encompass approximately 2,700 acres abutting both the Willamette and Molalla Rivers as depicted in Figure (1).

The Molalla-Pudding subbasin is located within Clackamas and Marion Counties, and includes the cities of Woodburn, Mt. Angel, Silverton, Canby, Molalla, Hubbard, Gervais, Aurora, Brooks, Barlow, Colton and Scotts Mills and portions of Salem, Keizer, Donald, and Wilsonville.

The Willamette River and the Molalla River basin is a very important commercial, municipal, cultural, recreational, ecological, and aesthetic asset. Working to preserve and maintain water quality will ensure prosperity, productivity, and quality of life for the entire Willamette basin region now and in the future.

Functional water resources are essential to protecting the future health and prosperity of the Willamette Valley. The Oregon Department of Environmental Quality (DEQ) has set water quality standards for the waterways in the region to protect beneficial uses such as drinking, fishing, swimming, fish spawning, and irrigation. Streams, lakes, and rivers that do not meet these standards are included in the statewide 303(d) list of impaired waterbodies.

TMDL Requirements and Pollutant Parameters

Section 2

2.1 TMDL Requirements

The Clean Water Act of 1977 "authorizes the U.S. Environmental Protection Agency (EPA) to 'restore and maintain the physical, chemical, and biological integrity of all waters of the nation'" (DEQ, 2004). In response to the Clean Water Act, the EPA designated state agencies to develop water quality standards, perform water quality monitoring to understand current conditions, determine sources of pollution, and develop TMDLs as a tool to improve water quality. As a component of the overall effort to protect and restore the beneficial uses of Oregon's waterbodies, the DEQ issued TMDLs for the entire Willamette Basin.

The TMDL process begins when a stream, lake, or river does not meet water quality standards and is classified as water quality-limited on the state's 303(d) list. A TMDL determines how much pollution can be added to a river without exceeding water quality standards. The TMDL identifies where pollution comes from and divides or "allocates" the load of the pollutant among different sources.

The pollutant load is split up between the different sources of pollution according to their contribution to the overall pollution load. Any difference between the waterway's loading capacity and the current pollutant load must be mitigated by pollution reduction activities. The DEQ develops waste load allocations for point sources such as wastewater treatment plants and industrial discharges. They also develop load allocations for non-point pollution from agricultural, urban, and forestry lands such as erosion, animal wastes, and stormwater.

The Oregon Administrative Rule (OAR 340-042-0080) that addresses TMDLs requires local governments and other agencies that have been determined to be Designated Management Agencies (DMA's) to develop and implement a Water Quality Management Plan (WQMP). The main elements are as follows:

A. Management strategies that will be used to achieve load allocations

B. A timeline and schedule to achieve measurable milestones

C. A plan for periodic review and revision of the implementation plan

D. Evidence of compliance with applicable statewide land use requirements

E. Any other analyses or information as specified in the WQMP

2.2 TMDL Parameters

Temperature, bacteria, and mercury are the three parameters that have been included in all of the Willamette Basin TMDLs. Although other parameters are included in subbasin TMDLs, these three pollutants are the major concerns throughout the entire Willamette Basin.

Following are brief summaries of these three TMDL parameters, but more in-depth information on these parameters and the processes used to develop the TMDLs can be found in Chapters 2, 3, and 4 of the *Willamette Basin TMDL* (DEQ, 2006). The summaries below include basic information about the characteristics of the parameter, the potential sources of each pollutant, waterways in the region not meeting water quality standards, and a brief list of potential strategies to address each parameter.

Table 1: TMDL Parameters for both the Willamette and Molalla Rivers

Water Body	Listed River Mile	Parameter	Season – Criteria	Assessment Year	Action
Molalla River	0 to 25	Fecal Coliform	Fall/Winter/Spring	1998	Delisted 2004, but still showing impairment TMDL Completed
Molalla River	0 to 25	Temperature	Summer	1998	Still showing impairment TMDL Completed
Willamette River	24.8 to 54.8	Fecal Coliform	Fall/Winter/Spring	2006	Listed 2006 TMDL Complete
Willamette River	24.8 to 54.8	Mercury	Year Around	2006	Listed 2006 TMDL Complete
Willamette River	24.8 to 54.8	Temperature	Summer	2006	Listed 2006 TMDL Complete

2.3 Temperature

The temperature problem in the Willamette Basin is that the water is too warm at certain times of year and poses a threat to cold water fish species such as salmon. This is known as thermal pollution. Removal or disturbance of streamside vegetation is the primary activity that negatively impacts stream temperature due to the loss of shade cover, but water temperature is also affected by erosion, loss of channel complexity, low stream flows, dams, and heated discharges from industrial or municipal operations.

The major sources of thermal pollution that the DEQ evaluated for the Willamette Basin temperature TMDLs are wastewater treatment facilities, dam and reservoir operations, and the loss of streamside vegetation. Point sources will continue to be regulated through the existing National Pollution Discharge Elimination System (NPDES) permit methods. Sewage treatment plants, as well as large industrial permitted discharges, will be allocated heat loads during the next renewal of their NPDES permits.

The focus of the non-point source temperature TMDL is to mitigate the removal or disturbance of streamside vegetation. The most effective way to minimize thermal pollution is by reducing the amount of solar radiation that reaches the water. This is accomplished by protecting and reestablishing vegetation along waterways to provide shade cover. Temperature benefits can also be realized through stream restoration projects including stream bank stabilization, increasing stream flows, decreasing channel width, and restoring channel complexity.

Temperature TMDLs have been developed for the Willamette subbasins and mainstem Willamette River. The DEQ used two different approaches in developing the temperature TMDLs. One TMDL focuses on the mainstem Willamette River and its major tributaries up to the first dam. Using the other approach, the DEQ developed TMDLs on a more localized scale for stream segments upriver from dams.

The maximum temperature increase in the waters of the state from all human activities can be no more than 0.3 degrees Celsius. This was designated by the State of Oregon in Oregon Administrative Rule 340-041-0028. In the TMDLs, this allowance is known as the Human Use Allowance and is split up between various sources of human-caused thermal pollution. Models indicate that restoring shade cover to natural levels could reduce temperatures in the mainstem Willamette River by 0.7 degrees Celsius (DEQ, 2006).

The amount allocated to each source of thermal pollution varies by location, but, generally, non-point sources are allowed to contribute no more than 0.05 degrees C, point sources can contribute up to .25 degrees C, and the TMDL allocates 0.0 degrees C to the U.S. Army Corps of Engineers Willamette Project reservoirs. The DEQ factors in .05 degrees as a reserve capacity that will be set aside now to accommodate future growth by meeting the increased demand for industrial and municipal wastewater discharges. On average, waterways in the Willamette Basin need to receive 23 percent less thermal input than is currently being received (DEQ, 2004).

The major implication of the temperature TMDLs is the protection and restoration of streamside vegetation. Examples of options to address thermal pollution include mechanisms such as:

- Develop materials that explain why landowners should preserve natural streamside vegetation
- Implement demonstration projects on public land to illustrate potential riparian management techniques
- Institute a riparian ordinance that prohibits the removal of native streamside vegetation
- Acquire critical streamside property
- Become involved in a water quality trading program
- Actively restore riparian areas on public land and help private property owners restore riparian areas on private land
- Conservation of water for public use

2.4 Bacteria

The City of Canby is located on River Mile 33 in the Middle Reach of the Willamette River and is impacted by the bacteria load entering into the mainstem via its tributaries and from other sources above RM 48. The effects of tributary loads in the middle reach of the Willamette River, while significant, are more subtle than in the upper reach. Flows from the Molalla/Pudding and Tualatin subbasins increase the average *E. coli* concentration in the mainstem slightly.

A possible source of bacteria in the middle reach is nonpoint source pollution being delivered to the Willamette River directly or through unmonitored tributaries. Nonpoint source pollutant loading comes from diffuse sources as opposed to point source pollutant loading which is discharged by individual facilities. Nonpoint fecal bacteria sources may include wildlife, livestock waste, failing residential septic systems, and residential and urban runoff. Based on analysis in the individual subbasin bacteria TMDLs, forested landscape does not cause or contribute significantly to water quality violations for bacteria. A major transition in land use occurs in the middle reach which corresponds to an increase in bacteria concentration between monitoring stations at RM 34 and 18 as defined in the Willamette Basin TMDL Chapter 2 (Figure 2.8 and 2.9).

The land that drains into the Willamette River directly or through unmonitored tributaries between RM 48 and 34 is dominated by agriculture (79%) with only a minor residential and urban component (6%). Between RM 34 and 18, though, the landscape is more varied with forestry (37%), agricultural (29%), and residential/ urban (26%). The residential and urban land use component includes Canby, Oregon City, West Linn, Lake Oswego, Gladstone, and Milwaukie as well as unincorporated parts of Clackamas County and the very southwestern portion of Portland. The increase in urbanization corresponds with the observed increase in *E. coli* concentrations in the Willamette River. Although the loading from urban runoff could not be quantified in this reach, other analyses in the Willamette Basin

have shown that it can be a significant source of bacteria pollution. Generalized reductions will apply to these sources.

The bacteria targets are generalized into percent reduction ranges that are applied in all the subbasins of the Willamette Basin. These planning targets have been allocated among the two major land uses that contribute bacteria to waterways; agricultural and urban. The Willamette Basin Bacteria TMDL states that urban areas must reduce their bacteria contributions by 80-94% to meet water quality standards.

Bacteria violations of water quality standards are most common in creeks and streams that drain urban and agricultural land. The mainstem Willamette River is water quality limited for bacteria during the high flows of the fall-winter-spring months, but is in compliance during summer low flows when there is the least amount of runoff. Above Willamette Falls, violations in the bacteria standards are usually single sample events that are related to high levels of precipitation and the resulting runoff.

The major sources of bacteria in the urban and rural residential areas are stormwater runoff, erosion, domestic and wild animal waste, failing septic systems, and municipal sewer overflows. Other sources of bacteria include livestock, irrigation runoff, and stream bank erosion.

Local jurisdictions can focus on urban issues to ensure that the quality of water does not degrade due to current land use, population growth, and land use changes.

Strategy options to address bacteria in the urban area include:

- Preventing erosion and controlling sediment from new construction
- Detaining and treating stormwater prior to discharge into waterways
- Keeping stormwater conveyance channels clear of organic matter
- Controlling animal waste
- Maintaining and restoring riparian buffers
- Encouraging better site design to decrease runoff
- Preventing non-stormwater and illegal discharges
- Developing stewardship and educational programs to prevent pollution
- Street sweeping

2.5 Mercury

Mercury is a very complex pollutant. The way it acts in nature and the different forms it takes make it difficult to understand and accurately monitor. With no regard to local, state, or even international boundaries, mercury can be transported in the air after soil disturbance, automobile emissions, and industrial emissions across many miles and deposited by rainfall.

Air deposition from emissions is one of many ways that mercury moves through the environment. Some point sources, including timber processing plants and mills, discharge low levels of mercury in their wastewater effluent.

Stormwater runoff suspends mercury molecules and carries them to waterways. Mercury is naturally occurring at low levels, but when native soil erodes at an accelerated rate those molecules are released in abnormal amounts. Mercury is also set in motion when sediment that has been deposited long ago is re-suspended due to high flows or a significant disturbance.

High mercury levels in the Willamette Basin have resulted in fish consumption advisories. To protect public health, especially that of pregnant women and young children, the Department of Human Services (DHS) has issued advisories recommending that people limit the amount of fish they consume from certain waterways. The DHS specifically advises against consuming large amounts of fish from the Willamette River, Coast Fork Willamette River, Dorena Reservoir, and Cottage Grove Reservoir due to the high levels of mercury.

Despite the uncertainty and complex nature of mercury, there are steps that can be taken to minimize the amount of mercury that is deposited in waterways and accumulated in the tissues of fish, wildlife, and humans. The goal of the mercury TMDL is "to reduce mercury levels in the basin to a point where fish are no longer unsafe to eat" (DEQ, 2006).

To begin addressing the mercury problem in the Willamette Basin, the DEQ has developed interim allocations for point sources and non-point sources while they conduct more in-depth research. Instead of specific allocations, the DEQ calculates the interim mercury TMDLs based on two categories: non-point and point sectors. The DEQ expects all non-point sources to begin implementing mercury reduction management strategies and policies. The TMDL will be revised in the future to be more specific according to the results of further research.

Implementation plans must include a mercury reduction strategy "that includes feasible measures to minimize mercury runoff" (DEQ, 2006). DMAs have an array of options to reduce mercury pollution. Many of the management strategies that address mercury pollution also address bacteria and temperature. Potential management strategies include:

- Working with dentist offices to properly dispose of mercury wastes
- Establishing a stormwater plan with water quality protection components
- Stormwater detention and treatment prior to discharge into waterways
- Establishing an erosion prevention and sediment control program
- Regular street sweeping and stormwater system maintenance
- Limiting land disturbance whenever possible

NON-POINT & POINT SOURCE DISCHARGES

Section 3

This section will discuss and delineate the differing surface water discharges to the two waterbodies located within the City of Canby's jurisdiction. The City of Canby is unique in comparison to the majority of DMA's required to submit a Water Quality Management plan in that the City of Canby has two subbasins bordering its Urban Growth Boundary (UGB). The Molalla River on the West side of town and the Willamette River on the North are both listed in the DEQ TMDL, and therefore must be addressed in this plan. This section will identify the Non-Point Discharge and the Point Source Discharge locations for both the Willamette and Molalla Rivers and give insight into their impacts on the receiving streams.

It is key to note that the total surface water discharge area is only 456 acres of the 2,700 acres within the City of Canby jurisdiction as noted in Figure 1. The remaining stormwater for the City of Canby is discharged through Underground Injection Control devices (UIC's), which will be regulated in accordance with the City of Canby WPCF permit. The City of Canby has currently applied for a WPCF permit for the UIC's with DEQ, and is awaiting guidance on the permitting process.

3.1 Molalla River (Point Source)

The City of Canby has five major contributory sources of discharge into the Molalla River. The first is the stormwater collections system coming from the Canby Downtown corridor, the second is the N. Baker Drive drainage area comprised of old and new subdivisions, the third is the Knights Bridge Road drainage area, which includes some drainage from residential, the fourth is the small Berg Parkway drainage which includes a small commercial area, and the final is the storm drainage system on 99E through the middle of Canby. The Point Source contributory drainage areas are identified in Figure 1 and a description is provided in the Legend at the top of the page.

All five of the contributory sources identified within the City as a point source are stormwater collections only. Therefore these sections of town are not required to be addressed as a source of temperature, because stormwater has been determined to not be a significant contributor of heat for surface waters.

The largest drainage system (Canby Downtown Commercial) and the smallest (N. Baker Drive) both feed into detention ponds prior to their discharge into the Molalla River. Detention ponds provide quiescent areas for settling of sediment prior to discharge and are established management strategies for controlling mercury and bacteria.

The Knights Bridge Road and Berg Parkway drainage areas, although small, do not have detention facilities. Potential mercury and bacteria contributions from these sources will be addressed through the implementation strategies as outlined in Section 5 and 6.

The final contributory source with the potential for increased contributions of heat, bacteria and mercury is the stormwater coming from South and North Highway 99E identified in Figure 1. The City will not address this contributory source due to the fact that it is a Highway which is maintained and operated by Clackamas County and ODOT. Clackamas County and ODOT are both listed as DMA's and it falls under their jurisdiction to incorporate this section of potential pollutant source to the Molalla and Willamette Rivers in their Water Quality Management plans.

3.2 Willamette River (Point Source)

The City of Canby has three major contributory sources of discharge into the Willamette River. The first is the City of Canby Wastewater Treatment Facility located at the north end of the City Limits, the second is the North Maple Street drainage area and the final contributory source of stormwater comes from the Willow Creek drainage area. Please refer to Figure 1, for a detailed location map.

- WASTEWATER TREATMENT FACILITY:

  Wastewater treatment facility pollutant discharges concerning temperature, bacteria and toxics are controlled and regulated under the City NPDES permit. The City of Canby Wastewater treatment facility has had no problems meeting the NPDES permit requirements or the temperature waste load allocations in the Willamette River.

  However, the City of Canby has been proactive in making sure that the City will continue to make these waste load allocations in the future. In 2008 the City wastewater treatment facility purchased 34 acres adjacent to the facility. The property is part of the Willamette Wayside properties and will serve in the future as a dual use property. The future development would include either irrigated crops regulated through a Recycled Water Use Plan, or detention and wet land cooling ponds for stormwater and treated effluent.

- N. MAPLE STREET DRAINAGE AREA:

  The N. Maple Street subdivision is the second major source of stormwater discharge from the City into the Willamette River system located in the Northwest section of town, identified in Figure 1 and shaded in light green. This source of discharge contribution is from an 18 acre residential development. Stormwater management plans are not required to address sources of temperature, because stormwater has been determined to not be a significant contributor of heat to surface waters. Bacteria, mercury and toxic pollutants will be managed through the implementation strategies as outlined in Sections 5 and 6.

- WILLOW CREEK:

The final source of discharge to the Willamette River is via the Willow Creek drainage area. Willow Creek is a very short creek of less than two miles that runs south to north from 99E to the Willamette River. The creek does run year round and is fed by a pond on the south of 99E with some springs feeding the system on a year round basis. The Willow Creek subdivision and the Redwood Street drainage area encompasses approximately 126 acres and discharges stormwater into Willow Creek during the rainy season. Figure 1, identifies both areas and are highlighted in orange.

The City of Canby realized the importance of this small creek and has now purchased property on both sides of Willow Creek from Territorial Road to the Willamette River. As part of the Willamette Wayside Properties Master Plan this area, through the development of the Plan, will include the restoration of Willow Creek, future stormwater treatment facilities and the enhancement of the riparian corridor. The Willamette Wayside Master Plan is consistent with and part of the Implementation Strategies as outlined in Section 5 and 6. These two areas contribute only stormwater and therefore are not required to be addressed as a source of temperature, because stormwater has been determined to not be a significant contributor of heat for surface waters.

3.3 Molalla and Willamette River (Non Point Source)

The focus of the non-point source temperature TMDL is to mitigate the removal or disturbance of streamside vegetation. The most effective way to minimize thermal pollution is by reducing the amount of solar radiation that reaches the water. This is accomplished by protecting and reestablishing vegetation along waterways to provide shade cover. Temperature benefits can also be realized through stream restoration projects including stream bank stabilization, increasing stream flows, decreasing channel width, and restoring channel complexity.

Water Quality Efforts and Gaps Analysis

Section 4

The importance of maintaining the beneficial uses of the Willamette subbasin and its tributaries are crucial to the public health, economy and to future generations of Oregonians. This section will describe in detail the Water Quality Efforts the City of Canby is currently implementing and outline through a Gaps Analysis those areas in which the City plans to address in order to protect the receiving streams and prevent further water quality degradation within the City's jurisdiction.

In order to perform a Gaps analysis the City had to coordinate several departments such as Planning, Engineering, Wastewater, Pretreatment, Public Works, Parks and Stormwater. The underlying goal was to better understand what efforts differing departments are undertaking currently and assess potential deficiencies to meet the City's future goals, regulatory requirements and planning objectives.

Through this comprehensive analysis of our water quality related assets and gaps analysis the City will be able to better develop, utilize, prioritize and identify water quality related programs and capital improvement needs for our community. The actions identified in this Water Quality Management Plan will be implemented and tracked to insure the City is meeting its regulatory requirements, future goals and planning objectives.

4.1 City of Canby Water Quality Efforts

There are currently many water quality efforts underway in Canby. Canby's Development Code includes erosion control standards, stormwater standards for new development, and an animal waste pick up Ordinance. In conjunction with these standards the City of Canby Industrial Pretreatment program has implemented a mercury reduction program that includes working with dental businesses to comply with the amalgam separator laws directed by Oregon House Bill 3611. Most recently the City has developed a grease management program that inspects restaurants and businesses for proper disposal of Fats, Oils and Grease (FOG) inside and outside the food establishment. The following is a list of activities implemented by the City of Canby in an effort to reduce bacteria, temperature and toxic pollutants from entering the waterways within the City's jurisdiction:

- PET WASTE-OFFENSIVE LITTERING:

  The City of Canby Municipal Code Chapter 6 Section 6.08.045 defines any animal which defecates on another property or public parks without proper disposal of said waste commits the offense of permitting offensive littering by an animal. If convicted of this violation under this Ordinance, the person shall be punished by a fine not to exceed $500.00

  In an effort to reduce pet waste and further define public park rules in 1994 the City established Ordinance No. 914, adopting by reference the State of Oregon Park Statutes Chapter 390.005-390.124 and Administrative Rules Chapter 736, Division 10 and 15. The City of Canby also has placed Pet-Waste Pick up stations in each and every park within the City of Canby.

- EROSION CONTROL:

  In January of 2003 the City of Canby passed Ordinance No. 1108 and incorporated the Erosion Control Ordinance into the City Municipal Code Chapter 15.20. This chapter provides requirements for development and construction related activities in order to control the creation of sediment and to prevent the occurrence of erosion at the source during construction and development. The erosion and sediment control regulations seek to reduce the amount of sediment and pollutants such as mercury from entering storm drainage systems and surface waters from all ground disturbing activities.

  In addition to the erosion control efforts, the City of Canby has an aggressive Street Sweeping Program that attempts to sweep all quadrants of the City on a weekly basis.

- MERCURY AND TOXICS REDUCTION:

  The City of Canby has an active Industrial Pretreatment Program with several established management plans such as a Mercury Reduction and a Grease Management plan. The mercury management plan is based around surveying and working with dentists to make sure that their business utilizes amalgam separators, maintains and operates the separators correctly and disposes of mercury, silver and lead based debris in a proper manner.

  The grease management plan provides restaurants with Best Management Practices (BMP's) informational flyers, inspects that the grease traps or interceptors are cleaned and maintained properly and makes sure grease wastes are not migrating off site and into stormwater devices.

  In addition to developed plans to manage pollutants, the City's industrial pretreatment staff routinely distributes BMP informational flyers to varying industrial and commercial businesses in an effort to reduce toxics in the environment. Informational flyers include dental offices, automotive shops, print shops, photo developers, and restaurant BMP flyers.

- ILLEGAL DISCHARGE:

  In an effort to reduce illegal discharge of pollutants into the City stormwater collections system, the City has implemented a program of marking the collection system catch basin with informational markers. The initial efforts worked with voluntary groups from within the community to apply the markers at every catch basin in the downtown corridor. Currently the City Public Works staff has taken on the responsibility of providing and installing the environmental sensitive markers.

- STORMWATER MANAGEMENT AND PLANNING:

  The City of Canby currently utilizes the Storm Drainage Master Plan developed in 1994 for the Capital Improvement Plan. The plan is outdated and new strategies will need to be addressed to regulate stormwater drainage within the City's jurisdiction. Please refer to Implementation Strategies in the following section.

  A key component of Stormwater Management relates to the City Planning for new development within the City of Canby. Although not incorporated by Ordinance, the City Planning Department currently utilizes, incorporates and encourages developers to use many of the Site and Design standards from the DEQ January 2003 (Biofilters Guidance Document). This document establishes design parameters for the construction of Bioswales, Vegetative Buffers, and Constructed Wetlands.

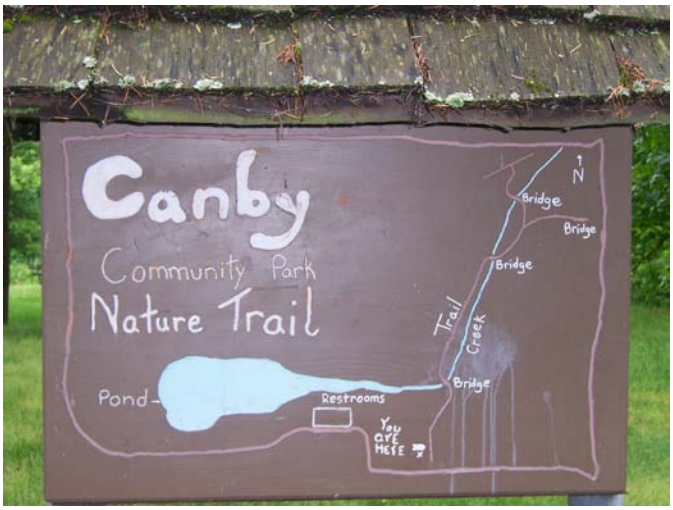
  The City Planning and the City Urban Renewal have also been proactive in encouraging developers to utilize, whenever possible, pervious pavement, infiltration pavers and pervious concrete into many parking lots and new development. These efforts have been instrumental in reducing the amount of surface runoff entering into the UIC's and waterways within the City limits.

- RIPARIAN PROTECTION AND RESTORATION:

  The City of Canby Planning and Parks Department have been instrumental in the City's efforts to create green space for parks, community education, restoration of wildlife habitat and protection of sensitive riparian areas within the city's urban growth boundary. Two major projects include the Canby Community Park Habitat Restoration Project and the Canby Wayside Plan.

  A. Canby Community Park Habitat Restoration Project

  This project encompasses the park land located along the Molalla River. The park has a small wetlands area that was filled with trash and overgrown with brush. With the efforts of over 600 volunteers from Cub Scouts, Boy Scouts, Churches, Canby School District, Molalla River Keepers, City Staff and community businesses the area has been restored to a productive wetlands.



This habitat restoration area is now an educational resource for the School District and community providing science classes, interpretive signs, native plant nursery, continued wetlands restoration projects and water quality monitoring.

B. Willamette Wayside Properties Master Plan

A central component of the Willamette Wayside Master Plan is a conceptual design for the future use and development of the Willamette Wayside properties. The conceptual design presented is consistent with the framework provided by the guiding principles and serves to guide the development and restoration of the Willamette Wayside properties over the next 20-years. The plan describes all of the improvements proposed for the properties and generally depicts where each will be located. In short, the Conceptual Plan establishes a graphical and narrative road map of future use and development on the Willamette Wayside properties. Please refer to Figure 2 for a graphical representation of the Willamette Wayside Conceptual Design.

In 2001-2002 the City of Canby acquired two properties, the Log Boom and Fish Eddy properties, and in 2009 the City acquired the 34 acre Sisters property. These properties are collectively referred to as the Willamette Wayside properties. The City acquired the Willamette Wayside properties to provide additional park and open space amenities for Canby residents. Together, these properties total approximately 135 acres and extend 5,000 feet along the south shore of the Willamette River, north of the city-limits and Urban Growth Boundary (UGB).

Establishing a planning framework is an essential step in the master planning process. That framework is contained in seven “guiding principles” articulated by the plan. The guiding principles are intended to recognize the unique features and opportunities presented by the Willamette Wayside properties and to create a balance between development and preservation of open space and natural features. In short, the guiding principles establish both a vision for future development (which is manifest in the Master Plan) as well as a framework for development and use. The guiding principles include:

1. Respect natural features
2. Strengthen connectivity
3. Enhance and control access
4. Create a safe place to recreate
5. Foster educational opportunities
6. Develop recreational opportunities
7. Secure funding sources

The acquisition of sensitive properties connected to the Willamette River along the Urban Growth Boundary (UGB) and the guiding principles of respect for natural features and to foster educational opportunities are further examples of the City’s water quality efforts to date as reflected in Principles one and five:

Principle 1: Respect natural features

The main focus of this principle is maintaining the ecological integrity of significant natural areas while restoring and enhancing areas that lack such integrity. Participants during the three community workshops indicated that the top priority for the future use of the property should be respecting the existing natural features on the Willamette Wayside properties.

The maintenance and enhancement of natural areas can be accomplished by the removing invasive species, planting additional native species, and creating low-impact recreation opportunities while restoring terrestrial and aquatic habitat areas within the property. Structures and recreational amenities should be constructed in locations that do not diminish or impair the significant natural features of the property. Significant natural areas include: Willow Creek wetland, Willow Creek, Willamette River Riparian Habitat, Oak Woodlands, and other native vegetative communities of highest ecological value.

During the community workshops, participants made specific suggestions about respecting natural features on the site:

- Maintain and restore the Willow Creek wetland and riparian areas;
- Remove invasive species and encourage the growth of native species;
- Allow only passive (low-impact) recreation – only emergency, city park, and Willamette Country Club maintenance vehicles should be allowed access to the property;
- Ensure that recreational uses do not interfere with natural qualities and wildlife habitat;
- Remove the culverts on the property from Willow Creek to improve the connection to the Willamette River.

Principle 5: Foster educational opportunities

The historical use of the Willamette Wayside properties by the logging industry and the variety of significant natural areas present a unique educational opportunity for Canby residents. The participants in the workshops stated that this education should be incorporated into the design of the properties. Interpretive signs will be located in appropriate locations so the community can learn about natural flora and fauna as well as the historical roots of the area. The interpretive signage and the historical and natural amenities will be especially valuable for Canby students and youth. The properties will be useful as an educational resource and field trips and day camps should be encouraged.

During the series of community workshops, participants made the following suggestions:

- Provide signs which interpret to the property's history: placards should be used to talk specifically about the log boom and skidder ramp;
- Locate an informational sign near the parking areas or at the beginning of the old logging road.
- Place interpretive signs next to habitat areas to identify specific species and habitat types.
- Encourage the use of the property for outdoor education for students (i.e. test water quality, discuss wetland functions, etc) and youth.

Many of the guiding principles established in the Willamette Wayside Master Plan are instrumental in the ability of achieving the Water Quality Management Goals for Non-Point Source pollution reductions related to activities within the City's jurisdiction. For further information, PDF download or a copy of the City of Canby Willamette Wayside Properties Master Plan, please contact the City of Canby Planning Department at 503-266-7001.

- CONSERVATION OF PUBLIC WATER USE:

  The City of Canby has an intergovernmental agreement with Canby Utility Board for the operation and management of the City drinking water collections system and water treatment plant. The Canby Utility Board is an independent subdivision of the City of Canby, appointed by the mayor and confirmed by the council.

  The majority of the municipal water supply for the City of Canby is pumped from the Molalla River and conservation strategies to reduce withdrawal rates during the summer months will have a beneficial impact to the temperature reduction strategies on the Molalla River subbasin.

  Canby Utility actively promotes water conservation through public outreach and education programs, system metering, leak detection programs, conservation-based rates/fees and other programs. Canby Utility's efforts to achieve water conservation and more efficient use of the region's water resources are developed around a new rate structure that encourages conservation. The water use reduction strategy is based on a three-tier rate structure as an incentive to reduce water use during the peak summer months. The new rate structure was adopted in March of 2010, effective as of June 1, 2010.

  Canby Utility's conservation rate would apply to the largest volume customer classes which all experience summer peaks: Residential, Commercial, and Multi-Family. The three-tiered block rate would charge the existing rate for the first volume block, an additional 25% for the second block, and an additional (total) 75% for the third block.

  With the newly adopted rate structure, Canby utility is also expanding conservation education programs for its customers. In addition to the new rate structure, Canby Utility has recently submitted a Water Management and Conservation Plan to comply with Oregon Administrative Rules (OAR) for Public Water Systems, Chapter 690, Division 86 and applicable elements of Division 315. The plan is awaiting approval from the Oregon Water Resources Department.

  The following is Canby Utilities benchmarks for conservation measures as outlined in their Water Management and Conservation Plan submitted June 28, 2010:

CANBY UTILITIES

Summary of Benchmarks for Water Conservation Measures

Component	Benchmark
Annual Water Audit	If the level of unaccounted for water exceeds 10 percent, a more detailed record-keeping program and analysis would be appropriate and will be considered.
Metering	The system is fully metered.
Meter testing and maintenance	The current meter testing and maintenance program will resume upon completion of the AMR program.
Rate structure	Canby Utility will implement the adopted tiered-rate structure and collect and analyze water use data to assess the price elasticity and effectiveness for the conservation measures.
Leak detection	Canby Utility will continue routine leak detection surveys.
Public Education	Finish development of an educational presentation for local school children with a focus on understanding drinking water and the role of conservation. Conduct educational visits one to two times per year. Include educational and informative fliers to be included in monthly billing statements. Fliers to be included two to four times per year.
System-wide leak repair	Canby Utility will continue to budget $300,000 toward replacement of aging water mains.
Technical and financial assistance	Canby Utility will continue to promote the previously described technical and financial programs as feasible.
Customer Service	Canby Utility provides access to educational and informational materials to assist customers in water use reduction in support of the new tiered water rate structure.

4.2 Gaps Analysis

In performing the Gaps Analysis the City evaluated the current water quality efforts being undertaken in existing programs throughout the City and compared them to the reduction strategies from the Willamette and Molalla TMDLs. In addition to the internal comparison of existing programs, the City reviewed examples from other municipalities in the region to identify and evaluate additional water quality gaps for this analysis. As a result, the City will be able to improve on our current water quality efforts and focus on the water quality gaps in a more unified and cohesive approach.

During the gaps analysis it became apparent that the City will need to focus on the development of critical documents such as the Stormwater Management and Stormwater Master plan. The importance of these documents is to guide the City in the decision process with a strategic plan that encompasses planning, funding, capital improvements, operations and maintenance of the stormwater drainage system within the City's jurisdiction. These efforts will be assigned a high priority in our implementation strategies and timeline schedule.

Secondly, the City will need to maintain or enhance our current water quality efforts such as protecting and restoring streamside vegetation, public education and to strengthen or mechanism for erosion control. The remaining efforts will be assigned a medium priority in our implementation strategy and schedule.

The level of priority designation assigned to each pollution reduction strategy was determined by comparing the City's current efforts to the gaps analysis. The City then evaluated which water quality gaps where the most critical to the ability of the City to comply with DEQ regulatory requirements concerning stormwater and to meet the reduction goals in the Willamette and Molalla TMDL's. The reduction focus areas prioritized in Table 2 correlate to the Implementation Strategies outlined in Section 5 and to the Implementation Matrix in Section 6.

Table 2: Pollutant Reduction Focus Areas for the City of Canby

Strategy Category	Priority Rating
Stormwater Management and Planning	High
Riparian Protection and Restoration	Medium/High
Education/ Training	Medium/High
Erosion Control	Medium
Illegal Discharge	Medium
Animal Waste Management	Medium
Mercury and Toxic Reduction	Medium

Implementation Strategies

Section 5

The City of Canby compared the results of the gaps analysis with our current water quality efforts to derive at potential activities to minimize the pollutants of concern addressed in the Willamette and Molalla river TMDL's. The following is a list of Implementation Strategies and activities the City will utilize to reduce contributions of heat, bacteria, mercury and toxics to surface waters within the City's jurisdiction:

5.1 Stormwater Planning and Management

Stormwater planning and management is a primary focus of the City's TMDL efforts. The City recognized that coordinated efforts between all departments within the City are needed to manage stormwater and attempt to reduce pollutants that are addressed in the Willamette Basin TMDL.

In an effort to address the current TMDL's for the Willamette and Molalla River the City will need to update the 1994 Stormwater Master Plan and complete the Stormwater Management plan. These two documents are necessary in order to guide the City in future capital improvements for stormwater and provide the City with a strategic plan to maintain and operate the stormwater drainage system.

Key elements that need to be updated in the Stormwater Master Plan are as follows:

- Existing Stormwater System Assessment and Improvements
- Design Considerations
- Regulatory Requirements Pertaining to Stormwater Runoff
- Capital Improvement Planning and Phasing Timetables

Key topical sections that will be included in the Stormwater/UIC Management Plan:

- Establishing a Stormwater Planning Committee
- Regulatory Requirements
- Stormwater Management Policy & Implementation Actions
- Public Education, Outreach and Participation
- Illicit Discharge Detection and Elimination
- Erosion Prevention and Sediment Control
- UIC Decommissioning Plan

In addition to the documents described above the City Planning Department and Publics Works are working on updating the Public Works Design standards for the City of Canby. The new Public Works design standards will incorporate a section on Low Impact Development (LID) along with the minimum design standards for stormwater runoff. The LID standards refer to Clean Water Services Low Impact Development Approaches (LIDA). The options identified within the LID standards are Porous Pavement, Green Roofs Infiltration Planters/Rain Gardens, Flow through Planters, Swales, Vegetated Filter Strips and Vegetated Swales.

Because the City cannot require developers to incorporate LID standards into their design, the City is proposing an incentive program to encourage the use of LID approaches. To encourage the use of LID practices in subdivision development and building design, the voluntary incentive program will use System Development Charges (SDC) credits, permit fee reductions, or design review credits.

The Public Works Design standard updates and LID incentive program are scheduled to be adopted by Council in the fall of 2010. The objective of the incentive program and LID standards will be to focus on practices that minimize stormwater runoff to receiving streams within the City of Canby's jurisdiction. The focus of the design standards will be to meet the following goals:

1. Protect and enhance water quality;
2. Meet State and Federal water quality standards;
3. Prevent property damage during floods and storms;
4. Reduce pollution and runoff;
5. Protect native plant species, and fish and wildlife habitats;
6. Conserve scenic and recreational values of open areas, including stream enhancement.

In order to quantify the effectiveness of the incentive program and LID standards the City of Canby will need to assess the current amount of LID within the City and track all future LID development. The assessment and tracking of LID within the City will be used to establish a baseline percentage of LID within the City, establish reasonable goals for LID and to modify the incentive program when needed.

5.2 Riparian Protection and Restoration

Prior to the TMDL process the City of Canby was proactive and realized the importance of protecting and restoring sensitive riparian areas and natural wildlife habitats. The City has invested considerable staff time and resources into a strategic concept as outlined in the Canby Wayside Plan and Community Park Habitat Restoration project. These projects have been instrumental in the City's efforts to create green space for parks, community education, restoration of wildlife habitat and protection of sensitive riparian areas within the city's urban growth boundary.

The activity and implementation strategy for this section will focus on continued funding and grant opportunities to move forward with the project lists developed for the Willamette Wayside property and Community Park Habitat Restoration.

The second implementation activity will be the review and possible update of the City of Canby Municipal Code Section 16.37 (Riparian Overlay Zone Map). The purpose of the Riparian Overlay Zone is intended to be used in conjunction with any of the city's underlying base zones to assure that the future development of the site will provide ample protection for riparian areas, thereby protecting and restoring the hydrologic, ecological and land conservation functions these areas provide.

5.3 Education/Training

In order to preserve, restore, and protect sensitive riparian areas and water quality within our jurisdiction, the City has undertaken several educational outreach programs throughout our community. As described in our water quality efforts section, the City currently works with several organizations including churches, community businesses, the school district and environmental groups in an effort to promote education and outreach strategies.

In addition, the City Industrial Pretreatment program has been handing out informational flyers to commercial businesses that have the potential to impact water quality on a yearly basis.

The City will continue to use existing outlets to distribute water quality information to targeted audiences and build on our existing partnerships with community organizations. These outlets include the City's website, the planning counter, Industrial Pretreatment literature and City employee training sessions.

5.4 Erosion Control

The implementation activities for erosion control will be to maintain current water quality efforts and focus on strengthening and enforcing the City of Canby 2003 Erosion Control Ordinance No. 1108. In the 2010-2011 budget for Public Works the City has dedicated a .20 FTE position towards erosion inspection and enforcement of the City Ordinance 1108.

Secondly, the City is planning on updating Ordinance 1108 and possibly incorporating the 2008 Erosion Prevention and Sediment Control Planning and Design manual developed by Water Environment Services (WES). This document was constructed in partnership with a large number of Cities in the Metro area, and is a very comprehensive and detailed manual on erosion control.

5.5 Illegal Discharge

To address illegal discharges of wastes the City of Canby will seek to partner with Clackamas County or the State of Oregon to hold a hazardous waste pick up event in the City of Canby at a minimum of every five years. These events will incorporate the use of educational materials on proper hazardous waste disposal and encourage voluntary reporting of hazardous waste violations.

5.6 Animal Waste Management

The City Parks Department has been very active in its efforts to control animal waste within the City of Canby park system as described in the water quality efforts section. Canby therefore will strive to maintain our current efforts and encourage compliance of our waste pick-up ordinance by attempting better enforcement of the rules.

5.7 Mercury and Toxics Reduction

Because Mercury and Toxics reduction encompass many of the implementation activities outlined above, the City's overall goal will be to bolster the activities listed. These activities include establishing the development and implementation of a stormwater management plan, working with dentists to dispose of mercury, establishing sound erosion control standards, regular street sweeping, limiting land disturbance, community hazardous waste pick-up events, and whenever possible to provide for stormwater detention and treatment prior to disposal.

5.8 Water Conservation

Due to the independent operations of the water treatment system and the fact that Canby Utility is in the process of implementing a Water Conservation and Management Plan, the City is proposing no implementation strategies for this section.

Implementation Matrix

Section

6

The following matrix details the strategies that will be implemented within the next five years. Some of these strategies will be pursued only if funding allows. The matrix displays the pollutant being addressed, the strategy to address it, when that strategy will be implemented, and how to measure progress and successful implementation. This matrix will also serve as a tracking tool for annual reporting to the DEQ.

POLLUTANT: *BACTERIA*							
				City of Canby: TMDL Implementation Tracking Matrix			
SOURCE *What sources of this pollutant are under your jurisdiction?*	**STRATEGY** *What is being done, or what will you do, to reduce and/or control pollution from this source?*	**HOW** *Specifically, how will this be done?*	**FISCAL ANALYSIS** *What is the expected resource need? Are there existing resources budgeted? If not, where will the resources come from?*	**MEASURE** *How will you quantitatively or qualitatively demonstrate successful implementation or completion of this strategy?*	**TIMELINE** *When do you expect it to be completed?*	**MILESTONE** *What intermediate goals do you expect to achieve, and by when, to know progress is being made?*	**STATUS** *Include summary and date.*
1. Pet and Animal Waste	Reduce the amount of pet waste that is not properly disposed of	Install pet waste stations and educational signs when needed	Parks Department funded and mechanism in place	Check bag supply weekly	Ongoing, evaluate effectiveness through usage		
		Improve enforcement of existing pet waste pick-up ordinance		Review Ordinance with Parks Staff and Code Enforcement	July 1, 2011	Track number of Warnings or Fines on a yearly basis	
2. Erosion Control	Decrease sedimentation and erosion from new construction	Enforce current Ordinance	Funding in 2010-2011 PW Budget	.20 FTE dedicated for inspection and enforcement of Ordinance	July 1, 2010	Better Service and Enforcement	
		Include stormwater design criteria for new development	Funding Available through Planning Department Budget	Draft Stormwater Design Standards and adopt into City Code	Code adoption before July 1, 2012	Code adopted and developers comply with City Code	
		Update current Erosion Control Ordinance	Funding Available through PW Budget	Utilize WES Erosion Control Plan and adopt Ordinance	Ordinance adoption before July 1, 2012	Ordinance adopted and enforce provisions of Municipal Code	
3. Stormwater Discharge	Update Stormwater Master Plan and Complete Stormwater Management Plan	Update Stormwater Master Plan	Funding through Grants or SDCs	Hire Consulting Firm to Create Master Plan	Completion of Master Plan by July 1, 2014	Funding and RFP in Place by July 1, 2013	
		Complete Stormwater Management Plan	Funding through Storm/Sewer Budget	Hire Consulting Firm or Complete Management Plan In-House	Completion of Management Plan as required in WPCF Permit	Draft Plan to DEQ by July 1, 2012	

POLLUTANT: *BACTERIA (Continued)*							
				City of Canby: TMDL Implementation Tracking Matrix			
SOURCE *What sources of this pollutant are under your jurisdiction?*	**STRATEGY** *What is being done, or what will you do, to reduce and/or control pollution from this source?*	**HOW** *Specifically, how will this be done?*	**FISCAL ANALYSIS** *What is the expected resource need? Are there existing resources budgeted? If not, where will the resources come from?*	**MEASURE** *How will you quantitatively or qualitatively demonstrate successful implementation or completion of this strategy?*	**TIMELINE** *When do you expect it to be completed?*	**MILESTONE** *What intermediate goals do you expect to achieve, and by when, to know progress is being made?*	**STATUS** *Include summary and date.*
Stormwater Discharge (continued)	Maintain Current Stormwater Maintenance Activities	Street Sweeping Program	Public Works Department funded and mechanism in place	Establish a monthly program for street sweeping entire City	July 2011	Better service and fewer complaints	
		Catch Basin Cleaning		Try to achieve 25% of the catch basins cleaned per year	July 1, 2011	Fewer call outs due to street flooding and yearly tracking of catch basin cleaning July 1, 2011	
		Catch Basin Marker Program		Try to install 25 new environmental sensitive buttons per year	City wide buttons in place by July 1, 2015	Track number of buttons installed per year	
	Implement a City Stormwater Committee	City Administrator appoints staff	Funded through City budget	Committee meets on a monthly basis	December 2010	Committee meets and assigns goals and tasks by July 1, 2011	
	Incorporate LID and incentive program into Public Works Design standards	Public Works design standards adopted by Ordinance	Public Works and Planning department budget	Establish a baseline of current LID in City and track development to establish goals and success of program	July 1, 2011	Create an incentive program to encourage developers to utilize LID standards by July 1, 2011	
4. Wastewater Treatment Plant	Maintain low effluent bacteria levels	Maintain Compliance with NPDES Permit	Funding in Sewer Budget	Continual Monitoring through the NPDES permit and DMR reporting	In progress and on-going	N/A	

POLLUTANT: *TEMPERATURE*

City of Canby: TMDL Implementation Tracking Matrix

SOURCE *What sources of this pollutant are under your jurisdiction?*	**STRATEGY** *What is being done, or what will you do, to reduce and/or control pollution from this source?*	**HOW** *Specifically, how will this be done?*	**FISCAL ANALYSIS** *What is the expected resource need? Are there existing resources budgeted? If not, where will the resources come from?*	**MEASURE** *How will you quantitatively or qualitatively demonstrate successful implementation or completion of this strategy?*	**TIMELINE** *When do you expect it to be completed?*	**MILESTONE** *What intermediate goals do you expect to achieve, and by when, to know progress is being made?*	**STATUS** *Include summary and date.*
1. Solar Radiation Input	Protect and Enhance Existing Riparian Vegetation	Review and update of City Code 16.37 (1994 Riparian Overlay Zone Map)	Funding Available through City Planning Department or Storm/Sewer Budget	Riparian setbacks clearly marked on map and available at planning counter	July 1, 2012	Review of current Riparian Overlay Map before July 1, of 2011	
	Continue to Implement the Willamette Wayside Properties Master Plan	Restoration of Willow Creek, and Enhance Riparian Corridor	The funding strategies include donations, grants, partnerships, land trusts, volunteers and City SDCs. Projects are moved forward as funding becomes available.	As projects are completed they will be included in the yearly WQMP report. New projects will be added to the list as the Willamette Wayside Master Plan moves forward.	In progress and on-going. Estimated completion date 2025 depending on funding and volunteers.	City to work on Grant funding for projects. Secure Grant by 2013	
		Interpretive Signs to Educate Visitors of the Ecological and Cultural History					
		Restoration of Fish Eddy site to Wet Prairie					
		Restoration of Native Woodlands and Protection of Native species					
	Molalla River Community Park Habitat Restoration	City staff works with Schools and Community Organizations to Restore Wetlands Habitat	Funding is available through PW and Planning Departments	Schools and Organizations have classes and projects for native plant restoration and wetlands rehabilitation	On-going	Community Park Pond Rehabilitation July of 2012	
2. Wastewater Treatment Plant Discharge	Summer Effluent Temperature	Maintain Compliance with NPDES Permit	Funding available through Sewer Budget	Monthly DMR Report	On-going	Monitor Effluent Discharge During Summer Months	

POLLUTANT: *MERCURY AND TOXIC POLLUTANTS*							
				City of Canby: TMDL Implementation Tracking Matrix			
SOURCE *What sources of this pollutant are under your jurisdiction?*	**STRATEGY** *What is being done, or what will you do, to reduce and/or control pollution from this source?*	**HOW** *Specifically, how will this be done?*	**FISCAL ANALYSIS** *What is the expected resource need? Are there existing resources budgeted? If not, where will the resources come from?*	**MEASURE** *How will you quantitatively or qualitatively demonstrate successful implementation or completion of this strategy?*	**TIMELINE** *When do you expect it to be completed?*	**MILESTONE** *What intermediate goals do you expect to achieve, and by when, to know progress is being made?*	**STATUS** *Include summary and date.*
1. Toxic Pollutants	Reduce the amount of hazardous waste that is not properly disposed of	Hold at least one community hazardous waste pick-up event every five years	Sewer/Industrial Pretreatment Budget	Record amount and types of hazardous waste received at pick-up event	At a minimum of every five years. Prior to July 1, 2015	Initiate contact with State or Clackamas County to organize event by July 1, 2012	
2. Erosion Control	Decrease sedimentation and erosion from new construction	Enforce current Ordinance	Funding in 2010-2011 PW Budget	.20 FTE dedicated for inspection and enforcement of Ordinance	July 1, 2010	Better Service and Enforcement	
		Include stormwater design criteria for new development	Funding Available through Planning Department Budget	Draft Stormwater Design Standards and adopt into City Code	Code adoption before July 1, 2012	Code adopted and developers comply with City Code	
		Update current Erosion Control Ordinance	Funding Available through PW Budget	Utilize WES Erosion Control Plan and adopt Ordinance	Ordinance adoption before July 1, 2012	Ordinance adopted and enforce provisions of Municipal Code	
3. Stormwater Discharge	Update Stormwater Master Plan and Complete Stormwater Management Plan	Update Stormwater Master Plan and Stormwater Management plan	Funding through Grants, SDCs or Storm/Sewer budget	Hire Consulting Firm to Create Master Plan or Complete Management Plan In-House	Completion of Master Plan by July 1, 2014. Completion of Management Plan as required in WPCF.	Funding and RFP in Place for Master Plan by July 1, 2013. Draft Management Plan to DEQ by July 1, 2012	
4. Industrial Pretreatment Activities	Maintain Current Pretreatment Activities focused on Toxics Reduction	Provide BMP flyers, Grease and Dental Management Plans	Sewer/Industrial Pretreatment Budget	Dentist in Compliance with SB 3611, Percent Reduction in Grease at WWTP, and Compliance with SB 737	In Compliance by July 1, 2011	Complete Sampling for SB 737 and update Dental Survey by July 1, 2011	

Monitoring, Reporting and Compliance with State Land Use Goals

Section 7

7.1 Monitoring and Reporting

The City of Canby recognizes the importance of establishing an adaptive management process in which to monitor, review and revise the plan when necessary. City staff will annually provide DEQ with an update of the Implementation Strategies Matrix, and a summary report of the status of the activities listed on the matrix. The City of Canby recognizes that progress towards lowering pollutant loads will be best measured by tracking accomplishments towards implementing the strategies identified in this TMDL Implementation Plan.

Through an adaptive management approach the City of Canby will review, evaluate and revise the TMDL Implementation Plan in its entirety every five (5) years, following approval of the final version of the Plan. Revisions, additions, or restructuring of the Plan will be coordinated with DEQ during the evaluation process.

At the request of the DEQ or the City of Canby, both parties will meet to discuss the progress of the implementation plan and any possible changes needed to better address the pollution reduction goals for the Molalla and Willamette subbasins. The City, in collaboration with DEQ, will conduct an evaluation of the success of the Plan including an assessment of progress made by the City, a review of existing water quality data, and other information to assess the effectiveness of the Plan relative to the pollution reduction goals. The evaluation findings will be reflected in the revised City of Canby TMDL Implementation Plan.

7.2 Compliance with State Land Use Goals

All of the strategies and activities listed in this Plan and Implementation Matrix are consistent with the 2007 City of Canby Comprehensive Plan and State Land Use Goals. In order to determine if the City of Canby was in compliance with State Land Use Goals, staff compared the City Comprehensive Plan and City Municipal Codes to this TMDL Implementation Plan.

During the review process it was determined that the TMDL Implementation Plan did not either apply too or impact State Land Use Goals 3, 4, 8, 9, 10, 12, 13, 14, 16, 17, 18 and Goal 19. The following State Land Use Goals apply or are impacted by the TMDL Implementation Plan:

Goal 1: Citizen Involvement: To develop a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process.

The citizens of the City of Canby are given the opportunity to review and comment on the TMDL Implementation Plan, Public Works design standards and the City Comprehensive Plan during the Public Comment period when City Ordinances are adopted through Council.

Goal 2: Land Use Planning: To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.

The City of Canby TMDL Implementation Plan is consistent with the City of Canby Comprehensive Plan which sets the policy framework for land use strategies for the City.

Goal 5: Open Spaces, Scenic and Historic Areas, and Natural Resources: To protect natural resources and conserve scenic and historic areas and open spaces.

Policy No. 6-R, 7-R, 8-R and 9-R of the City of Canby Comprehensive Plan incorporates policies into the City Municipal Code that preserve, encourage restoration, and protect open spaces, historic areas and natural resources during land use decisions. The TMDL Implementation Plan is consistent with this Goal as described in Section 5.2 which refers to the Riparian Overlay Zone, the Canby Wayside Plan and the Community Park Habitat Restoration project.

Goal 6: Air, Water and Land Resources Quality: To maintain and improve the quality of the air, water, and land resources of the state.

The TMDL Implementation Plan is consistent with the City Comprehensive Plan and Goal 6, because the plan includes implementation strategies to better manage stormwater runoff through Low Impact Design programs, updated Public Works stormwater design criteria, preservation and rehabilitation of riparian areas, water conservation and erosion control. The TMDL Implementation Plan addresses water quality by reducing surface water inputs of heat, bacteria, and mercury.

Goal 7 - Areas Subject to Natural Disasters and Hazards: To protect life and property from natural disasters and hazards.

The Plan is consistent with Goal 7 because the Riparian Protection and Wetland Overlay will be reviewed and updated, if needed as described in Section 5.2.

Goal 11 - Public Facilities and Services: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

The TMDL Implementation Plan is consistent with Goal 11 because it identifies in the implementation strategies the need to update the Stormwater Master Plan, the Stormwater Management Plan and a strategy to encourage Low Impact Development within the City of Canby.

Goal 15 - Willamette River Greenway: To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway.

The TMDL Implementation Plan is consistent with Goal 15 as outlined in Section 5.2 that refers to the Canby Wayside Plan, which includes the Willamette Wayside properties and the restoration of that park area as described in Section 4.1.

SUMMARRY

Through the development of this plan it became apparent that in order to implement a TMDL Implementation Plan it would be critical that all of the departments such as Public Works, Planning, Engineering and Environmental Quality worked together and communicated. In previous years, 2003-2006 the City had a Stormwater Committee that discussed and moved forward planning, projects and environmental compliance issues in a somewhat cohesive manner with input from all departments.

I believe that it is vital to the City's ability to implement the City of Canby TMDL Implementation Plan that the City forms a Stormwater Committee. The stormwater committee will bring together professionals from all of the departments to provide input, direction and staff time towards the implementation of this plan. The goal of the City and the stormwater committee will be to meet or exceed the regulatory requirements surrounding stormwater.