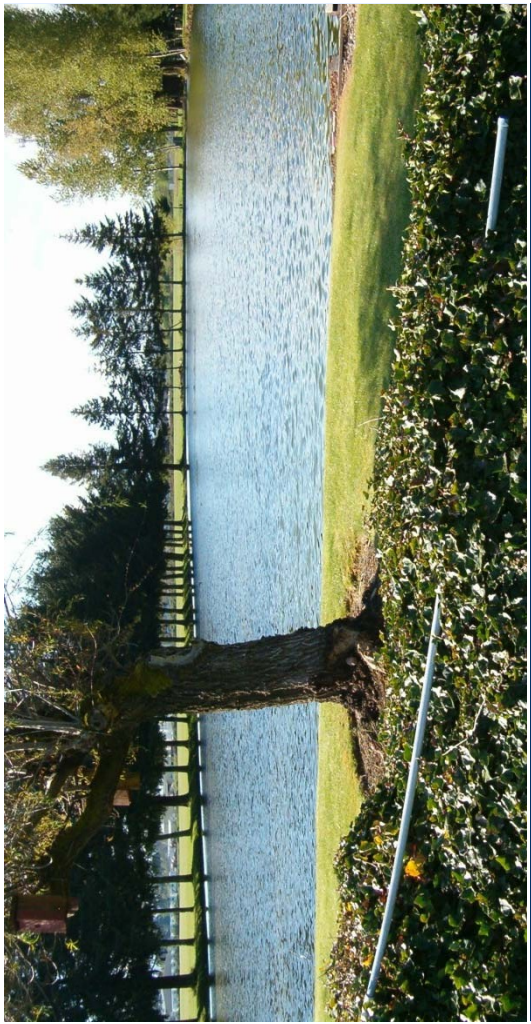
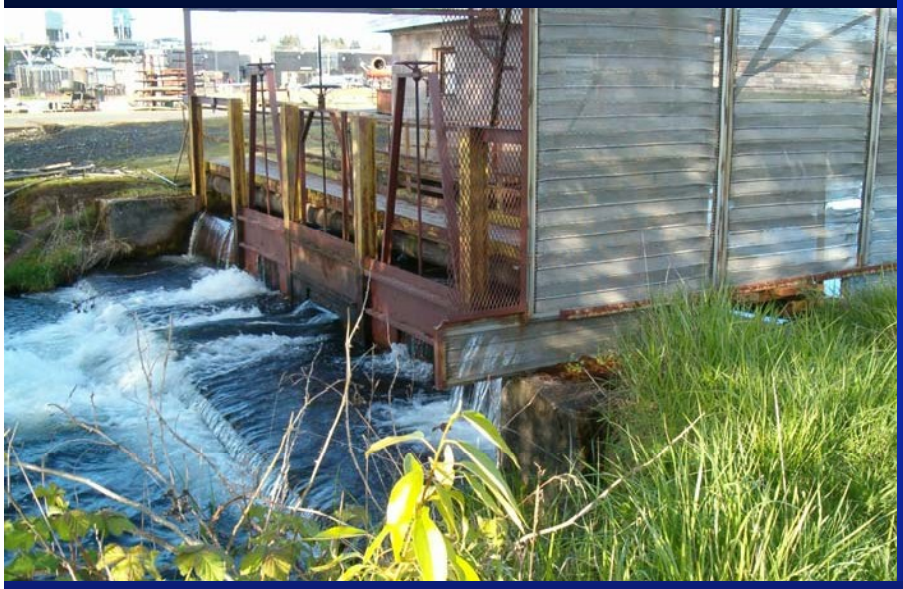
# Appendix H

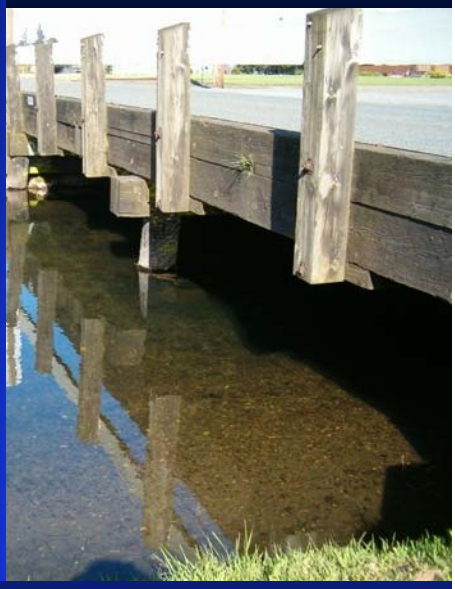
# TMDL Implementation Plan

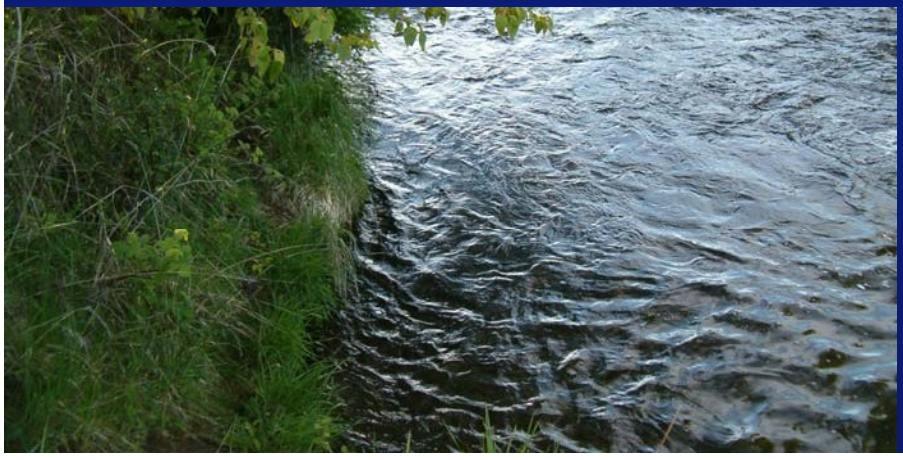


# Stayton, Oregon
# Willamette Basin TMDL Implementation Plan

**February 2009**







KELLER associates

Oregon
Theodore R. Kulongoski, Governor

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January 28, 2009



JAN 30

Dave Kinney
Public Works Director
City of Stayton
362 N. Third Avenue
Stayton, OR 97383

**Re: Willamette River Basin TMDL Implementation Plan**

Dear Mr. Kinney:

The Oregon Department of Environmental Quality (DEQ) has reviewed the November 2008 ***Stayton, Oregon Willamette Basin Total Maximum Daily Load (TMDL) Implementation Plan*** prepared by Keller Associates. The DEQ appreciates the amount of work that went into this plan by the City of Stayton with the assistance of Keller Associates. The plan meets the intent and requirements for the development of TMDL implementation plans as specified in Oregon Administrative Rule 340-042-0080 (3) and we would like to approve the plan for implementation at this time. We do have some comments, however, that we would like to convey to the City of Stayton to be considered as part of an adaptive management framework.

As Stayton proceeds with implementation, we think it would be helpful to expand upon the stormwater controls measures and evaluate existing riparian conditions. Some measures related to the above that would support the TMDL reductions for Stayton to consider include:

1. Assessment and analysis of current riparian conditions to confirm existing conditions within the first year and identify sites for restoration [ex., riparian setbacks in place being adhered to; areas that don't meet the setback requirement; areas where new development is proposed; establish when 50 feet is sufficient based on the quality and quantity of vegetation; establish list of priority projects and areas along the riparian corridors that would benefit from shade canopy (temperature) and native understudy (erosion and temperature)].
2. Implement additional best management practices supportive of pollution prevention in municipal operations for roads, parks, and city maintenance shops. For example, reduce sediment reaching Mill Creek and North Santiam through overland flow.

3. Assess planning and building ordinances for barriers to post construction development and redevelopment supportive of TMDL reductions. As Stayton proceeds with developing and implementing Post Construction Stormwater Management, in addition to riparian preservation section 3 requirements, consider such things as, low impact development, stormwater treatment, "green building," and maintenance of hydrology as key structural and source control strategies.
4. Provide a link for the City of Stayton website and include water quality topics on the website.

For clarification purposes, DEQ would also like to submit the following comments pertaining to the plan at this time:

**Page 5-1 and 5-2: 5.3 NPDES Phase II Six Minimum Control Measures**
10,000 should be 50,000.

We would like to check in with you on an annual basis to assess the TMDL implementation process and the status of the measures contained in your BMP tracking matrix. The matrix is designed with the annual reporting requirement in mind and we believe that it is well-suited for tracking progress overtime. We feel that the annual review process will facilitate adaptive management and the five year reviews.

Stayton's first annual report will be due the last week of September 2009, and should cover February 2009 through August 2009. Stayton's first fifth year report will be due the last week in September 2013, and should assess implementation efforts from February 2009 through August 2013.

Please feel free to contact me at 503-378-5073 or via e-mail at gramlich.nancy@deq.state.or.us should you have any questions related to TMDL Implementation. Thank you for your effort on the development of Stayton's TMDL Implementation Plan. We look forward to your continued involvement in TMDL Implementation efforts in the Middle Willamette and North Santiam Subbasins, and to your ongoing commitment to improving water quality conditions.

Sincerely,

Nancy Gramlich
Willamette Basin Coordinator

cc:
Roland Rocha, Keller Associates
Don Eubank, City of Stayton

City of Stayton, Oregon

Willamette Basin TMDL Implementation Plan – Agency Review

February, 2009

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Table of Contents

# Chapter 1 INTRODUCTION

## 1.0 General

As part of a watershed approach to water quality problems, the State of Oregon is in the process of developing a Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP) for each water body that does not meet specific water quality standards. The Willamette River is among these water quality impaired bodies of water for parameters of temperature, mercury, and bacteria.

The United States EPA approved the Willamette River Basin TMDL (WB-TMDL) On September 29, 2006. In the WB-TMDL, the City of Stayton is listed as a Designate Management Agency (DMA) because it is bordered by Mill Creek and North Santiam River which are Willamette River tributaries. As a DMA, Stayton is responsible for water quality within its jurisdiction and is required to submit a TMDL Implementation Plan to the Oregon Department of Environmental Quality under Oregon Administrative Rule 340-042-0080(3).

This report provides a comprehensive description of Stayton's ongoing and planned efforts to reduce targeted pollutant loadings in accordance with the WB-TMDL.

## 1.1 TMDL Implementation Plan Objective

The objective of Stayton's implementation plan is to fulfill all requirements designated in the Oregon State TMDL Rule 340-042-0080(3). To meet these requirements, the implementation plan must:

- Identify the management strategies which will be used to achieve load allocation and reduce pollutant loading
- Provide a timeline for implementing the management strategies
- Provide target completion dates for benchmarks in implementing the management strategies
- Provide for performance monitoring with a plan for periodic review and revision
- Provide evidence of compliance with applicable statewide land use requirements
- Provide any other elements as specified in the WQMP

The following chapters in this report specify how the City of Stayton plans to meet these requirements. The final chapter provides a general summary of the implementation plan including a progress tracking matrix for annual reporting and review.

## 1.2 Related Documents

Through prior efforts, the city has recently completed a Storm Water Master Plan. The Storm Water Master Plan addresses water quality issues, and contains preliminary plans anticipating both the TMDL implementation and the NPDES phase II program. This implementation plan is consistent with these master plan elements, and the master plan provides much of the background and supporting data for the implementation plan.

## 1.3 Acknowledgements

Key to the present and ongoing success of water quality efforts in Stayton are the citizens of Stayton, the employees of the Stayton City Public Works Department; Michael Faught, Public Works Director; Members of the Stayton City Council, and the Oregon Department of Environmental Quality.

# Chapter 2 EXISTING CONDITIONS

## 2.0 General

The City of Stayton is proactive in its efforts to improve water quality. The city has recently completed a Storm Water Master Plan outlining significant capital improvement projects, and is currently working toward establishing a storm water program aimed at positioning the city to meet future state and federal requirements. This chapter summarizes the city's current status with regard to the applicable Statewide Land Use Goals, and current storm water quality conditions.

## 2.1 Oregon Statewide Land Use Goals

In 1973 the Oregon State Legislature established statewide standards to be used by local government agencies in land use planning. The intent of the standards was to protect Oregon's natural resources and promote economic development. The Department of Land Conservation and Development (DLCD) was created at that time to be the administrative agency to manage these standards.

Over time, these standards have evolved into a set of 19 Land Use and Planning goals covering everything from Citizen Involvement to the preservation of Ocean Resources. As not all of these goals directly apply to the WB-TMDL, DEQ has shown interest in the position of Stayton in relation to Statewide Landuse and Planning Goals 5 and 6 because these are the pertinent sections with regard to the Implementation Plan.

Statewide Planning Goal 5 is to protect natural resources, and conserve scenic and historic areas, and open spaces. In correlation with this goal, local governments are to adopt programs that will achieve this goal. Part of this is to inventory riparian corridors and establish policies to protect them.

Statewide planning Goal 6 is similar to Goal 5 in that the objective is to maintain and improve the quality of the air, water and land resources of the state. All waste and process discharges cannot exceed the carrying capacity of the water resources nor degrade nor threaten them.

The city's comprehensive plan was revised in April 2006, and addresses all of statewide land use goals. The comprehensive plan has been acknowledged by the Department of Land Conservation and Development to be compliant with the state wide goals. The city's ongoing land use practices, permitting practices, and development code are consistent with the land use goals and the proposed management strategies in the implementation plan. A letter from the Stayton City Planner has been included in Appendix B, which states the city is in compliance with Statewide Land Use Goals (Goals 5&6 in particular). Furthermore, the

proposed TMDL Implementation Plan is consistent with the city's comprehensive plan to the extent required by law.

## 2.2 Existing Water Quality

Stayton's TMDL efforts focus on the waters within the city's jurisdiction which includes the Salem Ditch (also known as the Stayton Ditch), the North Santiam River, Mill Creek, and the Power Canal.

The majority of the city's urban impact is on the Salem Ditch, which travels east to west along the south border of the city, then turns north and runs along the city's west border ultimately discharging to Mill Creek in the northwest corner of the city limits. Figure 1 in Appendix A identifies the ultimate discharge locations for the various portions of the city's storm system.

Because the majority of the stormwater discharges to the Salem Ditch, the ditch provides an opportunity to test the net impact of the stormwater discharge on water quality.

In March of 2007, four storm water samples were collected from two points in the Salem Ditch upstream of Stayton, and two points downstream of Stayton. The samples were taken during a rain event and were tested for Biochemical Oxygen Demand, Chemical Oxygen Demand (COD), Orthophosphate-phosphorus, Specific Conductivity, Total Solids, Total Suspended Solids (TSS), Turbidity, Hardness, pH, Phosphorus, and E coli.

The water quality test results specific to the WB-TMDL target pollutants have been summarized in Table 2.1. The TMDL targets are basin-wide targets and are not specific to Stayton, but they serve as comparison basis for the city.

No data was collected on the temperature, but mercury and bacteria were tested. No mercury was detected, and bacteria increased by 8.5 mpn/100 ml. More testing over an extended period would be necessary before any firm conclusions can be drawn on the storm water quality, but initial testing appears to indicate the city's overall impact in relation to the WB-TMDL is relatively light.

**Table 2.1 TMDL Targets vs. Existing Conditions**

| Water Quality Parameter | WB-TMDL Target | City Inlet | City Outlet |
|---|---|---|---|
| Temperature | Mill Creek: 18°C*<br>North Santiam: 18°C* | No Data | No Data |
| Mercury | 27% Reduction | None Detected | None Detected |
| Bacteria | 80% Reduction | 6.3 mpn/100 ml | 14.8 mpn/100 ml |

*Target temperatures for summer months

# Chapter 3 MANAGEMENT STRATEGIES

## 3.0 General

This chapter discusses the general strategies the city will implement to reduce pollutant loads. The methods for assessing the effectiveness of these strategies are discussed in Chapter 4. Fundamentally, these strategies are designed to focus efforts on activities that will result in the maximum reduction of pollutants given the city's limited resources.

## 3.1 Management Strategies

The following sub-sections describe Stayton's management strategies for reducing temperature, mercury, and bacteria. Some of the strategies are already in place, and have been identified in their scheduled implementation as 'ongoing'. Strategies that have been selected as part of this plan to fill the gaps have specific implementation dates as chosen by the city according the resources available. The strategies, along with the benchmarks and schedules are summarized in the Tracking Matrix in Appendix A.

### 3.1.1 Temperature

The WB-TMDL has established a temperature TMDL to create a healthier environment for salmon and trout species found in the Willamette Basin. There is not one target temperature for the entire basin, because the optimum temperatures vary by location according to the fish habitat designation for the area. DEQ would like to see efforts from Stayton to address temperature concerns through protection, restoration, or creation of riparian vegetation. The Oregon State DEQ does not recognize storm water as a source of temperature loading for the purposes of the temperature TMDL.

Because storm water runoff from the city is not recognized by DEQ as a source of temperature loading in the rivers, direct solar radiation on the water bodies within Stayton's jurisdiction is the primary source for temperature loading. The effects of temperature loading can be minimized if the water in the river is deep and well shaded.

The depth of the water is affected by two factors, namely, flow volume and the channel shape. During the summer months, when solar radiation is at a peak, the flow in the river and the runoff volume from the city is typically low. Under this scenario, any flow added to the river from the city's storm water system will help lower the stream temperatures because it will provide additional volume to the river and it will typically be cooler because it is piped underground prior to discharging to the river.

The second factor affecting the depth of the water in the river channel is the shape of the channel. The channel shape can be negatively affected through erosion. Erosion is more likely to occur where the channel banks are bare and unstable. As banks erode, the shape of the channel tends to be wide and flat, therefore reducing the water depth and increasing the impact of solar radiation. Riverbank vegetation or structural stabilization measures prevent channel erosion and promote a deeper channel resulting in cooler water temperatures. Bank vegetation not only prevents erosion, but can provide shading if the vegetation consists of trees.

In an effort to improve water quality in the North Santiam River, the City of Stayton recently completed a stream bank tree planting project. In September of 2007, the city planted 3,200 Willow Tree cuttings. The project improved approximately 18,000 square feet of the river's north bank south of Stayton.

The city's land use development code also contains provisions that require 50 foot riparian setbacks as a measure of protecting the riverbanks and promoting stream health. This code will continue to promote cooler water temperatures as the city develops beyond its current limits. The city's goal is to continue the practice of enforcing the existing land use code through the development review and approval process.

In addition to setback requirements, Sections 17.16.090 and 17.20.80 specifically protects trees and other vegetation in riparian corridors.

The city has also formed an active partnership with North Santiam Watershed Council, and the Oregon Association of Clean Water Agencies (ACWA). This relationship will provide the city opportunities to take part in a watershed approach to water quality, and to partner with these agencies on future water quality projects similar to the recent riparian development project completed in September 2007. The city's goal is to stay involved with these groups by attending six meetings each year as a management strategy to address the temperature TMDL.

### 3.1.2 Mercury

Mercury is pollutant of concern because of its toxicity and its tendency to bioaccumulate. Bioaccumulation is the process by which a substance builds up in concentration in living organisms as they take in contaminated air, water, or food because the substances can only be metabolized very slowly. The toxic effects of mercury poisoning range from debilitation to death.

Mercury is a natural soil component common throughout the Willamette Basin, and soil erosion accounts for nearly half of all the mercury found in

the Willamette River and its tributaries. Automobile emissions, Dental fillings, light bulbs, and thermometers are a few of the common non-natural sources of mercury.

The City of Stayton has identified sediment in sediment laden storm water and air pollution as two primary sources of mercury loading in the surrounding waters. To address sediment carried by stormwater, the city will focus on reducing runoff from construction sites, and reducing sediment loads in stormwater through improved maintenance practices.

The city currently provides reminders to developers during preconstruction meetings to obtain 1200-C permits as required by the state. The city also reviews erosion control plans as part of the plan review process. The city's goal is to continue these practices to aid in the prevention of excessive sediment in stormwater runoff from construction sites.

1200-C permits address construction sites that are an acre or larger in area. There are not currently any regulations for sites less than an acre and the city recognizes such sites as a potential source for sediment erosion. As such, the city will consider adding language to existing codes and/or design standards.

To reduce sediment loading from stormwater, the city currently sweeps the streets on a regular basis. Downtown corridors are swept weekly, collectors are swept twice a month, and residential streets are swept monthly. The city's plan is to continue street sweeping and begin tracking completion of the street sweeping.

In addition to street sweeping, the city currently cleans all of their estimated 650 storm water catch basins annually. Cleaning the catch basins not only prevents trapped sediment from reentering the system, but also enables the basins to function properly and remove more sediment from the system. The city's goal is to continue cleaning all of the catch basins annually and track the number of basins cleaned.

As part of the stormwater master plan, the city has established a plan to begin pressure cleaning the storm water lines. There are approximately 15 miles of stormwater lines in the city. The plan is to clean the lines once every five years. This will prevent buildup, allow for proper function of the system, and remove excess sediment.

In addition to mercury carried in storm water sediment, the city realizes air pollution can contribute to mercury levels in surface waters. For this and many other benefits, the city supports a county commuter ride program. A large park-and-ride lot is located in the northeast end of the city. Commuter ride program information is also available at the public works office. The

goal in relation to this management strategy is to continue to support the commuter ride program.

An implementation schedule and measurable benchmarks are identified for each of these strategies in the Tracking Matrix in Appendix A.

### 3.1.3 Bacteria

Bacteria concentrations in water are typically measured by an indicator group of bacteria such as E. coli in units of Most Probable Number (MPN) per unit volume. Potential sources of bacteria include failing septic systems, leaking sewer lines, substandard wastewater effluent discharges, pet waste, livestock waste, duck feeding areas, and cross-connections.

Stayton has reviewed the potential sources of bacterial contamination and has determined that pet waste, poorly maintained sewer lines, and cross connections are the areas on which they will focus their management efforts.

The city has installed pet waste stations in local parks to encourage owners to clean up after their pets. The city plans to inventory theses stations to determine quantities, locations, installation years and other data necessary to assess additional needs. The city will continue to stock and maintain the stations, as well as inventory the existing stations and assess additional needs.

The city currently cleans and inspects the sewer system periodically. The goal is to continue this practice and commit to a schedule of cleaning and inspecting every line once every five years. The anticipated outcome of this effort is well maintained lines that will prevent sewage leaking or overflowing and reaching the natural waters surrounding the city.

In reviewing the city codes and ordinances, it was discovered that there is nothing prohibiting storm drain and sanitary sewer cross-connections. As a result, a goal has been established to propose ordinance language prohibiting cross-connections.

The specific implementation schedules and benchmarks for each of these strategies are listed in the Tracking Matrix in Appendix A.

# Chapter 4 PLAN REVIEW AND REPORTING

## General

Tracking and reporting on the progress of the implementation plan is essential to its success because it provides the feedback necessary to make necessary adjustments. Adjustments are necessary over time due to changing needs or variances in field conditions.

As such, tracking and reporting have been included as part of the implementation plan to serve as tools to help the city achieve the plan objectives. This chapter presents the city's plan for tracking and reporting their progress on the implementation plan activities.

## 4.1 Implementation Tracking

Implementation tracking refers to keeping track of which of the planned activities have been implemented within their chosen timeline and which ones have not. It should be noted that the timelines for implementation are not regulatory, but rather City of Stayton will track and report on the progress of the planned TMDL Implementation Plan Activities – including interim steps necessary for the various benchmarks. The City will keep an internal inventory of progress towards completion of each of the activities listed on the tracking matrix throughout the year.

## 4.2 Effectiveness Tracking and Evaluation

Effectiveness tracking will focus on how beneficial the strategies are in relation to the time and effort required to implement them. The evaluation of this effectiveness in reducing pollutant loads will rely on city personnel performing adequate and timely data collection and analysis.

A record of the time and resources spent will be kept on each of the activities and will be compared to the measurable benchmark for the activity. For example, catch basin cleaning may cost an average of $17 per catch basin, and result in an average of 2 lbs of sediment being removed from the system. This would allow the city to compare this activity with other activities for effectiveness resources required.

The effectiveness of activities such as public education are difficult to quantify, however activities themselves can be tracked as indicated in the tracking matrix. However, the intent in tracking the meetings is to measure the level of effort compared to a sense of its effectiveness which should be determined by those participating in the activities.

Central to the effectiveness evaluation will be the questions: "How well is this activity helping us reach our goal of pollutant reduction?", "Can this activity be modified to be more effective?", "Are there other activities that could be more beneficial?" Once the appropriate data is collected, the results will be evaluated on the basis of these questions.

The city will review the results of all effectiveness evaluations on an annual basis and consider possible alterations to the implementation plan if some activities prove to be ineffective. This internal review will be completed prior to the annual DEQ reporting. The city will also review and track interim steps being taken towards their benchmarks in the annual and five-year reviews.

## 4.3 Reporting

Oregon DEQ requires the city to report implementation progress annually. This reporting will be facilitated through the use of the tracking matrix presented in the previous chapter. The annual reporting will consist of filling out the status column with an appropriate indicator and submitting the matrix to DEQ. The annual and 5-year reports will also discuss interim steps being taken towards the various benchmarks. Any necessary minor adjustments may also be made at this time. In an effort to coordinate TMDL reporting with other reporting required of the city, they will report in September of each year after an internal review held in August starting in 2009.

## 4.4 Adaptive Management

As circumstances change, the needs and strategies related to this implementation plan will change. This may be due to changes within the city, state and federal regulations, or in the Willamette Basin itself. The City of Stayton will specifically revisit this implementation plan every five years. The city will also consider potential revisions or redirections that may be necessary as a result of DEQ's revisions to the WB-TMDL. The first of these revisits will be in 2013. The reevaluation will include a review of existing tracking data and other information to evaluate the effectiveness of the plan relative to the pollution reduction goals.

# Chapter 5 ADDITIONAL ELEMENTS

## 5.0 General

The WB-TMDL requires additional elements from the WQMP to be addressed by various communities according to their population designation. Because Stayton is considered by DEQ to be non-MS4 DMA, the additional requirements are not as extensive as those required of MS4 DMAs. This chapter addresses the additional elements required for the City of Stayton.

## 5.1 Public Involvement Plan

Stayton is required to include a public involvement element as part of the TMDL Implementation Plan. The city will implement the plan upon acceptance from DEQ, however, the city's plan is to involve the public through a public open house where the implementation plan will be presented to the public and City Council in within 60 days of DEQ's approval of the Implementation Plan.

As revisions to ordinances and standards are proposed during city council meetings which are open to the public, the public will have an opportunity to be further involved.

## 5.2 Fiscal Analysis

A fiscal analysis is required in order to identify the resources necessary to develop, implement, and maintain the plan components identified in this report. Given the absence of resources available for additional programs and practices, many of the plan elements have been selected on the basis of their minimal financial impact. Items such as policy implementation will cause an insignificant financial impact and will be absorbed into the regular operations budgets.

The more resource intensive components of the plan are to be integrated as part of the storm water master plan or other existing programs, and the funding will come from the utility or program budgets. For example, the storm water master plan components will likely be funded by a System Development Charge for new developments, and a utility for existing users which has been detailed in the Storm Water Master Plan.

## 5.3 NPDES Phase II Six Minimum Control Measures

Because Stayton is not currently a Municipal Separate Storm Sewer System (MS4) community, the city is not required to implement the Six Minimum Control Measures for mercury and bacteria reductions tied to the NPDES Phase II requirements. An MS4 designation is typically triggered by a population of

50,000, other urbanization indicators, or at DEQ's discretion. Stayton's population is currently estimated at 7,700.

However, as part of this implementation plan, DEQ has asked the city to consider these elements and determine which measures could feasibly be accomplished as part of the implementation plan. The Six Minimum Control Measures identified in Chapter 14 of the Willamette Basin Water Quality Management Plan are:

1) Pollution prevention in municipal operations
2) Public education and outreach on storm water impacts
3) Public involvement and participation
4) Illicit discharge detection and elimination
5) Construction site storm water runoff control
6) Post-construction storm water management in new development and redevelopment.

Each of these measures and the extent to which the city plans to address them is covered in the Tracking Matrix in Appendix A.

# Chapter 6 IMPLEMENTATION SUMMARY

## 6.0 General

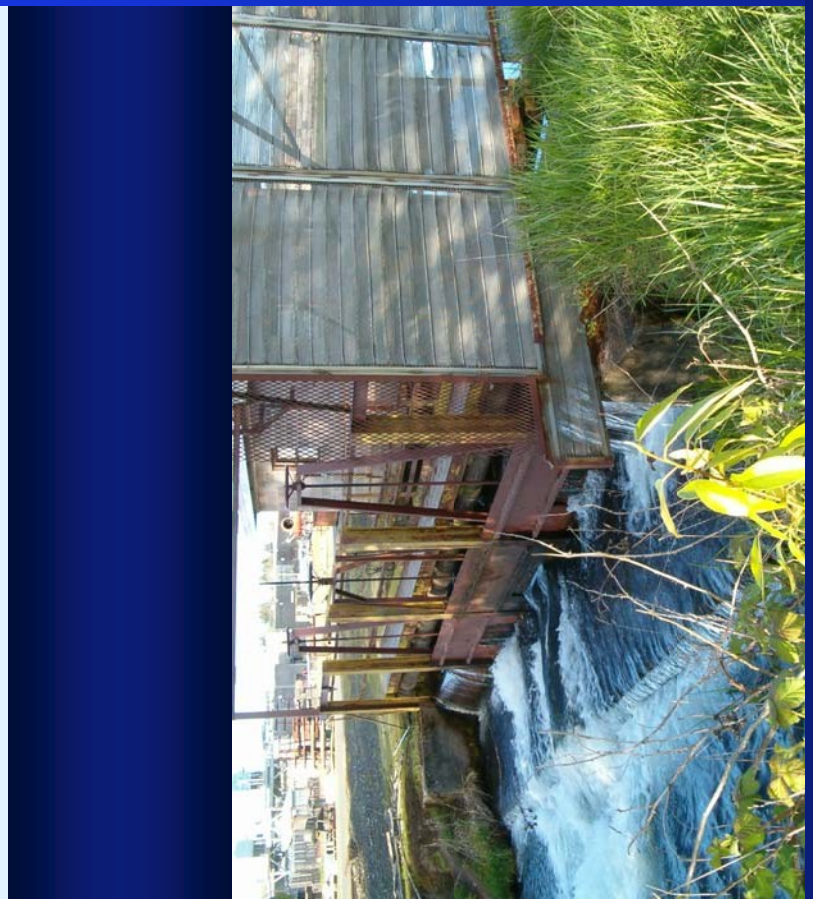
This chapter presents a summarized list of implementation actions in chronological order. This will serve as a quick planning and tracking reference for city personnel. However, this list is not intended to be comprehensive so the report and the Tracking Matrix should be consulted for more detail on the Implementation Plan and its elements.

## 6.1 Summary of TMDL IP Actions

**Table 6.1 - Implementation Plan Actions**

| Year | Action | Targeted Outcome |
|---|---|---|
| *2008* | Present TMDL IP to Council and Public | Involve the public |
| *(& Ongoing)* | Review Sediment Erosion Control Plans | Reduce mercury loadings |
| | Remind developers to obtain 1200C permits | Reduce mercury loadings |
| | Maintain riparian setbacks | Reduce temperature and mercury loadings |
| | Support commuter ride program | Reduced mercury loadings |
| | Continue Watershed Council and ACWA Involvement | Remain current with local storm water issues, potential temperature reduction through riparian preservation or restoration projects. |
| | Street sweeping | Reduce mercury loadings |
| | Clean catch basins | Reduce mercury loadings |
| | Inspect 20% annually and repair damaged Sanitary Sewer lines as resources permit | Reduce bacteria loadings |
| | Visit riparian project site annually | Reduce mercury loadings |
| | Hold internal plan review | Maintain or adjust goals as necessary |
| | Fill out Tracking Matrix, send to DEQ annually | Keep DEQ informed on progress |
| | | |
| *2010* | Clean storm water lines, Track % cleaned | Reduce mercury loadings |
| | | |
| *2012* | Inventory and assess Pet Waste Stations | Reduce bacteria loadings |
| | Propose code/standard language for erosion control on construction sites < 1 acre | Reduce Mercury loadings |
| | | |
| *2013* | Track Volunteer Coordination and Support | Improve existing benefits of volunteer efforts |
| | Propose Cross-Connection Control Language for new ordinance | Reduce bacteria loadings |
| | Complete 1st 5-year TMDL IP review and coordinate with DEQ | Adapt management strategies changing conditions |

# Appendix A: Tracking Matrix and Figure



Implementation Plan Tracking Matrix

| POLLUTANT | SOURCE | STRATEGY<br>What is being done, or what will be done to reduce or control pollution from this source | HOW THIS WILL BE DONE | MEASURE<br>How implementation or completion will be measured | TIMELINE<br>When this strategy will be implemented or completed | BENCHMARK<br>The goal to be met within the indicated timeline | STATUS |
|---|---|---|---|---|---|---|---|
| Temperature | Solar Radiation | Protect and promote healthy riparian areas | Sustain land use code which requires riparian setbacks | Track the number of development and redevelopment plans reviewed for conformance with riparian policy | Ongoing | 100% of development and redevelopment plans | |
| | | | Review progress of riaprian project along N. Santiam River | Are the trees growing? | Ongoing | Check the site annually | |
| | | Work with other agencies on watershed solutions | Maintain contact with ACWA and continue to participate with North Santiam Watershed Council | Track number of coordination meetings attended annually | Ongoing | Attend 6 meetings annually | |
| Mercury | Sediment | Reduce sediment reaching Mill Creek and North Santiam through storm water | Ensure sediment erosion control plans are provided for development and redevelopment plans | Track % of sediment erosion control plan checks performed as part of plan review process | Ongoing | 100% of development and redevelopment plans | |
| | | | Remind developers of 1200-C permit requirements in preconstruction meetings | Track % of meetings wherein a 1200-C permit reminder was provided | Ongoing | 100% of preconstruction meetings involved a 1200-C permit reminder | |
| | | | Consider adding language to existing city codes and/or design standards for erosion control on construction sites <1ac | Public works or Planning and Zoning to propose language to be considered for inclusion in existing codes and standards. | 2012 | Propose Language for revised code | |
| | | | Perform regular street sweeping | Track % of streets swept monthly | 2008 | Downtown 4/mo, Collectors 2/mo, Residential 1/mo | |
| | | | Clean catch basins annually | Track % of catch basins cleaned annually | Ongoing | 100% of catch basins cleaned annually | |
| | | | Clean storm lines once every 3 yrs | Track % of lines cleaned annually | 2010 | 20% of storm lines cleaned annually | |
| | Air deposition | Reduce air pollution | Support commuter ride program by providing information at Public Works Building | Brochures provided? Y/N | Ongoing | Brochures provided? Y/N | |
| Bacteria | Pet Waste | Reduce pet waste reaching streams through storm water runoff | Continue support and use of pet waste stations at city parks. Inventory existing stations, and assess need for additional stations | Provide inventory and assessment results in a report | 2012 | Report presented? Y/N | |
| | Municipal Sewage | Reduce municipal sewage reaching streams through surface water and groundwater pathways | Detect and repair leaking city sewer lines as resources allow | Track % of lines cleaned and inspected | Ongoing | 20% of lines cleaned annually | |
| | | | Propose language in city code which prohibits storm system and sanitary sewer cross-connections | Language proposed? Y/N | 2010 | Language Proposed? Y/N | |
| Additional Elements Required from the WB-WQMP | Six Control Measures for Mercury and Bacteria from NPDES Phase II Program | Pollution Prevention in Municipal Operations | See: Mercury>Sediment>Street Sweeping, Catch Basin Cleaning, Storm Line Cleaning | | | | |
| | | Public Education and Outreach | See: Mercury>Air>Reduce Pollution>Commuter Ride information | | | | |
| | | | Coordinate with Volunteer Groups | Begin tracking and report number of volunteer projects performed annually | 2008 | 100% of City Coordinated Volunteer projects reported | |
| | | Public Participation | Present TMDL IP to City Council for Approval | Presented? Y/N | 2008 | Presented? Y/N | |
| | | Illicit Discharge Detection and Elimination | See: Bacteria>Sewage>Reduce>Cross-Connections | | | | |
| | | | Map storm lines and outfalls | Completed in 2007 | | | |
| | | Construction Site Runoff Control | See: Mercury>Sediment>Stormwater Reduction>1200C, Erosion Control Plans | | | | |
| | | Post Construction Storm Water Management | See: Riparian preservation requirements in section 3 of implementation plan. | | | | |

W:\Work\104038\104038-035 TMDL Implementation Plan\Design\CAD\FIG-1.dwg

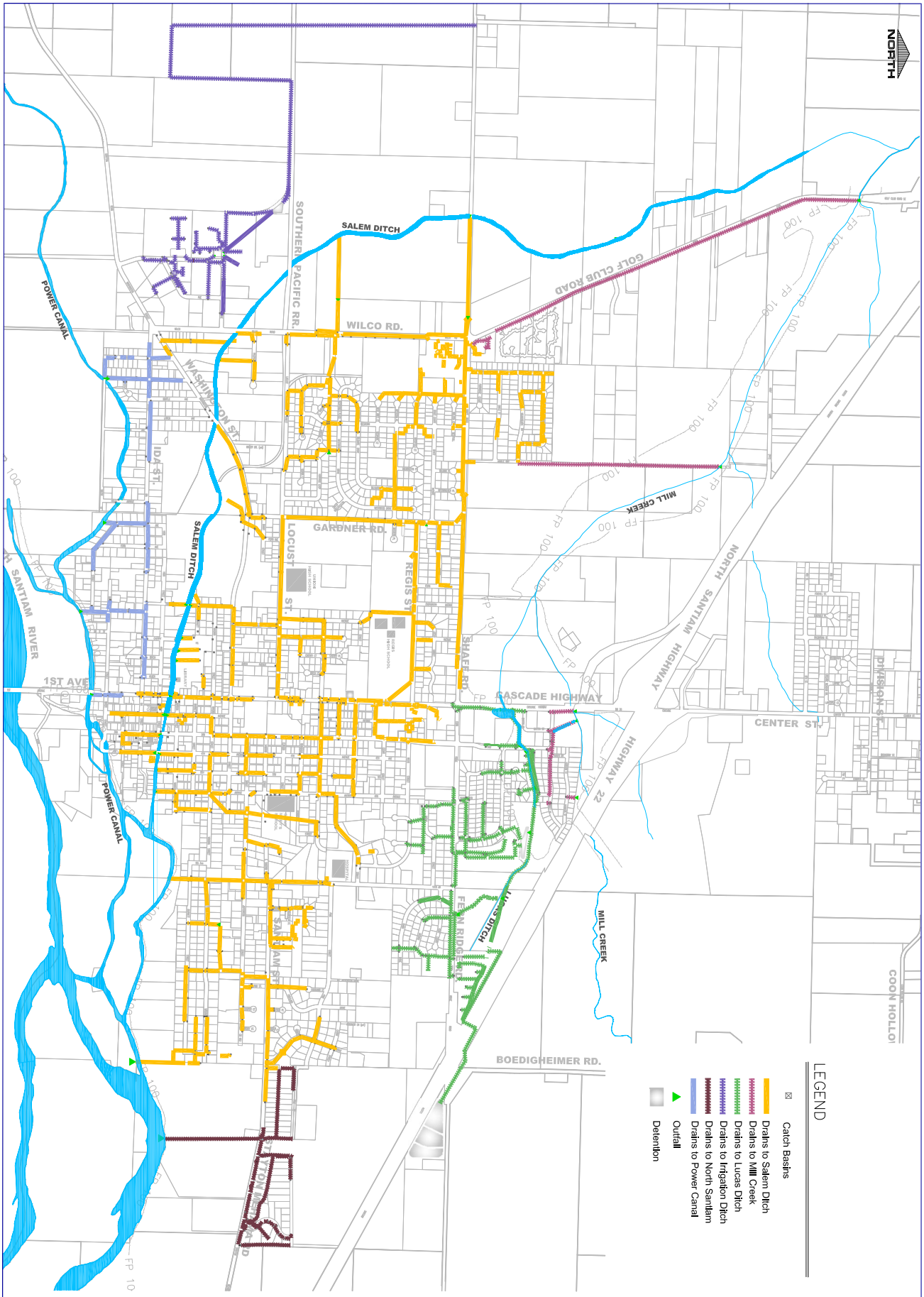



FIGURE 1

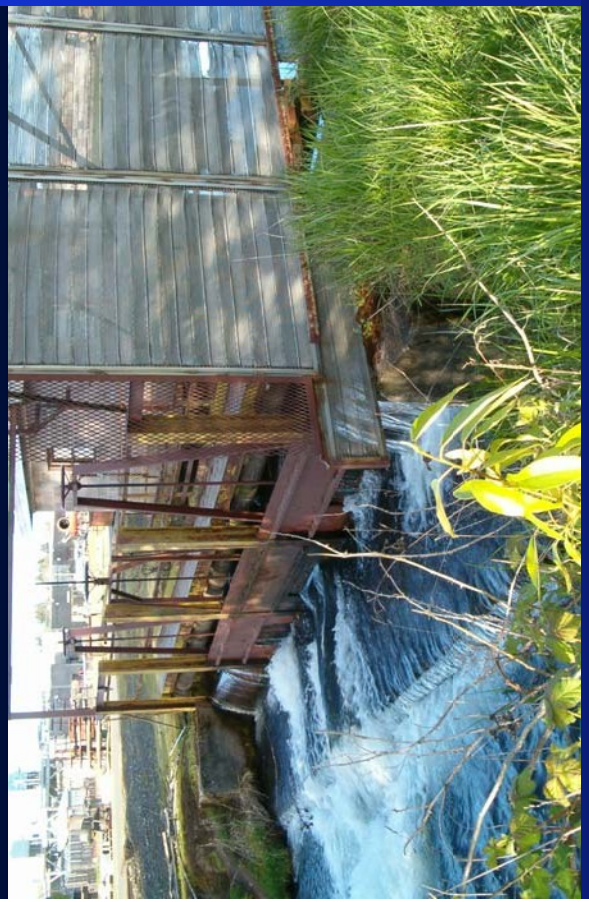
# Existing Drainage Areas

**TMDL Implementation Plan**
Stayton, OR

KELLER ASSOCIATES

KA-104038-035
FIG-1.dwg

# Appendix B: Land Use Compatibility



# City of Stayton

*Planning Department*

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**TO:** Michael R. Faught, Public Works Director

**FROM:** Dan Fleishman, City Planner

**SUBJECT:** Compliance with Statewide Goals 5 and 6

**DATE:** December 6, 2007

You have asked for a memorandum regarding the City's compliance with Statewide Planning Goals 5 and 6. Oregon state law requires all municipal comprehensive plans and land use regulations to comply with 14 statewide planning goals. Compliance is assured by submittal of local plans and regulations to the Department of Land Conservation and Development for review and "acknowledgement." These two statewide planning goals address natural resource issues and can be summarized as the following.

**Goal 5: To protect natural resources and conserve scenic and historic areas and open spaces.**

Local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon's livability.

**Goal 6: To maintain and improve the quality of the air, water and land resources of the state.**

All waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards. With respect to the air, water and land resources of the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards and implementation plans, such discharges shall not (1) exceed the carrying capacity of such resources, considering long range needs; (2) degrade such resources; or (3) threaten the availability of such resources.

Generally, Stayton's Comprehensive Plan and Land Use and Development Code were initially drafted in the late 1970s. They were acknowledged by DLCD at that time as being compliant with the goals. Subsequent updates and amendments have also been acknowledged as compliant.

More specifically, Stayton's Comprehensive Plan inventories the significant natural, historic and cultural resources within the urban growth boundary and contains policies for their protection. The City has purchased tens of acres of open space for parks. The City's Land Use and Development Code contains provisions that require riparian setbacks and protection of wetlands. There are also two historic preservation districts and particular protection to buildings and sites identified in the comprehensive plan as historically significant.

The City has adopted a Parks and Recreation Master Plan that calls for the development of more park land to assure protect natural resources and provide open space. The City has recently updated its water and wastewater master plans to assure that it can both provide adequate service for the projected growth and meet its obligations to maintain the quality and quantity of water resources within and adjacent to the City.

Let me know if you need additional information.