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Nancy:

On September 21, 2006 The City of Sublimity was identified as a Designated Management Agency (DMA) and given the authority to manage and regulate sources of pollutants listed in the Willamette Basin TMDL. Attached please find the City's DRAFT Total Maximum Daily Loads Implementation Plan as required by the Department of Environmental Quality. The plan:

- a. Identifies the management strategies used to achieve load allocations and reduce pollutant loading
- b. Provides a timeline and a schedule for completing measurable milestones
- c. Provides for performance monitoring with a plan for periodic review and revision
- d. Provides evidence of compliance with applicable statewide land use requirements
- e. And provides other analyses or information as specified in the Water Quality Management Plan (WQMP).

The TMDL Implementation Tracking Matrix captures three of the six control measures as identified in Part 2 of the TMDL specific implementation requirements. Specifically, the City will develop and implement a pollution prevention program for municipal operations. The City will continue its public education efforts and further develop a storm water public education and outreach program. The City will also actively develop, implement, and enforce a program to reduce pollutant in any storm water runoff to the DMA's system from construction activities that result in a land disturbance of greater than or equal to one acre.

Sincerely  
Alan Frost

Public Works Director

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

## **Introduction**

On February 26, 2007, the Public Works Director met with Oregon Department of Environmental Quality (DEQ) officials to determine the City of Sublimity's (the City) responsibilities for meeting the requirements of the federal Clean Water Act and Oregon Administrative Rule 340-042-0030 to produce a TMDL Implementation Plan. It was determined at that meeting the City would develop a brief explanation of the current and future activities; the City will implement and keep implementing to minimize water pollution. The current and new activities would lessen the introduction of the three main pollutant parameters (bacteria, mercury, and temperature) affecting the Willamette River Basin and constitute a TMDL Implementation Plan. The plan would be in the best interest of the City in maintaining and improving water quality within the City limits and the watershed as a whole.

This narrative and matrix serves as the City's Implementation Plan, listing ongoing and intended actions. The attached matrix summarizes activity that the City of Sublimity will undertake to meet TMDL requirements and also serves as a reporting mechanism. The City will annually report on implementation progress by March 31<sup>st</sup> of each year starting in 2009 by filling in the 'status' column and submitting the revised matrix to DEQ. The City of Sublimity will re-evaluate this Implementation Plan every five years following passage of the plan and report findings to DEQ by March 31<sup>st</sup> of that year. The report will describe: (a) the effectiveness of the strategies implemented, (b) planned adaptations if strategies are not effective, (c) the findings of the evaluation and (d) the basis for these conclusions.

The City of Sublimity will use an adaptive management approach and review and revise their Implementation Plan as needed following DEQ's re-evaluation/re-visit of the Willamette TMDL. The City will finance the plan using existing general fund monies from streets and planning. User fees from water and wastewater will also be used because the overall impact is to improve water quality. Currently, storm system maintenance is financed using street funds and the current public outreach web site is financed through the General Fund. Sewer funds can be used to support public outreach and involvement, as long as water quality and the sewer plant are part of the school training and newsletter programs. The City will use a classroom program developed in Woodburn used to introduce school children to water quality issues. The major expenses of the program are time and materials that includes a color book and crayons.

The City will post the plan on its WEB site after DEQ approval and prior/after City Council approval. The cost of the WEB site posting is not anticipated to significantly increase costs over current WEB expenditures. The major cost of the WEB site is time and hosting, which the city is already expending on the program. The total fiscal impact of the implementation plan on City finances will be negligible and absorbed using currently budgeted programs. The plan will be presented to City Council approval at the first Council Meeting following DEQ approval. The City will also invite public comment on the TMDL Implementation Plan before approval.

## **Background**

### **Contact Information**

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Subbasin:	Middle Willamette
Receiving Water body:	Mill Creek: Unnamed tributaries of Mill Creek

The City of Sublimity, Oregon is located in Marion County, southeast of the City of Salem and east of the Willamette River on the low foothills of the Oregon Cascades of the northern Willamette Valley (Figure 1). Sublimity, Oregon is a rural residential community situated on a plateau, amid gently rolling hills dropping down all around into grassy vales. The City was incorporated and granted its own charter in 1903 and maintained a steadily growing population from 1910 through 1970 when it leveled off. There was a surge of growth again in 1973 attributed to the construction of the Stayton sewage collection system. Each year has shown growth other than 1982. Future growth will depend on the capacity of the utilities and any development of local economy. Sublimity's current population is approximately 2,255.

Along with other cities in the Willamette Basin the City of Sublimity is a Designated Management Agency under the Clean Water Act and has legal authority over land use on the 576 acres within the City's limits. The City's sewage is contracted for treatment with the City of Stayton who treats and discharges the effluent under their NPDES permit. The City of Sublimity is located in the Mill Creek/Willamette River Watershed (Figure 2). The City's storm water system and City runoff discharge into unnamed winter streams and Mill Creek located just west of the City. Mill Creek is a tributary of the Willamette River.

Mill Creek was listed as water quality limited on the 1998 303(d) list due to excess loading of bacteria year round. The creek is listed from its mouth in Salem upstream to its headwaters in the Cascade foothills. Mill Creek was initially listed based on the elevated fecal coliform counts reported by the City of Salem. The City of Salem collected 781 samples of which 32% (249 of 781) exceeded the 90th percentile criterion (400 MPN/100ml). The entire Willamette Basin, including Mill Creek is listed for mercury. Lower Mill Creek is also 303d listed for temperature in summer months.

The entire City of Sublimity is served by sanitary and storm sewer systems. The City's ongoing maintenance programs ensure all storm catch basins are cleaned and piping systems flushed regularly. Storm systems that serve the industrial areas and areas that may generate pollutants receive extra inspections and evaluations. The City plans to include in its newsletter information about sources of bacterial, temperature, mercury, and pesticide contamination. The news letter will highlight concerns and advise citizens on the proper handling of pesticides and pet feces to minimize or avoid water quality concerns. These notices will also include actions that homeowners and businesses can take to properly maintain their irrigation systems and avoid unnecessary runoff, which could result in fertilizer or pesticide-laden water entering the creek.

The City's overall strategy for bacteria, mercury, and temperature reduction will include a three prong approach. The City will continue its ongoing management and maintenance programs for the storm water system. The City will initiate an education and public outreach program to increase public awareness of storm water quality issues. Lastly, the City will continue with its aggressive erosion control program to help stabilize soils and reduce the amount of silt washed into Mill Creek during winter storm events. Storm water erosion is a source of mercury, bacteria, and reduces the growth of shading vegetation in the riparian areas.

Figure

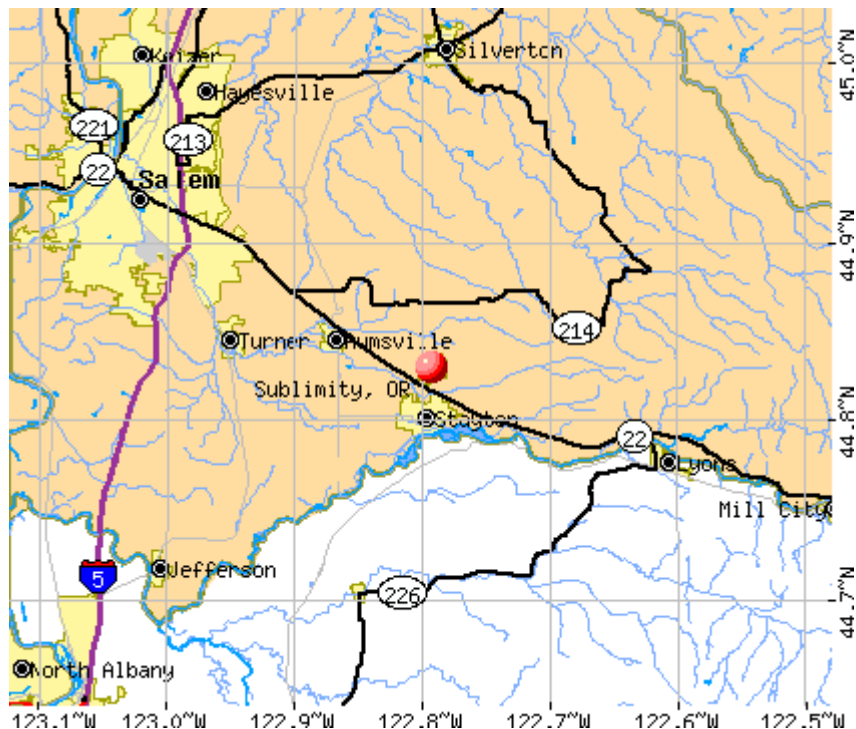
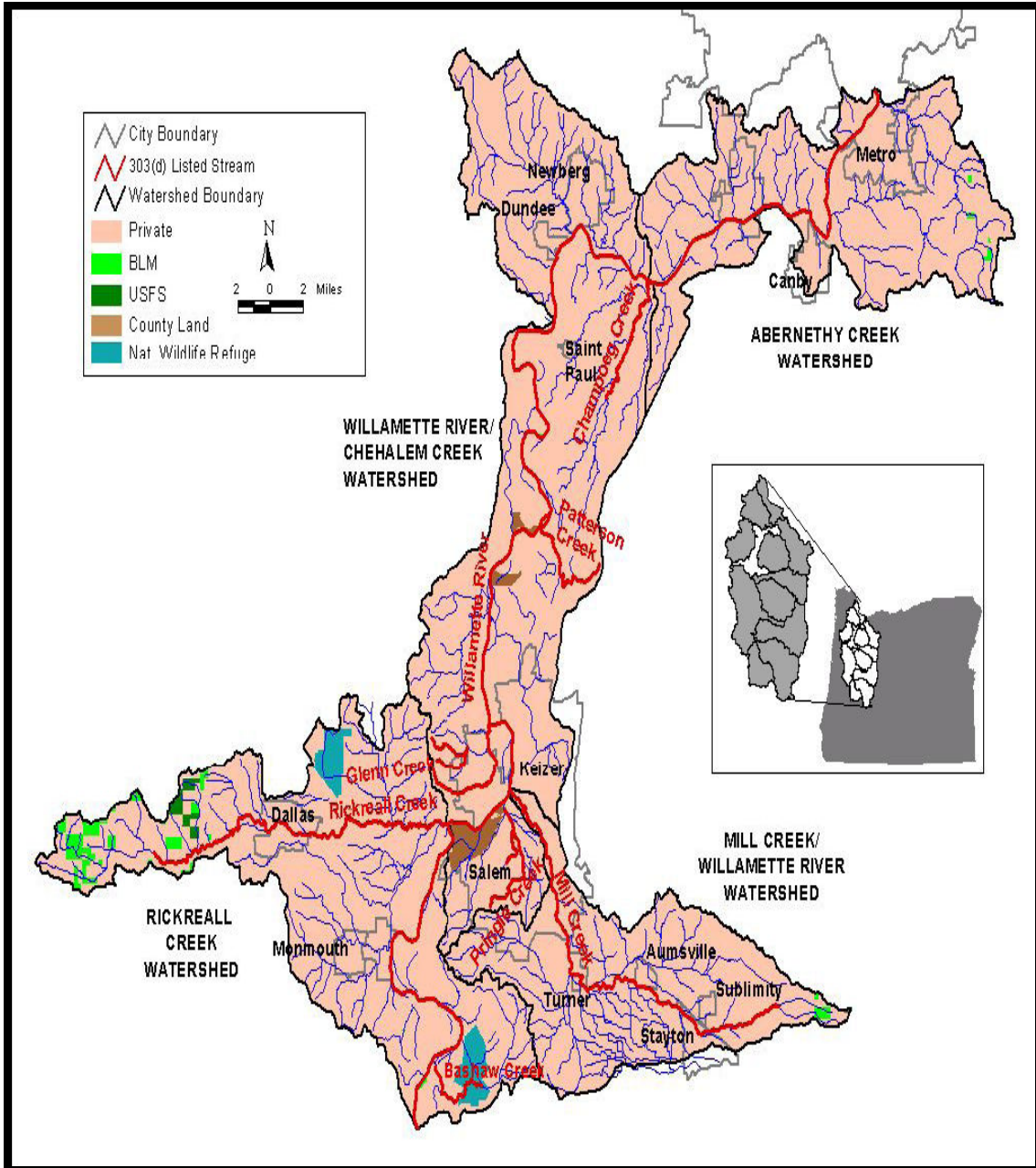


Figure 2



### Mercury

Besides direct industrial effluent, as in mine drainage or manufacturing, mercury generally comes from natural sources (soil and rock) that are mobilized through erosion and or acid precipitation. The City has been testing its raw drinking water source for the presence of heavy metals, including mercury, for over two decades. Mercury levels have been present only in trace amounts in these samples. However, considerable erosion occurs in the watershed as evidenced by high creek turbidity levels during winter storm events. Mercury is known to be present in appreciable amounts in the soils or bedrock within the Willamette Basin Watershed (Willamette Basin TMDL Mercury Fact Sheet). Mercury is present in fossil fuels, natural gas, diesel and heating oil. The mercury can be transported and deposited on the land where storm water runoff can carry it into water bodies.

The City of Sublimity has in place a set of City Codes that requires the protection and preservation of existing natural drainage channels based upon 50-year flood data (City Code 2.204.04). The code also requires that waters drained from developments are substantially free of pollutants through construction techniques as sedimentation ponds, reseeded, phasing of grading of open spaces and the protection of natural scenic and cultural resources.

An erosion control plan is required for all new residential partitions and subdivisions, planned unit developments, multi-family developments, commercial developments, and industrial developments regardless of size or slope (City Code 2.204.03). Current Code wording is general in nature so the Public Works Department plans to recommend adding specific erosion control requirements to its Land Development Code. The requirements will include measures such as installation of silt-fences or other sediment barriers; including Mulching and seeding of created bare soil and avoidance of excavation during the wet season, for all new construction or reconstruction and for improvements in City infrastructure over one acre in size. City Council will consider including the costs of developing and adopting this ordinance in the operating budget for the City. Once adopted, the developer will pay the costs of developing erosion control plans and for implementing erosion control facilities.

### Temperature

The City of Sublimity's sewage is all pumped to the City of Stayton's POTW Treatment Facility for treatment and disposal. Temperature management actions for the City of Sublimity's sewage are coordinated by the City of Stayton via their NPDES permit. Of greater concern to the City of Sublimity is the maintenance of shading vegetation, given elevated summer temperatures and low flows of Mill Creek during the summer months. Most of Mill Creek's banks are not shaded and the water is hit by direct sunlight. However, Mill Creek is entirely outside the City limits. The unnamed tributaries inside the City limits are lined with mature trees and shaded, but dry during the summer months. The City's Code contains riparian setback requirements, outside the 50-year flood event, designed to maintain an adequate width of riparian vegetation (City Code 2.204.04 Page 71). However the language is not specific to the exact minimum number of feet the setback needs to maintain from the waterway. The City will change the code to include

specific language that tells how many minimum feet the set back must have from the waterway regardless of the 50 year flood. For example, the language will read something like “all development shall be planned, designed, constructed and maintained beyond the 50 year flood plain with a minimum setback of 15 feet regardless of the floodplain limitations”. The City also may have opportunities to encourage additional vegetation along the unnamed seasonal creeks within the City limits.

**Bacteria**

The City's Land Development Code contains requirements that new development be served by a sanitary and storm sewer system. Costs for new development to connect to the sewer systems are borne by the developer. The City regularly cleans and maintains its storm water catch basins and streets. This regular maintenance reduces mercury and bacterial discharges into the waterways. The regular maintenance also reduces the overall system maintenance costs by avoiding unnecessary concrete erosion caused by hydrogen sulfide. The City of Stayton also maintains all of the gravity sewers, pump stations, and force mains located within its urban growth boundary. The City disposes of all pumped material from its sewerage system in accordance with DEQ requirements.

**Conclusion:**

As stated at the beginning of this plan, it is our understanding that these statements, along with the attached matrix, will be seen by DEQ as meeting their requirement for the City's Total Maximum Daily Load Implementation Plan. All of the strategies outlined here and listed in the matrix are consistent with the City of Sublimity's land use plans. The City will check for and attain consistency with local and statewide land use laws in any future actions related to TMDL implementation.

# City of Sublimity TMDL Implementation Plan Matrix

<b>Pollutant</b> What pollutants does the TMDL address?	<b>Source</b> What sources of this pollutant are under your jurisdiction?	<b>Strategy</b> What is being done or what will you do to reduce and/or control pollution emanating from this source?	<b>How</b> Specifically how will this be done?	<b>Benchmark</b> How will you demonstrate successful implementation of completion of this strategy	<b>Minimum Control Measure</b>	<b>Timeline</b> When will the strategy begin? Be completed?	<b>Measure</b> What intermediate goals will be achieved and by when to know progress is being made?	<b>Status Annual Reporting</b>
<b>Temperature</b>	1. Solar radiation input 2. Water treatment plant discharges 3. Wastewater overflows from collection system. 4. Marion Estates Nursing Home Pond.	a. Maintain existing shading vegetation and setback requirements. b. Work with property owners along waterways within City to initiate riparian tree plantings. c.. Maintain a no overflow policy from Wastewater collection system and lift stations in Sublimity. d. Work with Marion Estates to maintain and increase shading. e. Allow no discharge from pond to storm sewer during critical summer months.	a. The City will work with landowners and schools to ensure shade is maintained. b. The City will develop a tree-planting program with local nurseries and Marion Estates. c. Sublimity will enforce construction disinfection policy. d. Educate Marion Estates to the importance of no discharges from pond during critical months.	a. Enforce code requirements and track the number of violations. b. Monitor new growth in riparian and pond areas by visiting sites annually. c. Track the number of school riparian planting projects which City was a partner. d. Inspect Marion Estates pond to ensure no discharge and record discharges.	Public Education and Outreach Pollution Prevention in Municipal Operations	Begin 2008 ongoing	a. Document present conditions with photographs. Compare with future photographs of riparian areas. b. Complete at least one riparian tree planting project every two years.	
<b>Bacteria</b>	1. Erosion prevention (Captures Mercury) 2. Pet and animal waste 3. Road ways and storm catch basins 4. Reduce disinfection chemicals from water system before discharge to waterways within City. 5. Ensure proper operation of Sanitary sewer lines, connections, and pump stations. 6. Marion Estates Nursing Home Pond.	a. Encourage riparian tree planting: enforce City Code requiring erosion control plans. b. Send Newsletter to homeowners and give one educational presentations at high school per year, emphasis pet and animal waste (Dog, Cat, Duck). c. Clean streets and storm catch basins on annual basis. d. De-chlorinate all high chlorine disinfection water from construction before discharge to waterways within City. e. Maintain and expand as needed sewer collection system O & M program.	a. The City of Sublimity will maintain certified operations of its POTW Collection System to ensure a no overflow policy and proper procedures are followed if an overflow occurs. b. City produces yearly newsletter and presents water quality class at high school. c. City schedules yearly cleaning of catch basins and roadways. Will track pounds of debris removed.	a. Yearly newsletter b. Maintain record of catch basin and street cleaning. c. Schedule classes	Pollution Prevention in Municipal Operations Public Education and Outreach Pollution Prevention in Municipal Operations	Begin 2008 Ongoing	Heightened public awareness related to bacteria and temperature issues. Distribute and collect survey in newsletter and classes to determine effectiveness of public outreach.	
<b>Mercury</b>	1. Natural background in soil and rock from erosion and sedimentation 2. Erosion and sedimentation	Limit erosion and silt runoff to unnamed waterways and reduce stream turbidity	City will add specific erosion control requirements (e.g. silt fences, mulching, seeding, avoid excavation during wet weather) to Code.	a. Once adopted City Recorder and Public Works department will monitor compliance with Land Development code requirements. b. Ensure and document new pre-developments over or equal to one acre obtain 1200C permit.	Construction Site storm water runoff control pre-development	a. Begin 2008 Completed 2009 b. Check on 1200C permits obtainment ongoing	a. Erosion Control requirements adopted by the City b. Monitor and check number of 100C permits obtained	