



2009

# City of Marysville Stormwater Management Program



February 16, 2007 to  
February 15, 2012

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## PURPOSE

The National Pollutant Discharge Elimination System (NPDES) Permit (Permit) is a federal permit that regulates stormwater and wastewater discharges to waters of the State. While it is a federal permit, the regulatory authority has been passed to the Washington State Department of Ecology (Ecology). The Phase II Stormwater Permit for Western Washington was issued by Ecology in January of 2007 and went into effect the following month. While the Permit went into effect in February of 2007, the Permit itself phases program implementation requirements over the duration of the five year permit term.

The Permit requires that all affected municipalities create and implement a Stormwater Management Program (SWMP) which addresses five required program elements: 1) Public Education and Outreach, 2) Public Involvement and Participation, 3) Illicit Discharge Detection and Elimination, 4) Run-Off from New Development, Redevelopment and Construction Sites and 5) Pollution Prevention and Operation and Maintenance for Municipal Operations. Select cities, such as the City of Marysville, are required to provide additional actions that are necessary to meet the requirements of their applicable Total Maximum Daily Loads (TMDLs).

The SWMP shall be designed to reduce the discharge of pollutants from the regulated small municipal separate storm sewer system (MS4) to the maximum extent practicable (MEP), meet state AKART (all known and reasonable technologies) requirements and protect water quality.

## INTRODUCTION

The City of Marysville is located in west central Snohomish County approximately five miles north of Everett. The City is drained by the Allen/Quilceda watershed which is located in the lower Snohomish River Basin. The watershed contains approximately 70 minor streams and tributaries and encompasses an area of



approximately 49 square miles. The tributaries in the watershed drain into Allen and Quilceda Creeks. Both of these creeks empty into Ebey Slough near the mouth of the Snohomish

River. Roughly 11 square miles of the Allen/Quilceda watershed is drained by Allen Creek with the other 38 square miles of the watershed being drained by Quilceda Creek.

Major highways within the City include Interstate 5, state route 531, state route 528 and state route 529. Burlington Northern Railroad also runs through the City. Marysville was officially incorporated on March 20, 1891 and follows a comprehensive plan which is updated annually.

### Population and Growth

The City of Marysville was incorporated in 1891 with 350 inhabitants. Timber related industries increased the population to 1250 residents by 1905. As new buildings,

schools, streets, bridges and highways were built the town's population continued to grow. In 1954 2,500 people resided in the City. By 2008 the City had grown to 36,210 residents. Upon annexing the majority of its Urban Growth Area (UGA), in December 2009, the City grew to approximately 57,000 residents. Today a large number of City residents are employed in manufacturing, retail trades, education, or health and social services. The population is largely supported by the Boeing plant in nearby Everett.

## Land Use Distribution

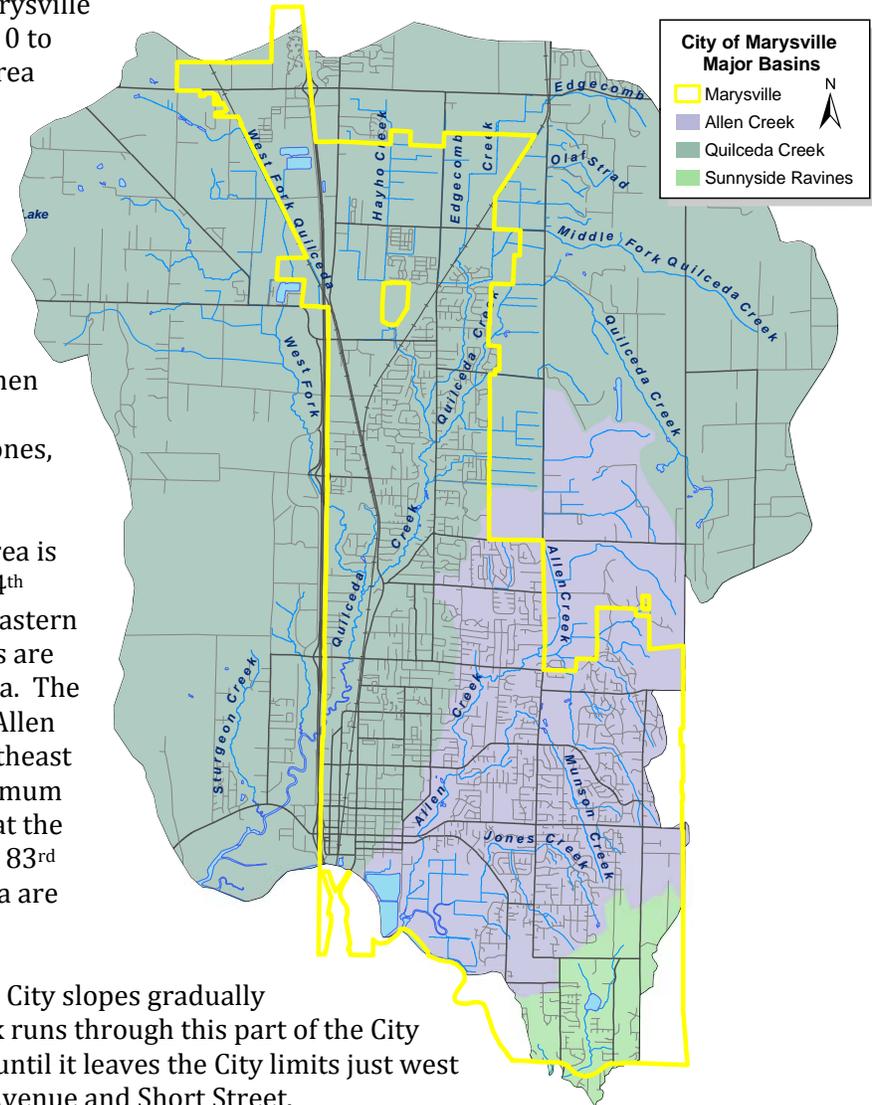
Marysville is largely comprised of residential neighborhoods. A large majority of commercial and industrial properties are located on the east and west sides of State Ave, which is the main north-south thoroughfare through the City. New commercial and industrial development is occurring in the Downtown, Lakewood and Smokey Point areas of Marysville.

## Topography

The southwestern part of Marysville is generally flat ranging from 0 to 60 feet in elevation. In this area of the City, drainage from the major streams empty into Ebey Slough.

The southeastern and northeastern parts of the City are higher in elevation with drainage generally flowing north westerly and then south westerly toward Ebey Slough. The headwaters of Jones, Munson and King Creeks are located in the southeast. The maximum elevation in this area is 465 feet, between 60<sup>th</sup> and 64<sup>th</sup> streets on Highway 9 at the eastern edge of the City limits. Slopes are generally westerly in this area. The headwaters to Quilceda and Allen Creeks are located in the northeast portion of the City. The maximum elevation is 430 feet located at the intersection of 74<sup>th</sup> place and 83<sup>rd</sup> avenue and slopes in this area are generally northwesterly.

The northwestern part of the City slopes gradually south. Part of Quilceda Creek runs through this part of the City in a southwesterly direction until it leaves the City limits just west of the intersection of Beach Avenue and Short Street.



## Hydrologic Conditions

Marysville is made up of the Quilceda and Allen Basins which are both sub-basins of the larger Snohomish Basin. The Quilceda Basin covers an area of roughly 36 square miles and consists of till,

outwash, Custer Norma and saturated soils with the central plain of the basin being comprised primarily of a combination of Custer Norma and outwash soils. The eastern and western hillsides primarily consist of till soils. Till soils are dense and have limited infiltration capabilities. On the other hand Custer Norma and outwash soils drain well. However, due to high winter groundwater tables in the basin, surface water runoff is common. The Allen basin covers an area of roughly 11 square miles and consists of Till, Outwash, Custer Norma and Saturated Soils. Again, due to high groundwater tables in the winter, surface water runoff is common in the Allen Basin as well. Marysville receives approximately 37.5 inches of precipitation annually with the majority of it falling in the winter and spring months.

## **Receiving Water Quality/Pollutants of Concern**

The City of Marysville's storm drainage system ultimately outfalls to Ebey Slough. Both Allen and Quilceda creeks have been placed on Washington State's 303(d) list for fecal coliform, requiring Total Maximum Daily Load (TMDL) cleanup plans. Other pollutants of concern within the Allen/Quilceda Watersheds include total suspended solids, fertilizers, petroleum, detergents, heavy metals and organic wastes. Low dissolved oxygen levels are also a concern in summer months. Primary sources of pollution in the watershed include high sediment loads due to construction activities, runoff from agricultural and pasture lands, failing septic systems in older neighborhoods and increased impervious runoff causing high pollutant loading from urbanization. All these activities have potentially detrimental effects on water quality within the watershed.

## **Storm Water Drainage System**

Within Marysville, stormwater runoff from buildings, driveways, parking lots and other impervious surfaces is collected, then conveyed through public drainage facilities. Most of the tributary drainages lines are within existing road rights-of-way. Run-off is collected on individual properties and either conveyed to an area-wide detention/water quality facility prior to release or detained and treated on-site and released into the public system. The City built a seven acre regional detention facility in 2003. City-owned surface water facilities are complemented by the numerous on-site detention and water quality enhancement facilities constructed by private landowners and businesses.

# PROGRAM COMPONENTS

## 1. Public Education and Outreach

### Permit Requirements

- Develop an education program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the Permittee with the goal of reducing or eliminating behaviors and practices that cause or contribute to adverse stormwater impacts.
- Develop a method to measure the understanding and adoption of the targeted behaviors for at least one targeted audience in at least one subject area.
- Track and maintain records of public education and outreach activities.

### Current Activities

The City of Marysville has developed a public education and outreach (PEO) program. The PEO program has been prioritized to target the required audiences and subject areas. A number of different campaigns have been developed for each set of audiences and problems.

The City has produced a Microsoft Excel document with a calendar of past and planned events and details of the education plan. Progress on the PEO program will continue to be tracked in the Excel spreadsheets designed for this purpose. (S5.C.1)

The **General Media Campaign** will target the general public and homeowners. This campaign has several different elements including:

- a) A general information board explaining each of the permit requirements and stormwater pollution problems and what the target audience can do to solve them. The board is displayed at festivals and events Citywide. Events include the Homegrown Festival, Touch a Truck, Earth Day and Poochpalooza. The board has also been used for public speeches and public meetings such as the Friends of the Library.
- b) Numerous Pet Waste Stations have been installed in City Parks. The Stations and the information associated with them educate the general public on the health and environmental risks associated with pet waste.
- c) In 2008 the City began purchasing dog waste dispensers and bag refill rolls. Tags with educational information were attached to the dog waste dispensers with directions on how to receive free refill bags. An Excel spreadsheet with the number of dispensers purchased and distributed and the number of refill rolls purchased and distributed is kept. The number of refill requests will serve as a monitoring criterion. The pet waste portion of the general media campaign is of high priority because of the Snohomish River tributaries TMDL requirements.
- d) In August 2009 the City received a box of manuals called "Rain Garden; Handbook for Western Washington Homeowners." This manual was created by Washington State



University Extension and distributed to local cities by Snohomish County. These handbooks are now available to City residents at the front counter of the Public Works building. The manuals are an excellent source of information about Low Impact Development techniques for the general public, homeowners, landscapers and property managers.

- e) A Microsoft Power Point presentation with information about each of the targeted behaviors was created and displayed on the public access channel. The power point presentation is directed to all target audiences. The content of the presentation is updated and changed at least once a year to target all of the required education elements in different ways. The information rotates with the general announcements daily on the public access channel. The information started to air in August 2008.
- f) In December 2009 the City purchased 1,000 drain markers to be placed throughout the city. The markers have the “Puget Sound Starts Here” logo and a line of text that reads “Only rain down the drain.” The markers will help raise awareness about stormwater and the messages of the regional campaign.
- g) The City has been participating in an annual Earth Day event with the AQWA Team. This group collaboratively organizes the event each year. In 2007 the event was hosted in two locations, the Marysville Waterfront Park and Jennings Park. The 2007 event featured informational booths and a service activity. In 2008 the event was organized as a walking tour that started at Waterfront park, went through the City Public Works buildings and along the slough. There were booths, bird watching activities and tours of the City Waste Water Treatment plant. In 2009 the event was just outside of City limits in a community park. This event was a service day and volunteers spread 30 yards of bark around plants in a riparian zone recently restored by Snohomish County.



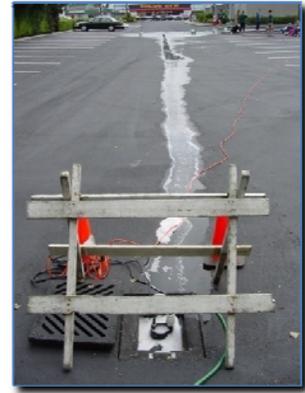
The **Elementary Education Program** targets the general public. The City has cooperated with a local not-for-profit agency and the Marysville School District to provide water quality education to fifth grade classrooms within Marysville. The curriculum covers a range of topics relating to salmon habitat including: water quality, macro invertebrates, vegetation monitoring and more. The students also learn about proper car washing procedures, the storm drain system, and the importance of stream buffers. The program aims to reduce or eliminate behaviors and practices that cause or contribute to adverse storm water impacts.

Measurement method: Students involved in the program are given pre and post tests specific to the information taught in the program. Increased understanding of the topics discussed help to determine the program’s effectiveness.

The **IDDE campaign** targets the general public, homeowners and property managers. This campaign includes several different elements including:

- a) A door hanger has been created for the maintenance crew to distribute when cleaning stormwater facilities, catch basins and the sanitary sewer. Each door hanger has information about spills and illegal dumping and how to report them. Notes can be written on the door hangers letting residents know when and what kind of work was done.

- b) The City owns a clean water carwash kit. The kit is advertized on the City web-site, general information board and a flyer located in a kiosk at the front counter of the Public Works building.
- c) In March 2007 the City sent a letter to property owners in a newly annexed area with privately owned stormwater facilities. The letter notified residents of the facility and the home owner association's shared responsibility to maintain it. Recommended maintenance standards were included in the mailing. The notification letters were used as a pilot program to see how many property owners would respond. Individual homeowner association contacts are unknown and sending individual letters was the only option. The City received very few responses and no maintenance records as was requested.
- d) A magnet advertising Marysville's spill reporting number was created in April 2008. These magnets are passed out at the front desk of the Public Works building, during festivals and inspections.
- e) Flyers addressing issues relating to IDDE were inserted into utility bills in the June/July 2009 bill run. The flyer included information about the impacts of illicit discharges and how to report them.



The **Business Inspection and Education Program** targets businesses with the potential to cause stormwater pollution. In December of 2008 a list of all the licensed businesses in Marysville was categorized by industry type. All commercial animal handling areas associated with Standard Industrial Code (SIC) 074 and 075 were identified and mapped. Commercial animal handling businesses were sent educational information in June 2009. The letter also informed the businesses that they would be inspected. The inspections began in August 2009. Surface Water staff members are conducting the inspections. During the inspections staff members look for the use of applicable BMP's. If BMP's are not in place and corrective actions are needed Surface Water staff members will inform the business of the corrections verbally, and in writing, and schedule a return inspection. If the corrections are not made the business information will be passed on to code enforcement. Based on the inspection results as a whole the City will determine if inspections of commercial animal handling areas should be completed again during this permit term.

Further expansion of the Business Inspection and Education program will continue throughout the permit term. See the Planned section for further information on upcoming actions concerning this program. This program is designed to fulfill some of the City's education, IDDE and TMDL requirements.

The **Technical Review Procedures** will target engineers, contractors, developers, review staff and land use planners. The City has several different methods to ensure that the target audience is up to date with technical standards for site and erosion control plans, low impact development (LID) techniques and stormwater treatment and flow control Best Management Practices (BMP's).

- a) The City obtained grant funding in 2006 to develop low impact development language to add to the Marysville Municipal Code (MMC). In May of 2007 a new low impact development chapter, 19.49 Low Impact Development, was added to the MMC. By incorporating a LID section into the code, the City is encouraging the use of LID and is offering incentives to developers to utilize LID procedures. This section recommends using

the LID techniques and BMP's described in the Low Impact Development Technical Guidance Manual for Puget Sound, 2005, published by the Puget Sound Action Team.

- b) The Engineering Services department develops the Engineering Design and Development Standards (EDDS). The EDDS are updated annually. These standards must be used by engineers, developers and contractors submitting building plans to the City. The EDDS are publicized on the City website and made available at the front counter of the Public Works Building.
- c) City has adopted the 2001 Manual Stormwater Management Manual for Western Washington. All review staff and planners have this manual available to them. A link to the Manual is provided on the City website. Building plans submitted for review in the City are held to the Manual standards. The City will be adopting the 2005 Stormwater Management manual for Western Washington by February 2010.

Measurement method: Each year starting in 2009, the number of development projects incorporating LID practices will be counted. The City Planning Department has added an LID check box to their Permits Plus project review tracking software. Each development project utilizing LID practices will have this box checked during the plan review process and at the end of each year a report will be run to determine the total number of LID projects that occurred. If the number of projects using LID techniques increases each year the education program is working.

### **Planned Activities**

The **General Media Campaign** will target the general public and homeowners.

- a) The City will continue using the general information board at events.
- b) The City will to continue the use of the existing pet waste stations and plans to purchase additional stations as parks expand.
- c) The City will continue distributing dog waste dispensers.
- d) New educational information and brochures will be developed and posted on the City website. Links to other applicable websites and educational information may also be posted.
- e) The City plans to continue coordinating with the AQWA Team to organize the Earth Day event.

The **IDDE campaign** will target the general public, homeowners and property managers.

- a) The City maintenance crew will continue to distribute door hangers when cleaning stormwater facilities, catch basins and the sanitary sewer.
- b) The City will continue to advertize the clean water wash kit on the general information board, web-site and flyer located in the kiosk.
- c) If another annexation occurs and there are private facilities within the annexed area, the City will notify property owners about their maintenance responsibilities in some fashion. Because outreach efforts were ineffective from the previous annexation regarding private storm facility maintenance, details of this notification have yet to be determined. The contact method will depend on the size of the annexation, the number of facilities and facility ownership.
- d) The City will continue to distribute IDDE magnets at the front desk of the Public Works building, during festivals and inspections.

The **Business Inspection and Education Program** will target businesses with the potential to cause stormwater pollution. Businesses using automotive chemicals, hazardous cleaning supplies, pesticides, fertilizers and other hazardous materials are a high outreach priority. Outreach to these businesses may include sending educational materials or inspections. Surface Water staff members have not determined the potential inspection overlaps that may occur with Waste Water staff, the Fire District or the Snohomish County Health Department. To avoid multiple inspections of a single business, the Surface Water staff members will meet with these departments to coordinate the inspection efforts.

The **Technical Review Procedures** will target engineers, contractors, developers, review staff and land use planners.

- a) The City will continue to encourage the use of LID and the Low Impact Development Technical Guidance Manual for Puget Sound, 2005, published by the Puget Sound Action Team.
- b) Engineering Services staff will continue to ensure plans meet City EDDS.
- c) Currently the City has adopted the 2001 Manual. The City is developing an ordinance to adopt the 2005 Stormwater Management manual for Western Washington by February 2010. Engineering Services staff and Planners will have this manual available to them. A link to the manual will be provided on the City website. Building plans submitted for review in the City are held to the manual standards. When the new ordinance is adopted, the City will distribute information about the 2005 manual, and any other policy or procedural changes, to engineers, contractors and developers who are submitting plans to the City.

The following table outlines the implementation schedule for 2009 to achieve the goals and objectives of the PEO program and meet the compliance deadlines in the Phase II Permit.



S5.C.1- Public Education and Outreach	2010												2011												2012			
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
Cost tracking																												
General media campaign				Earth day		Strawberry Festival	Poochaloopa	Homegrown festival	Touch a Truck			Merrysville				Earth day		Strawberry Festival	Poochaloopa	Homegrown festival	Touch a Truck			Merrysville				Earth day
	update	TV21					update						update	TV21				update							update	TV21		
	ongoing											count bag requests																
	ongoing											count bag requests																
	Drain markers placed throughout the city																											
Elementary Env Ed				teaching																								
					results																							
IDDE Campaign																IDDE flyer												
	magnets distributed																											
	maintenance crew distributing door hangers																											
Business Inspection and Education Program																			update list									
																			info mailing for business									
	continue animal facility inspections											Finish	assess inspection results															
Technical Review Procedures							EDDS revised																					
	2005 manual adopted																											

- planned action
- X estimated complete date
- planned assessment activity
- completed activity
- permit due date
- entire program implemented due date

## 2. Public Involvement and Participation

### Permit Requirements

- Provide ongoing opportunities for public involvement through advisory councils, watershed committees, participation in developing rate-structures, stewardship programs, environmental activities or other similar activities. The public must be able to participate in the decision making process involving the development, implementation and update of the SWMP.
- Make the SWMP document and Annual Report available to the public by posting it on the permittee's website.

### Current Activities

The City of Marysville hosts the Allen Quilceda Watershed Action Team (A/QWA) meetings bi-monthly. The A/QWA Team is a diverse community group working together to implement the Quilceda/Allen Watershed Management Plan and to improve the overall water quality of streams in the watershed through education, community outreach and improvements to the environment. The team is comprised of representatives from local cities, Snohomish County, state agencies, the Tulalip Tribe, Marysville School District, non-profit organizations, local businesses and residents. Information about the A/QWA team is posted on the City website and the meetings are open to the public. (S5.C.2)



The City finalized an update to the Surface Water Comprehensive Plan in November 2009. The plan identifies upcoming capital projects and costs associated with these projects and permit compliance. As part of the development of the plan, public involvement was sought in identifying areas with drainage concerns. The plan was adopted by the Marysville City Council in December 2009. (S5.C.2)

The City began working on a comprehensive utility rate study in October 2007. The study evaluated stormwater, sewer and water utility rates in the City. Requests for public comment occurred at multiple times during the rate development. The rate study will be sent to council for approval and a public hearing will be held in January 2010.

Annually the City will request public comments on the SWMP. The comments received on the SWMP will be reviewed by Surface Water staff when updating the document. (S5.C.2.a)

To meet the required State and local public notice requirements a link (<http://marysvillewa.gov/publicworks/swm/NPDES.htm>) from the Surface Water web page titled "NPDES Phase II Permit" was created to make submittals required by the Permit available to the public. The SWMP, approved Quality Assurance Project Plan (QAPP) and previous Annual Reports, are all available through the link. (S5.C.2.b)

### Planned Activities

The City plans to continue participation in A/QWA Team. (S5.C.2)

The City will continue to post a request for comments on SWMP updates and maintain a link to the SWMP and other permit-required submittals. (S5.C.2.b)

The following table outlines the implementation plan for 2009 to achieve the goals and objectives of the Public Involvement Program and meet the compliance deadlines in the Phase II Permit.

S5.C.2- Public Involvement and Participation	2007												2008												2009																							
													1 yr												2 yr yr. report												30mo											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D												
2 Watershed committees, stewardship programs, environmental activities							A/QWA Team		A/QWA Team					A/QWA Team		A/QWA Team			A/QWA Team		A/QWA Team					A/QWA Team		A/QWA Team			A/QWA Team		A/QWA Team															
2 Participation in developing rate structures																New SW Com Plan Started																			plan publicized & sent to council													
																								Stormwater, sewer and water utility rate study began in October 2007																								
a. Participate in SWMP development																																			evaluate & update SWMP & the BMPs used. Publicize a request for comments on the SWMP													
b. SWMP and annual report available to public																																			post revised SWMP on web-site													

- planned action
- ~~X~~ estimated complete date
- planned assessment activity
- completed activity
- permit due date
- entire program implemented due date

S5.C.2- Public Involvement and Participation	2010 3 yr yr. report 46 mo												2011 4 yr yr. report 180day												2012 5 yr expire				
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	
2 Watershed committees, stewardship programs, environmental activities		A/QWA Team		A/QWA Team		A/QWA Team		A/QWA Team		A/QWA Team		A/QWA Team	continue involvement with A/QWA Team																
2 Participation in developing rate structures																													
	rate study advertized and sent to council																												
a. Participate in SWMP development	evaluate & update SWMP & the BMPs used. Publicize a request for comments on the SWMP												evaluate & update SWMP & the BMPs used. Publicize a request for comments on the SWMP																
b. SWMP and annual report available to public			post revised SWMP on web-site												post revised SWMP on web-site														

- planned action
- X** estimated complete date
- planned assessment activity
- completed activity
- permit due date
- entire program implemented due date

### 3. Illicit Discharge Detection and Elimination

#### Permit Requirement

- Include an ongoing program to detect and remove illicit connections, discharges and improper disposal, including any spills not under the purview of another responding authority, into the municipal separate storm sewers owned or operated by the Permittee.
- Develop a storm sewer system map, implement ordinances to prohibit illicit discharges and create a program to detect and address illicit discharges.
- Publicize a hotline or other local telephone number for reporting of spills or other illicit discharges. Track illicit discharge reports and actions taken in response to calls.
- Adopt and implement procedures for IDDE program evaluation and assessment, including tracking the number and type of spills or illicit discharges identified, inspections made and any feedback received from public education efforts.
- Provide appropriate training to staff on identification and reporting of illicit discharges.

#### Current Activities

At the time of permit issuance the City was using a Trimble Pathfinder Professional sub meter Global Positioning System (GPS). A majority of the structural stormwater BMP's have been mapped using this unit. In September 2009 the City purchased a Topcon GR3 sub centimeter GPS system. This GPS system will allow more information to be collected in the field and provide higher accuracy data within the City's GIS. The Surface Water and Global Information Systems (GIS) Departments have worked collaboratively to better define the way catch basins, facilities and outfalls are mapped in the City. (S5.C.3.a)



Tributary conveyances and associated drainage areas have been mapped based on Snohomish County and LIDAR data sources. Land use data is also mapped based on Snohomish County Assessor information and current City zoning. (S5.C.3.a.i)

The City of Marysville employs two full time GIS staff members to handle the mapping requirements for all City utilities. They digitize the MS4 system into ArcGIS utilizing paper and digital asbuilt drawings. The GIS Analyst also utilizes the GPS in the field to verify the accuracy of the digitization and to map areas that have not been asbuilt. Before permit issuance GIS staff were only mapping public storm systems. In 2007 GIS staff began mapping all public and private systems that are authorized and/or connected to the MS4. (S5.C.3.a.ii)

Existing infiltration facilities have been mapped during field inventories done with the GPS unit over the past 5 years. New stormwater facilities are mapped at the time asbuilt drawings are received whether the system connects to an existing portion of the MS4 or not. (S5.C.3.a.iii)

All the GIS information the City collects and maintains is recorded digitally. The information can be provided to the Department of Ecology upon request in the preferred electronic format. (S5.C.3.a.iv)



The City Council adopted ordinance 2782 in July 2009 to prohibit non-stormwater illegal discharges into the MS4. The ordinance creates a new chapter in Marysville Municipal Code (MMC) under Title 14- Water and Sewers called 14.21 Illicit Discharge Detection and Elimination (IDDE). The IDDE Chapter includes a list of acceptable discharges, prohibited discharges and conditionally acceptable discharges. (S5.C.3.b)

Within the MMC IDDE chapter, discharges from lawn-watering and other irrigation runoff are addressed in MMC section 14.21.060- Conditional discharges. This section refers the reader to MMC Chapter 14.09 Water and Sewer Conservation Measures. This chapter has detail on programs offered by the City to help citizens save water. This chapter also gives situations when the City can restrict the use of water to citizens. The outreach efforts described in this chapter should minimize lawn-watering wastewater. Some of the outreach efforts include providing citizens with outdoor hose nozzles that automatically shut off, water use audits, lists of business that install conservation fixtures and systems, economic incentives for voluntary installation of conservation fixtures and systems, and a watering calendar that may restrict the days residents are allowed to water their lawns in the Summer months. (S5.C.3.b.ii)

Within the MMC IDDE chapter, discharges from street and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents, are addressed in MMC section 14.21.060- Conditional discharges. This section allows street and sidewalk wash water, water used to control dust, and routine external building wash down, but the amount of water used must be minimized. This section also requires that active construction sites sweep streets prior to washing the street. The General Media Campaign, described in Section 1, will also be used to raise awareness of the potential pollutants that can be washed into the MS4 by residential sidewalk cleaning. (S5.C.3.b.ii)

The City has not identified any discharges acceptable by Ecology that are contributing a significant source of pollutants to waters of the State. For this reason no modifications were made to the lists of acceptable discharges or conditional discharges in the MMC IDDE Chapter. (S5.C.3.b.iv)

The IDDE chapter refers to MMC Title 4- Enforcement Code escalating enforcement procedures and actions. City Surface Water staff will work with the Code Enforcement officer as needed to implement the enforcement provisions of the IDDE Chapter. (S5.C.3.b.v- vi)

IDDE priority investigation areas have been identified using the methods recommended in chapter 5 of, "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments" by Robert Pitt and the Center for Watershed Protection, October 2004 (IDDE Manual). The City's GIS information was used to review land use data, business and industrial activity, areas where complaints have been registered in the past, areas with old sewer lines and neighborhoods with septic systems. Areas of industrial zoning were assumed to have storage of large quantities of materials that can potentially become an illicit discharge. The Drainage Needs Report (DNR) developed by Snohomish County in 2002, provided a shapefile of sub basins within the Quilceda and Allen drainage basins. The DNR sub basin areas were modified slightly to include only sub basins within the city limits and combined so that all sub basins were of

a similar size. The sub basins were then ranked by assigning points based on the criteria below to determine the highest priority sub basins within the city. (S5.C.3.c.i)

Complaints- Sub basins with a high number of past complaints were given more points.

- From 0-5 complaints = 0
- From 6-19 complaints =1
- More than 20 complaints =2

TMDL- If a portion of a TMDL water body runs through the sub basin it was assigned more points.

- No= 0
- Yes= 1

Outfalls- Sub basins with a high number of outfalls received more points.

- 0-1= 0
- 2 to 5 = 1
- 6 and over = 2

Zoning- Sub basins with industrial usage or high housing density were given more points than other sub basins. If there was more than one predominant zoning category in the sub basin then it received points according to whichever zoning type gives it the most points.

- Open, Public-Institutional, Recreation, Multi-Family Low, Single Family Low – 0
- Multi-Family Medium, Single Family Medium-1
- Multi-Family High, Single Family High, Single Family High Small Lot-2
- Business park, Community Business, Downtown Commercial, General Commercial, Mixed use, Neighborhood Business- 3,
- General industrial, Light industrial-4

Old Sewer- Sub basins with ageing sewer pipes were assigned more points than basins with newer infrastructure.

- Installed in 1960 to the present-0
- Installed in or before 1959-1

Septic- If the sub basin has areas with known septic systems it was given more points.

- No known areas with septic-0
- Known septic system area-1,

MS4 connectivity- This was a yes, no answer. If the sub basin is primarily covered with the MS4 the answer will be yes. If there is a ditch system that is known to connect into the piped system then the answer will be yes. If there is no known piped system, or ditch connectivity, the answer will be no. For sub basins without a MS4 connection, none of the other points assigned will be taken into account.

NPDES Facilities – Sub basins with a high number of NPDES permitted facilities were given more points. The location of these facilities were provided by the Washington State Department of Ecology and were limited to included only those facilities permitted for hazardous waste generation, hazardous waste storage, dairy activities or active enforcement actions.

- No NPDES facilities-0
- Less than three NPDES facilities per square mile -1
- Between three and ten NPDES facilities per square mile -2

- Greater than ten NPDES facilities per square mile -3

Average Development Age – Sub basins containing older developments were given more points.

- Average development age is less than 10 years old -0
- Average development age is between 10 and 20 years old -1
- Average development age is between 20 and 50 years old -2
- Average development age is greater than 50 years old -3

The priority areas are shown in Figure 3.1.

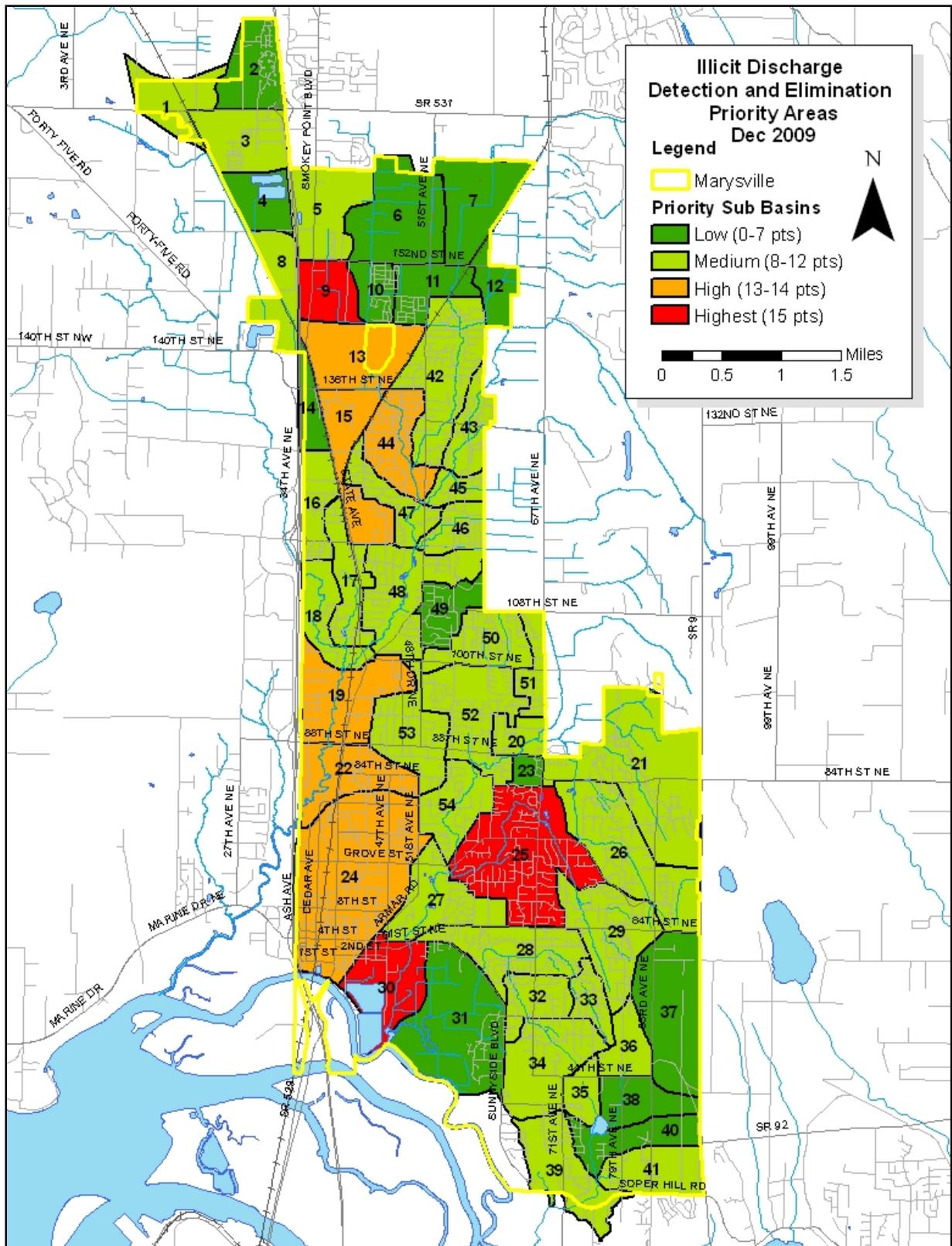


Figure 3.1

In the winter of 2009 Surface Water staff conducted a field assessment of all assumed outfall locations in the City. Many outfall locations were assumed because they are in difficult to reach areas, down steep slopes or on private property. All outfalls that were not directly discharging from a stormwater pond were identified using the Trimble GPS unit. High visibility markers were put in so the outfalls would be easier to locate in the future. Any incorrect mapping information was adjusted based off the fieldwork. (S5.C.3.c.ii)

An IDDE specific education program has been developed based on the requirements in section S5.C.1. More details on this program are in Section 1. (S5.C.3.d.i)

A hotline for reporting illicit discharges and spills was established in June 2008. The hotline was added to the blue pages under “spill reporting” in January 2009. The number has also been advertized on magnets distributed at events and advertised on TV21, the City’s local access channel. In the June/July utility bills an illicit discharge outreach flyer was sent out. The flyer advertized the problem illicit discharges cause, ways to prevent them, and how to report them. The City will keep records of all calls received and follow-up actions taken. (S5.C.3.d.ii)

All field staff responsible for identification, investigation, termination, cleanup and reporting illicit discharges, including spills, and illicit connections have read “Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments” by Robert Pitt and the Center for Watershed Protection, October 2004 (IDDE Manual) for initial training on these activities. The staff members responsible for these activities shadowed Snohomish County field personnel while doing an IDDE outfall inspection in July 2008. Follow up training shall be provided as needed to address changes in procedures techniques or requirements. (S5.C.3.f.i)

All field staff who may encounter illicit discharges have viewed, "Working for Clean Water: It begins with you," to introduce them to IDDE. The Streets and Operations crews viewed the video on 3/6/09, The Water Quality crews viewed the video on 4/9/09 and the Parks crews viewed the video on 9/9/09. Follow up training shall be provided as needed to address changes in procedures techniques or requirements. (S5.C.3.f.i)

### **Planned Activities**

Targeted field assessment activities will occur in Sub basins 9, 25, and 30 in the summer of 2010 to determine if there are any problems in these sub basins. These sub basins were identified as the highest priority sub basins based on the ranking criteria described above.

Targeted field assessment activities will occur in sub basin 9 in the summer of 2010. This sub basin was identified as a highest priority sub basin. This sub basin contains a high concentration of industrial use. The basin also has a high concentration of NPDES permitted facilities. A tributary to Hayho Creek runs through this sub basin. This area is also prone to seasonally high water tables. Furthermore, State Avenue/Smokey Point Boulevard also run through this sub basin from north to south. This is a very high traffic corridor. The industrial uses and State Avenue will be the primary areas of interest during field assessments. (S5.C.3.c.ii)

Targeted field assessment activities will occur in sub basin 25 in the summer of 2010 to determine if there are any problems in the sub basin. This sub basin was identified as a highest priority based on the ranking criteria described above. This sub basin is a residential neighborhood with a high traffic arterial running through it. One of the outfalls has been observed flowing during dry periods

in the past. Sampling and further monitoring should be conducted to determine if the outfall is receiving groundwater or an illicit discharge. (S5.C.3.c.ii)

Targeted field assessment activities will occur in sub basin 30 in the summer of 2010. This sub basin was identified as a highest priority sub basin. Sub basins 30 contains an industrial park, the City Public Works buildings and Waste Water treatment plant. Allen Creek runs through this sub basin and the southerly portion is bordered by Ebey Slough. Some areas of this sub basin are prone to flooding because of the elevation and proximity to Allen Creek and Ebey Slough. The industrial park will be the primary area of interest during field assessments because the City will be implementing a Stormwater Pollution Prevention Plan (SWPPP) for the Public Works buildings and Waste Water treatment plant. (S5.C.3.c.ii)

Additional targeted field assessment activities will occur each year as required by the Permit. Sub basins ranked as high priorities that have a potential for illicit discharges will be targeted. (S5.C.3.c.ii)

Screening for illicit connections during inspections will be completed using the IDDE Manual. (S5.C.3.c.ii)

Written procedures for characterizing the nature of an illicit discharge should be completed by May 2010 before the targeted field assessment activities begin. In all cases the procedures will be completed by the permit deadline of August 2011. Procedures will follow the guidance of the IDDE Manual and will include actions relating to complaints, reports, or dry weather inspections. All investigations, or referring of investigations, will occur within 7 days of receiving a complaint, report or monitoring information indicating an illicit discharge. (S5.C.3.c.iii)

Written procedures for tracing the source of an illicit discharge should be completed by May 2010 but in all cases will be completed by the permit deadline of August 2011. Tracing the source of illicit connections will be conducted using the methodologies suggested in the IDDE Manual. (S5.C.3.c.iv)

Written procedures for removing the source of an illicit discharge should be completed by May 2010 but in all cases will be completed by the permit deadline of August 2011. (S5.C.3.c.v)

The City will implement procedures for program evaluation and assessment including tracking the number and type of spills or illicit discharges and inspections made as well as any feedback received from public education and outreach efforts. A summary of this information shall be included in the annual report no later than the August 2011 deadline. (S5.C.3.e)

The following table outlines the IDDE implementation plan that will meet the compliance deadlines in the Phase II Permit.

S5.C.3- Illicit Discharge Detection and Elimination	2007												2008												2009																							
													1 yr												2 yr												30mo											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D												
Cost tracking begins																																																
IDDE program fully implemented																																																
a. Develop Stormwater Mapping System																																																
b. Discharge Regulatory Mechanism / Ordinance																																																
c. Program to detect and address idde fully implemented																																																
c.i Procedures for locating priority areas																																																
c.ii Field assessment of 3 high priority water bodies																																																
c.iii Procedures for characterizing nature of discharge																																																
c.iv Procedures for tracing the source of an Illicit Discharge																																																
c.v Procedures for removing discharge source																																																
d.i Distribute info on IDDE to employees, Public, business																																																
d.ii Illicit Discharge Hotline / Public Reporting																																																
e. Program Eval Plan/All component tracking																																																
f.i Field Staff Training (Illicit Discharge)																																																
f.ii Ongoing Training Program / Documentation																																																

- planned action
- estimated complete date
- planned assessment activity
- completed activity
- permit due date
- entire program implemented due date



## 4. Controlling Runoff from New Development, Redevelopment and Construction Sites

### Permit Requirements

- Develop, implement and enforce a program to reduce pollutants in stormwater runoff to a regulated small MS4 from new development, redevelopment and construction site activities.
- Include an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment and construction site projects.
- Include a permitting process with plan review, inspection and enforcement capability to meet the required standards.
- Include provisions to verify adequate long-term operation and maintenance of post-construction stormwater facilities and BMP's that meet the construction and permit requirements.
- Develop a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations and other enforcement records.
- Make available copies of the, "Notice of Intent for Construction Activity" and copies of the, "Notice of Intent for Industrial Activity" to representatives of proposed new development and redevelopment.
- Verify and document that all staff responsible for implementing the program to control stormwater runoff from new development, redevelopment and construction sites including permitting, plan review, construction site inspections and enforcement, are trained to conduct these activities.

### Current Activities

The City is reviewing the Marysville Municipal Code (MMC) to ensure that all ordinances are in compliance with permit requirements. In July 2009 the City adopted chapter 14.21 Illicit Discharge Detection and Elimination (IDDE). This chapter allows the City to complete inspections at facilities that were approved for development. (S5.C.4.a.iii)

Ordinance number 2694, Low Impact Development, was approved by the Marysville City Council in May of 2007. The ordinance added MMC chapter, 19.49 Low Impact Development. The LID chapter encourages developers to minimize the creation of impervious surfaces and employ measures to minimize the disturbance of native soils and vegetation. (S5.C.4.a.iv)

The City does not plan on allowing construction sites to apply the Erosivity Waiver in Appendix 1. (S5.C.4.a.v)



All stormwater site plans are reviewed by the Community Development Department for code requirements such as critical areas management, buffers, impervious area creation, building and landscape design and building setbacks. The plans are then reviewed by the Engineering Services group for civil plan requirements as described in City Engineering Design and Development Standards (EDDS) and the 2005 Stormwater Management Manual for Western Washington. (S5.C.4.b.i)

The City has two Construction Inspectors on staff to inspect development sites during construction. The Construction Inspectors verify proper installation and maintenance of required erosion and sediment controls for all permitted development sites during construction. In 2008 laptops were purchased for the inspectors so that inspection reports could be done quickly in the field. On returning to the office the reports are printed and filed with other necessary documents for the construction project. Inspectors enforce as necessary based on inspections. (S5.C.4.b.iii)

All development sites are inspected upon completion of construction. If there are deficiencies, in any utility, a punch list is created by the Construction Inspectors to be completed by the developer. Final acceptance of the utilities does not occur until all deficiencies have been remedied. Chapters 14.15, 14.16 and 14.17 of the MMC discuss responsibility for maintenance of stormwater facilities. The City requires developers to submit a maintenance plan for all facilities during the plan review process. At the beginning of construction developers are required to have a bond to cover the first two years of maintenance for a new stormwater facility. The Engineering Services Manager keeps records of the bonds. After the bond period expires, facilities are inspected, cleaned and maintenance obligations are given to the City, or a private entity. Facility ownership responsibility is discussed during the plan review process and finalized when a plat is approved. In most cases the City assumes responsibility for all single family stormwater facilities and commercial facilities are held privately. Enforcement is carried out by the inspection group and is based on site inspections. (S5.C.4.b.iv)

Records of all inspections are kept by the Construction Inspectors. The inspection program aims to inspect 100% of all construction sites within the City of Marysville. Records are kept to ensure the permit required 80% of all sites are inspected. (S5.C.4.b.v)

In 2009 Ordinance 2763 was adopted to enhance the existing enforcement code found in MMC Title 4. Any issues of non compliance relating to stormwater regulations will be handled using these guidelines. Construction Inspectors verbally communicate any issues of non-compliance as a first warning. If these issues are not remedied escalating enforcement actions can occur. First a letter is sent, then a temporary stop work order can be issued, approvals or permits can be revoked, and civil penalties can be filed. (S5.C.4.b.vi)

In 2008 laptops were purchased for the inspectors so that inspection reports could be done quickly in the field. On returning to the office the reports are printed and filed with other necessary documents for the construction project. Construction Inspectors enforce as necessary based on inspections. Any enforcement letters are filed by the Construction Inspection group with other project information. Records of maintenance inspections and maintenance during the 2-year bond

period will be kept by the Construction Inspection group. Maintenance activities carried out by the City after the bond period shall be kept by the Surface Water Maintenance crew. The City utilizes software called Permits Plus for tracking projects through plan review and construction. The size of the projects is entered into this program. As funding allows the Construction Inspectors will also begin using this software in the field. (S5.C.4.d)

As of March 2007, copies of the Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity have been made available to representatives of proposed new development and redevelopment sites. They are available at the City of Marysville Community Development/Public Works front counter as well as the City web page. (S5.C.4.e)

The City hosted a Certified Erosion and Sediment Control Lead course in 2007. Ten Marysville staff members took the course and were certified. The City intends to keep the certification current for pertinent staff and provide training to new staff members that need the training. In order to ensure that staff members were up to date with the 2005 Stormwater Management Manual for Western Washington several staff members attended training sessions on the manual. The training was run by the Department of Ecology in 2009. Further job training and certification records are tracked within each department by the department managers. (S5.C.4.f)

### **Planned Activities**

The City is reviewing the Marysville Municipal Code (MMC) to ensure that all ordinances are in compliance with permit requirements. A number of changes will be proposed. The updated ordinance will include the minimum requirements, technical thresholds and definitions in Appendix 1. Adjustment and variance criteria equivalent to that of Appendix 1 will also be included. All necessary ordinances will be adopted by the February 2010 deadline. (S5.C.4.a.i)

As part of the ordinance review and update the City will adopt the site planning process and BMP selection and design criteria from the 2005 Stormwater Management Manual for Western Washington. These ordinances will be adopted by the February 2010 deadline. (S5.C.4.a.ii)

The City plans to inspect sites prior to clearing and construction that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7. The MMC will be updated to require the developer/contractor to provide the City with the rating information in Appendix 7. The sediment transport potential evaluation will need to be provided to the City before civil plan approval. If the site has a high sediment transport potential a site inspection will occur to ensure proper site planning has been conducted and address the potential for sediment transport. The City plans to hire a new staff member to complete these inspections. (S5.C.4.b.ii)

Chapters 14.15, 14.16 and 14.17 of the MMC discuss maintenance responsibilities for stormwater facilities. These sections of code are under revision to be completed prior to the February 2010 deadline. All stormwater facility ownership responsibility is discussed during plan review and finalized when a plat is approved. (S5.C.4.c.i)

The City plans to adopt the timeframes specified in the Permit, and Chapter 4 Volume V of the 2005 Management Manual for Western Washington, as its maintenance standards. All maintenance will be conducted as set forth in the Stormwater Manual. If the Stormwater Manual does not have a

maintenance standard that applies to a stormwater facility, then the City will use the manual developed by the manufacturer of the facility. In all cases the applicant shall provide the proposed maintenance program to the City for approval before construction of the facility occurs. These sections of code are under revision to be completed prior to the February 2010 deadline. (S5.C.4.c.ii)

In 2008 there were over 235 City owned stormwater treatment and flow control facilities. The City has established a program for inspection and maintenance for all public facilities. Facilities are inspected annually and cleaned based on inspection records. Procedures for inspecting private facilities have not been fully developed. The City plans on inspecting all facilities permitted per the requirements in S5.C.4.b. The City plans to hire new inspector to develop and conduct the private facility inspection program. (S5.C.4.c.iii)

The City of Marysville holds a two year performance bond on all new flow control and water quality treatment facilities including catch basins for new residential developments. The City is currently determining the most efficient way to track and verify inspections that are completed during this two year bonding period. (S5.C.4.c.iv)

The following table outlines the implementation plan for the goals and objectives of the program to control runoff from new development, redevelopment, and construction sites.





## 5. Pollution Prevention and Operation and Maintenance for Municipal Operations

### Permit Requirements

- Develop and implement an operation and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- Establish maintenance standards that are as protective, or more protective, of facility function than those of the 2005 Stormwater Management Manual for Western Washington.
- Conduct annual inspection of all municipally owned or operated permanent stormwater treatment and flow control facilities, other than catch basins, and taking appropriate maintenance actions in accordance with the adopted maintenance standards.
- Conduct spot checks of potentially damaged permanent treatment and flow control facilities after major storm events.
- Inspect all catch basins and inlets owned or operated by the Permittee at least once before the end of the Permit term.
- Establish and implement procedures to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the City, and to reduce pollutants in discharges from all lands owned or maintained by the City.
- Develop and implement an on-going training program for employees of the City whose construction, operations or maintenance job functions may impact stormwater quality.
- Develop and implement a Stormwater Pollution Prevention Plan for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the City.
- Keep records of inspections and maintenance or repair activities conducted by the City in accordance with the reporting requirements.

### Current Activities

Each year Surface Water staff export a current list of facilities from the GIS system to a Microsoft Excel spreadsheet and create a map of all facilities. This ensures that all new facilities will be inspected each year. The facilities are inspected by Surface Water staff or the Stormwater Maintenance crew and maintenance needs are noted. The City records the condition of the facility and any work that was done in the spreadsheet. The City hopes that a different maintenance frequency may be justified based on early maintenance tracking. (S5.C.5.b)



In 2008 an inspection form was created for conducting spot checks of potentially damaged permanent treatment and flow control facilities after major storm events. Surface Water staff and the Storm Water Maintenance crew created a list of high priority facilities to check after major storm events. The City rain gauge and an online precipitation gauge will be used to determine if a

storm is greater than a 24-hour 10-year recurrence interval. Storm Water Maintenance crews will be alerted after major storms. If the Storm Water Maintenance crew finds damage to any of the facilities they will inspect all stormwater facilities that may be affected. Repairs will be conducted based on the results of inspections. Records of the inspections will be downloaded annually from the Storm Water Maintenance crew laptop to a central location for tracking purposes. (S5.C.5.c)



The City has been separated into seven grids for catch basin cleaning. All grids will be inspected and cleaned at least once during the Permit cycle. In addition to the grid being maintained in a given year, high traffic corridors that are known to have large sediment loads will also be maintained yearly as scheduling allows. Cleaning of high traffic corridors will be completed at the discretion of the Storm Water Maintenance Supervisor. Inspection and maintenance activity will be recorded in the field using GIS/GPS equipment and a Microsoft Access database. The City has purchased a laptop computer that has been installed in the vactor truck. The inspection and maintenance records are stored in an Access database on the laptop. The records will be compiled annually and kept in a central location. A map of the cleaning grids can be found in Appendix 1, Figure 1-2. (S5.C.5.d)

The City purchased a new vactor truck in 2007 to be used exclusively for storm system maintenance. The procedures used to dispose of decant waters collected during storm system maintenance are disposed of using methods consistent with Appendix 6 of the Permit, Street Waste Disposal. The City owns and operates its own decant facility that is subject to a Solid Waste Permit issued by the Snohomish Health district. (S5.C.5.d)

A near 100% inspection and maintenance program is the ultimate goal of the City operation and maintenance program. Records for each maintenance activity described above have an established tracking system. The systems rely heavily on the City GIS data, allowing accuracy in the field. GIS also allows staff to compile maintenance data and track maintenance progress in the office on an annual basis. (S5.C.5.e)

### **Planned Activities**

The City plans to adopt the maintenance timeframes specified in the Permit, and Chapter 4 Volume V of the 2005 Management Manual for Western Washington, as its maintenance standards. All maintenance will be conducted as set forth in the Stormwater Manual. If the Stormwater Manual does not have a maintenance standard that applies to a stormwater facility, then the City will use the manual developed by the manufacturer of the facility. In all cases, the applicant shall provide the proposed maintenance program to the City for approval before construction of the facility occurs. These sections of code are under revision to be completed prior to the February 2010 deadline. (S5.C.5.a)

The City has begun to establish and implement practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads and highways within the City. A document detailing the BMP's for each of these procedures will be developed no later than the February 2010 permit deadline. The BMP document will be expanded upon each year so that it includes BMP's for all of the maintenance activities carried out by the City maintenance crews. To do this the Standard

Operating Procedures (SOP's) will be updated in 2010. Once this has been completed, specific BMP's can be prescribed for each SOP. Planned and ongoing activities include:

- The Surface Water staff or Stormwater Maintenance crew inspect all the stream culverts within City right-of-way annually. They develop work orders based on the inspections and the Stormwater Maintenance Crew conducts the required maintenance. The City coordinates these activities with the Department of Fish and Wildlife in an effort to follow appropriate cleaning and permitting procedures.
- *Cleaning of culverts that convey stormwater in ditch systems and ditch maintenance:* The Stormwater Maintenance Crew performs annual ditch maintenance based on maintenance needs. The ditch maintenance is tracked by lineal foot and an Access database is being developed to track the work and disposal of materials removed. The crew performing the ditch maintenance activities are trained CESCL's and utilize appropriate BMP's to reduce stormwater impacts.
- *Street cleaning:* The City owns two street sweepers and has designated six maintenance zones to schedule sweeping throughout the City. During the winter months both sweepers run Monday through Friday. In the summer months only one sweeper truck is run Monday through Friday. The goal is to complete one maintenance grid monthly, regardless of the season. The typical schedule is subject to change based on weather, emergencies, holidays, etc. A map of the cleaning grids can be found in Appendix 1, Figure 1-2.
- *Road repair and resurfacing, including pavement grinding:* Most pavement repairs are performed by the City's Street Department. During these projects the Street Lead Worker and crew are responsible for implementing BMP's. In some cases the City will hire a contractor for road repair on a specific street or contract with Snohomish County and participate collectively in their annual overlay program. In either of these two circumstances, the contract will ensure that BMP's are followed.
- *Snow and ice control:* The City provides snow and ice control as necessary in emergencies. Washed rock is spread on main arterials only. The Street Division takes direction from the Marysville Police Chief to determine if snow plowing is necessary. In an effort to reduce stormwater impacts, the Streets Division ensures streets are swept as soon as feasible so the rock material will not enter the storm system.
- *Utility installation:* The City owns and manages the storm, sewer and water utilities. Qualified staff members install the utilities and employ appropriate BMP's and safety standards during installations. Some installations are done during development and trained staff members inspect and document the installations.
- *Pavement striping maintenance:* The City's Street Division performs pavement striping maintenance annually. They use water acrylic based paints or lead free thermo plastic markings. When roadway markings are removed from the asphalt the Street Division manually sweeps up the heavy debris and use the vacuum sweeper to clean up any remaining sediment. Staff members are trained in the proper BMP's to be used in an effort to reduce stormwater impacts.
- *Maintaining roadside areas, including vegetation management:* The City Street and Parks and Recreation Divisions maintain roadside areas. When possible, they leave a grass buffer between the roadway and drainage ditch to prevent sediment from entering the ditch. Vegetation is only removed if it is causing damage to the right-of-way or physically blocking right-of-way. Vegetation is also removed if it is causing visibility issues. Herbicides are only used by properly trained and licensed staff members and required BMP's are utilized.
- *Dust control:* Manual debris removal is used when possible in an effort to reduce stormwater impacts. Depending upon the need, construction sites may be wetted down to

create a hardened cap on loose dirt to control dust. Proper BMP's are used to ensure turbid surface water runoff is not impacting stormwater. (S5.C.5.f)

The City has begun to establish and implement policies and procedures to reduce pollutants in discharges from all lands owned and maintained by the City. Written procedures to address the runoff from these sites will be further developed no later than the February 2010 permit deadline. Planned and ongoing activities include:

- *Application of fertilizer, pesticides, and herbicides including the development of nutrient management and integrated pest management plans, Landscape maintenance and vegetation disposal:* The City of Marysville Public Works currently has staff members with fertilizer, pesticide, and herbicide applicators licenses. Applications are used on curbs and sidewalks to protect pedestrians and the integrity of the concrete and asphalt. Staff members take precautions when applying the herbicides to ensure it does not come in contact with stormwater. Additionally, there are staff members with aquatic pesticide applicator licenses. These staff members have the training required to apply state approved fertilizers, pesticides and/or herbicides in or around aquatic environments. The City currently has a permit issued by the Department of Health to allow for these applications. The Parks Department developed an Integrated Pest Management Plan (IMP) in 1999. The IMP plan will be updated to reflect the current conditions.
- *Sediment and erosion control:* The City crews apply applicable BMP's to the extent feasible on construction projects. The frequency of use and effectiveness of the BMP's has not tracked in the past. A BMP field guide detailing the BMP's for construction will be developed no later than the February 2010 permit deadline. The information in the BMP document will provide staff members a reference guide in the field. This knowledge should improve the usage and effectiveness of BMP's employed by staff members.
- *Trash management:* The City of Marysville owns and operates a solid waste utility. The utility implements policies and procedures required by the Department of Health and other regulatory agencies to reduce pollutants in discharges during the collection process.
- *Building exterior cleaning and maintenance:* The Facilities Crew power wash City buildings with water every five years. The City contracts a janitorial service to wash the windows once a year. The windows are washed using a squeegee to collect the dirt and soap off the window. This method virtually eliminates wash water from hitting the ground. (S5.C.5.g)

The City plans to develop an on-going training program for employees whose construction, operations or maintenance job functions may impact stormwater quality. To begin this training program a Power Point presentation about the use of BMP's was created by Surface Water Staff. This information was presented to the Public Works Utility Crews in April 2008. Further development of this program will be completed by the February 2010 deadline. (S5.C.5.h)



The City plans to develop a Storm Water Pollution Prevention Plan (SWPPP) for all city owned heavy equipment maintenance and storage yards and materials storage facilities. The SWPPP will be developed no later than the February 2010 deadline. (S5.C.5.i)

The following table outlines the implementation plan to achieve the goals and objectives of the Operations and Maintenance Program.

S5.C.5- Pollution Prevention and Operation and Maintenance for Municipal Operations	2007												2008												2009											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
a. Est. maint. Standard = to Ch.4 Vol.V of 05' SMMWW																																				
a.ii Conducted timely maintenance				GIS in vactor truck																																
b Annual inspections of all city, permanent, facilities				GIS in vactor truck											inspect public ponds/vaults (sw)																					
c Conduct Spot checks of stormwater facilities after major storms																																				
c Conduct spot maintenance																																				
d Inspect All city owned Catch Basins				GIS in vactor truck																																
e Document our inspection program				GIS in vactor truck																																
f Implement BMPs for maintenance activities																																				
g Implement BMPs for city lands																																				
h Implement training program															erosion BMP presentation																					
i Develop SWPPP																																				
j Keep records of maintenance activities				ongoing											ongoing																					

- planned action
- X estimated complete date
- planned assessment activity
- completed activity
- permit due date
- entire program implemented due date



## 6. Total Maximum Daily Load Requirements

### Permit Requirements

Affected permittees shall comply with the specific requirements identified in Appendix 2, keep records of all actions required by the permit that are relevant to applicable TMDLs and include the status of the TMDL implementation as part of the annual report submitted to Ecology.

- Address commercial animal handling areas and commercial composting facilities in the IDDE program.
- No later than 30 months after the effective date of this permit, compile a list of existing composting and animal waste handling facilities and begin to conduct inspections for all the listed sites, with adequate enforcement capability.
- Within 4 months of permit issuance, prepare and submit to Ecology for review, a QAPP for the sampling of streams and/or discharges from stormwater conveyances within the jurisdictions boundaries in order to determine areas with highest bacteria concentrations (high priority areas).
- Begin monitoring per the QAPP no later than nine months after permit issuance.
- No later than 12 months prior to permit renewal application, a Bacterial Pollution Control Plan (BPCP) shall be developed and no later than 9 months prior to permit expiration, conduct public review of it.

### Current Activities

The City Council adopted ordinance 2782 in July 2009 to prohibit non-stormwater illegal discharges into the MS4. The ordinance creates a new chapter in the Marysville Municipal Code (MMC) under Title 14- Water and Sewers called 14.21 Illicit Discharge Detection and Elimination (IDDE). The IDDE Chapter includes a list of acceptable discharges, prohibited discharges and conditionally acceptable discharges. By prohibiting non-stormwater discharges citywide, the new chapter also prohibits discharges from commercial animal handling areas and commercial composting facilities.



In December of 2008 a list of all the licensed businesses in Marysville was categorized by industry type. All commercial animal handling areas associated with Standard Industrial Code (SIC) 074 and 075 were identified and mapped. Using the list of Solid Waste Sites of Record from Snohomish County Health District, it was determined that there are no commercial composting facilities in the City. Commercial animal handling businesses were sent educational information in June 2009. The letter also informed the businesses that they would be inspected. The inspections began in August 2009. Surface Water staff members are conducting the inspections. During the inspections staff members look for the use of applicable BMP's. If BMP's are not in place and corrective actions are needed Surface Water staff members will inform the business of the corrections verbally, and in writing, and schedule a return inspection. If the corrections are not made the business information

will be passed on to code enforcement. Inspections will be scheduled such that all inspections will be completed no later than the December 2010 deadline. Based on the inspection results as a whole the City will determine if inspections should be completed again during this permit term.

City of Marysville's QAPP was approved by Ecology on December 17, 2007. Water quality monitoring is being conducted as identified and scheduled in the QAPP.

### **Planned Activities**

The list of composting and animal waste handling facilities will be updated no later than August 2011. The list will be submitted at the same time as the permit renewal application is submitted.

The City will develop a BPCP no later than February 2011. The BPCP will be submitted for public review by May 2011 and a final BPCP will be submitted in February 2012 with the permit renewal application.

The following table outlines the implementation plan to achieve the goals and objectives of the Total Maximum Daily Load Requirements.

Appendix 2- TMDL Requirements	2007												2008												2009											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
<b>S7 Compliance with TMDL</b>																																				
Keep records of all activities; will become annual status report	ongoing																																			
<b>Appendix 2</b>																																				
QAPP																																				
Monitoring per QAPP																																				
Business Inspection and Education Program																																				
Enforcement capability- ordinance & written plan																																				
BPCP developed																																				
1) Pet waste																																				
2) Eval enforcement																																				
3) Eval CAO																																				
4) Ed program																																				
5) Methods to prevent bacterial pollution																																				
6) AQWA team																																				
7) LID																																				
8) NA																																				
Public Review of BPCP																																				
Final BPCP submitted																																				

- planned action
- estimated complete date
- planned assessment activity
- completed activity
- permit due date
- entire program implemented due date

Appendix 2- TMDL Requirements	2010												2011												2012			
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
<b>S7 Compliance with TMDL</b>																												
Keep records of all activities; will become annual status report																												
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QAPP																												
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7) LID																												
8) NA																												
Public Review of BPCP																												
Final BPCP submitted																												

- planned action
- X estimated complete date
- planned assessment activity
- completed activity
- permit due date
- entire program implemented due date

## 7. Monitoring

### Permit Requirements

- Permittees are not required to conduct water quality sampling or other testing during the effective term of this Permit unless required for compliance with TMDLs or for characterizing illicit discharges.
- Provide a description of any stormwater monitoring or studies and an assessment of the appropriateness of the BMP's identified by the Permittee in each annual report.
- Prepare to participate in the implementation of a comprehensive long-term monitoring program.
- Identify two outfalls or conveyances where stormwater sampling could be conducted. One outfall shall represent commercial land use and the second will represent high-density residential land use.
- Conduct SWMP effectiveness monitoring.
- Include in the fourth annual report the status of identification of sites for stormwater monitoring as well as a summary of proposed questions for the SWMP effectiveness monitoring and describe the status of developing the monitoring plan.

### Current Activities

No activities are being conducted specific to the monitoring requirements yet. (S8)

### Planned Activities

The following table outlines the implementation plan to achieve the goals and objectives of the Monitoring Requirements. (S8)

S8 Monitoring		2007												2008												2009											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
B 1	Report any monitoring if it was conducted																																				
B2	Assesment of BMPs in SWMP																																				
C1aiv	2 outfalls/Conveyances chosen																																				
C1bi	Prepare to conduct monitoring																																				
C1bii	Choose questions and sites to monitor SWMP effectiveness																																				
C1biii	Develop monitoring plan																																				
C2a	Fourth annual report																																				
C2ai	Site identification status																																				
C2aii	Summary of questions																																				

	planned action
	estimated complete date
	planned assessment activity
	completed activity
	permit due date
	entire program implemented due date

S8 Monitoring		2010												2011												2012			
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
B 1	Report any monitoring if it was conducted																												
B2	Assesment of BMPs in SWMP																												
C1aiv	2 outfalls/Conveyances chosen																												
C1bi	Prepare to conduct monitoring																												
C1bii	Choose questions and sites to monitor SWMP effectiveness																												
C1biii	Develop monitoring plan																												
C2a	Fourth annual report																												
C2ai	Site identification status																												
C2aai	Summary of questions																												

	planned action
	estimated complete date
	planned assessment activity
	completed activity
	permit due date
	entire program implemented due date

# Appendix 1

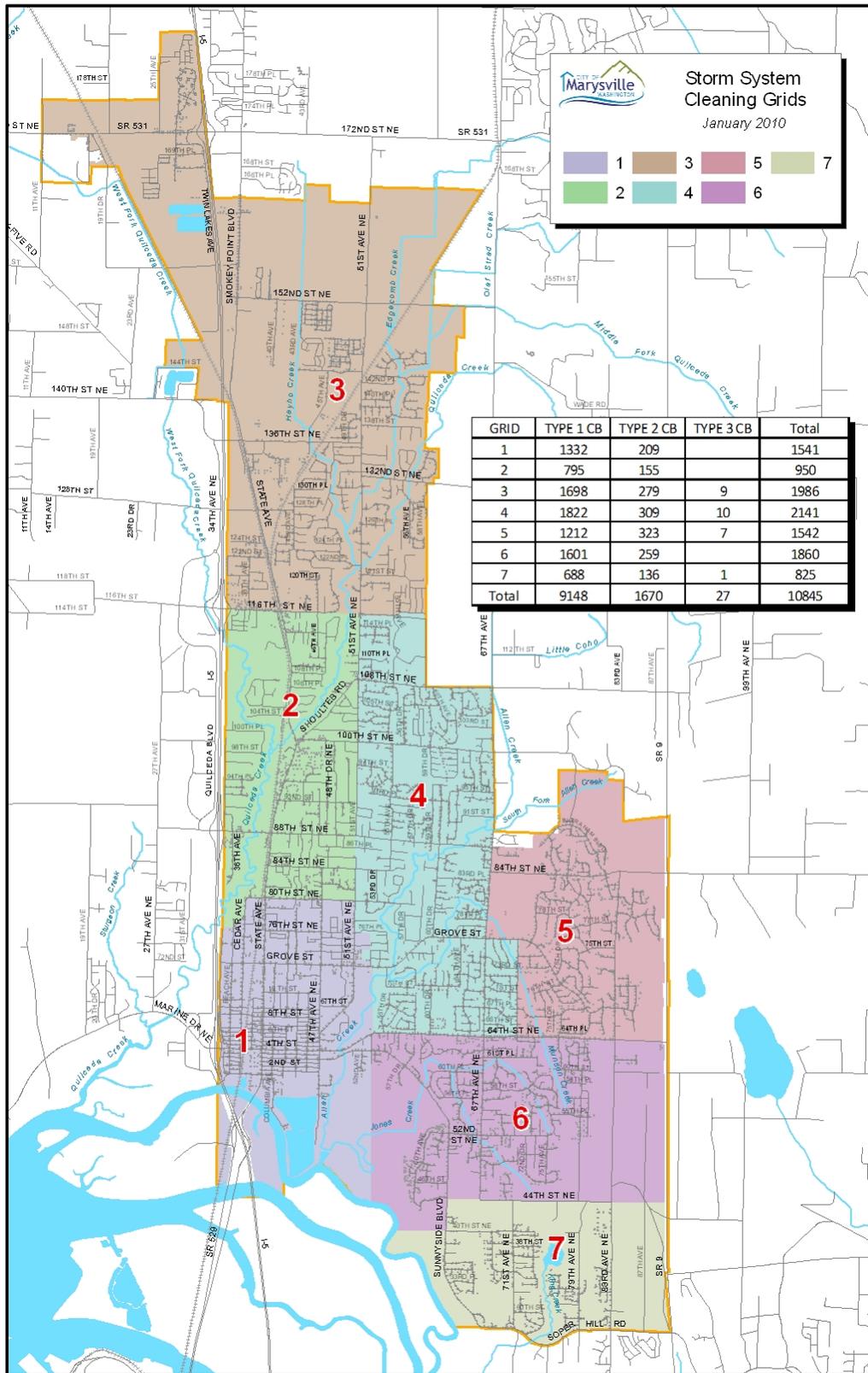


Figure 1-1

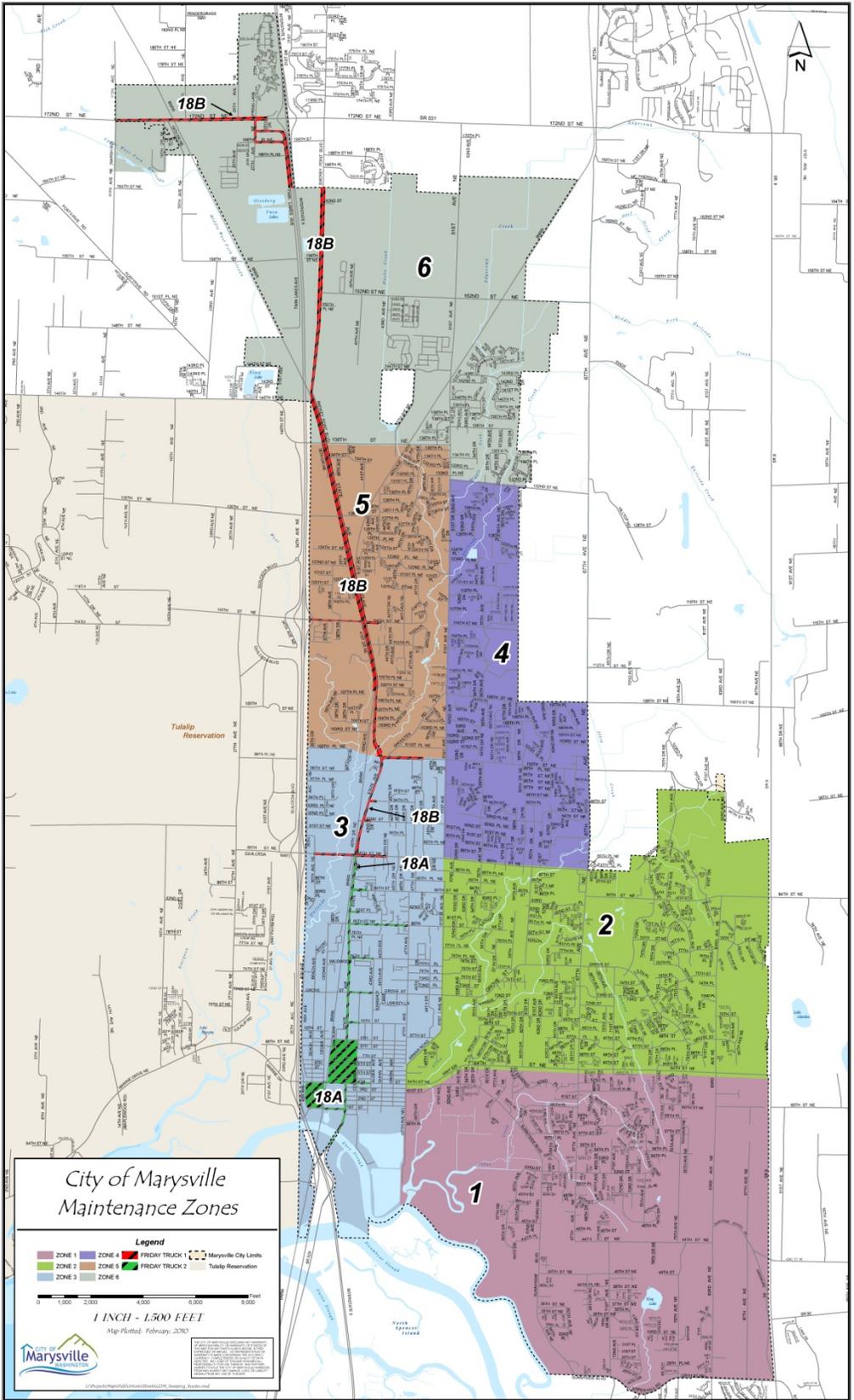


Figure 1-2