

Washington Department of Ecology Submission Cover Letter

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9:07:23 AM**

Report Received Dated:

3/29/2016 9:07:25 AM

Company Name	Signer Name	System Name
City of Milton	Aaron Nix	WQWebPortal

Attachments:

Document Name of Description	Document File Name
Submitted Copy of Record for City of Milton	Copy of Record CityofMilton Tuesday March 29 2016
WAR045014_5_03012016020539	Annual Report Question 5_2016_5_03012016020539
Question 13b - IDDE Methodology	Q13b_attachedSOPS
Question 17b - Information Sharing	ARDOC_Q17b_Information Sharing
WAR045014_7b_03242016091423	ARDOC_Q7b_Adoption of behavoir_7b_03242016091423
WAR045014_2_03012016013317	1859 Clear Firs Sunridge Annex_2_03012016013317
WAR045014_1_03242016091303	ARDOC_Q1_City of Milton 2016 S_1_03242016091303
Question 8_Opportunities Created	ARDOC_Q8_Opportunities for Public Participation
WAR045014_20_03242016093501	ARDOC_Q20_IDDE Program Summary_20_03242016093501

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

**For Ecology Use Only ---
Dev**



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Water Quality Program

Permit Submittal Electronic Certification

Permittee: MILTON CITY OF

Permit Number: WAR045014

Site Address: 1000 LAURAL ST
Milton, WA 98354-0317

Submittal Name: MS4 Annual Report Phase II Western

Version: 1

Due Date: 3/31/2016

Questionnaire

Number	Permit Section	Question	Answer
1	S5.A.2	Attach updated annual Stormwater Management Program Plan (SWMP Plan). (S5.A.2)	ARDOC_Q1_City of Milton 2016 S_1_03242016091303
2	S9.D.5	Attach a copy of any annexations, incorporations or boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period per S9.D.5.	1859 Clear Firs Sunridge Annex_2_03012016013317
3	S5.A.3	Implemented an ongoing program to gather, track, and maintain information per S5.A.3, including costs or estimated costs of implementing the SWMP.	Yes
4	S5.A.5.b	Coordinated among departments within the jurisdiction to eliminate barriers to permit compliance. (S5.A.5.b)	Yes
5	S5.C.1.a.i and ii	Attach description of public education and outreach efforts conducted per S5.C.1.a.i and ii.	Annual Report Question 5_2016_5_03012016020539
6	S5.C.1.b	Created stewardship opportunities (or partnered with others) to encourage resident participation in activities such as those described in S5.C.1.b.	Yes
7	S5.C.1.b	Used results of measuring the understanding and adoption of targeted behaviors among at least one audience in at least one subject area to direct education and outreach resources and evaluate changes in adoption of targeted behaviors. (Required no later than February 2, 2016, S5.C.1.b)	Yes
7b	S5.C.1.b	Attach description of how this requirement was met.	ARDOC_Q7b_Adoption of behavoir_7b_03242016091423
8	S5.C.2.a	Describe the opportunities created for the public to participate in the decision making processes involving the development, implementation and updates of the Permittee's SWMP. (S5.C.2.a)	See attached
9	S5.C.2.b	Posted the updated SWMP Plan and latest annual report on your website no later than May 31. (S5.C.2.b)	Yes

9b	S5.C.2.b	List the website address.	http://www.cityofmilton.net/departments/public-works/stormwater/
10	S5.C.3.a.i - vi	Maintained a map of the MS4 including the requirements listed in S5.C.3.a.i.-vi.	Yes
11	S5.C.3.b.v	Implemented a compliance strategy, including informal compliance actions as well as enforcement provisions of the regulatory mechanism described in S5.C.3.b. (S5.C.3.b.v)	Yes
12	S5.C.3.b.vi	Updated, if necessary, the regulatory mechanism to effectively prohibit illicit discharges into the MS4 per S5.C.3.b.vi. (Required no later than February 2, 2018)	Not Applicable
12b		Cite the Prohibited Discharges code reference	
13	S5.C.3.c.i	Implemented procedures for conducting illicit discharge investigations in accordance with S5.C.3.c.i.	Yes
13b	S5.C.3.c.i	Cite methodology	See attached
14	S5.C.3.c.i	Percentage of MS4 coverage area screened in reporting year per S5.C.3.c.i. (Required to screen 40% of MS4 no later than December 31, 2017 (except no later than June 30, 2018 for the City of Aberdeen) and 12% on average each year thereafter. (S5.C.3)	10
15	S5.C.3.c.ii	List the hotline telephone number for public reporting of spills and other illicit discharges. (S5.C.3.c.ii)	253-922-8738
15b	S5.C.3.c.ii	Number of hotline calls received.	3
16	S5.C.3.c.iii	Implemented an ongoing illicit discharge training program for all municipal field staff per S5.C.3.c.iii.	Yes
17	S5.C.3.c.iv	Informed public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste. (S5.C.3.c.iv)	Yes
17b	S5.C.3.c.iv	Describe the information sharing actions. (S5.C.3.c.iv)	See attached
18	S5.C.3.d	Implemented an ongoing program to characterize, trace, and eliminate illicit discharges into the MS4 per S5.C.3.d.	Yes
19	S5.C.3.d.iv	Number of illicit discharges, including illicit connections, eliminated during the reporting year. (S5.C.3.d.iv)	0
20	S5.C.3.d.iv	Attach a summary of actions taken to characterize, trace and eliminate each illicit discharge found by or reported to the permittee. For each illicit discharge, include a description of actions according to required timeline per S5.C.3.d.iv	ARDOC_Q20_IDDE Program Summary_20_0324201 6093501
21	S5.C.3.e	Municipal illicit discharge detection staff are trained to conduct illicit discharge detection and elimination activities as described in S5.C.3.e.	Yes
22	S5.C.4.a	Implemented an ordinance or other enforceable mechanism to address runoff from new development, redevelopment and construction sites per the requirements of S5.C.4.a.	Yes

24	S5.C.4.a.i	Number of exceptions granted to the minimum requirements in Appendix 1. (S5.C.4.a.i., and Section 6 of Appendix 1)	0
25	S5.C.4.a.i	Number of variances granted to the minimum requirements in Appendix 1. (S5.C.4.a.i., and Section 6 of Appendix 1)	0
26	S5.C.4.b.i	Reviewed Stormwater Site Plans for all proposed development activities that meet the thresholds adopted pursuant to S5.C.4.a.i. (S5.C.4.b.i)	Yes
26b	S5.C.4.b.i	Number of site plans reviewed during the reporting period.	14
27	S5.C.4.b.ii	Inspected, prior to clearing and construction, permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Damage Potential, or alternatively, inspected all construction sites meeting the minimum thresholds adopted pursuant to S5.C.4.a.i. (S5.C.4.b.ii)	Yes
27b	S5.C.4.b.ii	Number of construction sites inspected per S5.C.4.b.ii.	11
28	S5.C.4.b.iii	Inspected permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. (S5.C.4.b.iii)	Yes
28b	S5.C.4.b.iii	Number of construction sites inspected per S5.C.4.b.iii.	9
29	S5.C.4.b.ii, iii and	Number of enforcement actions taken during the reporting period (based on construction phase inspections at new development and redevelopment projects). (S5.C.4.b.ii, iii and v)	3
30	S5.C.4.b.iv	Inspected all permitted development sites that meet the thresholds in S5.C.4.a.i upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. (S5.C.4.b.iv)	Yes
31	S5.C.4.b.ii-iv	Achieved at least 80% of scheduled construction-related inspections. (S5.C.4.b.ii-iv)	Yes
32	S5.C.4.b.iv	Verified a maintenance plan is completed and responsibility for maintenance is assigned for projects. (S5.C.4.b.iv)	Yes
33	S5.C.4.c	Implemented provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to S5.C.4. a and b. (S5.C.4.c)	Yes
35	S5.C.4.c.iii	Annually inspected stormwater treatment and flow control BMPs/facilities per S5.C.4.c.iii.	Yes
35b	S5.C.4.c.iii	If using reduced inspection frequency for the first time during this permit cycle, attach documentation per S5.C.4.c.iii	Not Applicable

36	S5.C.4.c.iv	Inspected new residential stormwater treatment and flow control BMPs/facilities and catch basins every 6 months per S5.C.4.c.iv to identify maintenance needs and enforce compliance with maintenance standards.	Yes
37	S5.C.4.c.v	Achieved at least 80% of scheduled inspections to verify adequate long-term O&M. (S5.C.4.c.v)	Yes
38	S4.C.4.c.vi	Verified that maintenance was performed per the schedule in S5.C.4.c.vi when an inspection identified an exceedance of the maintenance standard.	Yes
38b	S5.C.4.c.vi	Attach documentation of any maintenance delays. (S5.C.4.c.vi)	Not Applicable
39	S5.C.4.d	Provided copies of the Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity to representatives of proposed new development and redevelopment. (S5.C.4.d)	Yes
40	S5.C.4.e	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. (S5.C.4.e)	Yes
42	S5.C.4.g	Participated and cooperated with the watershed-scale stormwater planning process led by a Phase I county. (S5.C.4.g)	Not Applicable
43	S5.C.5.a	Implemented maintenance standards as protective, or more protective, of facility function as those specified in Chapter 4 of Volume V of the 2005 Stormwater Management Manual for Western Washington.	Yes
44	S5.C.5.a	Applied a maintenance standard that is not specified in the Stormwater Management Manual for Western Washington.	Not Applicable
44b	S5.C.5.a	Please note what kinds of facilities are covered by this alternative maintenance standard. (S5.C.5.a)	
45	S5.C.5.a.ii	Performed timely maintenance per S5.C.5.a.ii.	Yes
46	S5.C.5.b	Annually inspected all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities. (S5.C.5.b)	Yes
46b	S5.C.5.b	Number of known municipally owned or operated stormwater treatment and flow control BMPs/facilities. (S5.C.5.b)	6
46c	S5.C.5.b	Number of facilities inspected during the reporting period. (S5.C.5.b)	6
46d	S5.C.5.b	Number of facilities for which maintenance was performed during the reporting period. (S5.C.5.b)	6
47	S5.C.5.b	If using reduced inspection frequency for the first time during this permit cycle, attach documentation per S5.C.5.b.	Not Applicable
48	S5.C.5.c	Conducted spot checks and inspections (if necessary) of potentially damaged stormwater facilities after major storms as per S5.C.5.c.	Yes

49	S5.C.5.d	Inspected all municipally owned or operated catch basins and inlets as per S5.C.5.d, or used an alternative approach. (Required once no later than August 1, 2017 and every two years thereafter, except once no later than June 30, 2018 and every two years thereafter for the City of Aberdeen)	No
49b	S5.C.5.d	Number of known catch basins.	780
49c	S5.C.5.d	Number of catch basins inspected during the reporting period.	30
49d	S5.C.5.d	Number of catch basins cleaned during the reporting period.	24
50	S5.C.5.d.i-ii	Attach documentation of alternative catch basin cleaning approach, if used. (S5.C.5.d.i or ii)	Not Applicable
51	S5.C.5.f	Implemented practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. (S5.C.5.f)	Yes
52	S5.C.5.g	Implemented an ongoing training program for Permittee employees whose primary construction, operations or maintenance job functions may impact stormwater quality. (S5.C.5.g.)	Yes
53	S5.C.5.h	Implemented a Stormwater Pollution Prevention Plan for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under an NPDES permit that covers stormwater discharges associated with the activity. (S5.C.5.h)	Yes
54	S7.A	Complied with the Total Maximum Daily Load (TMDL)-specific requirements identified in Appendix 2. (S7.A)	Not Applicable
55	S7.A	For TMDLs listed in Appendix 2: Attach a summary of relevant SWMP and Appendix 2 activities to address the applicable TMDL parameter(s). (S7.A)	Not Applicable
56	S8.A	Attach a description of any stormwater monitoring or stormwater-related studies as described in S8.A.	Not Applicable
57	S8.B.1	Participated in cost-sharing for the regional stormwater monitoring program (RSMP) for status and trends monitoring. (S8.B.1)	Yes
57B	S8.B.2	If choosing to conduct individual status and trends monitoring, attach an annual stormwater monitoring report in accordance with S8.B.2. (Required to submit reports beginning March 31, 2016)	
58	S8.C.1	Participated in cost-sharing for the regional stormwater monitoring program (RSMP) for effectiveness studies. (S8.C.1) (Required to begin no later than August 15, 2014)	Yes

58b	S8.C.2	If choosing to conduct discharge monitoring, attach an annual stormwater monitoring report in accordance with S8.C.2 and Appendix 9. (Required to submit reports beginning March 31, 2016)	
59	S8.D.1	Contributed to the RSMP for source identification and diagnostic monitoring information repository in accordance with S8.D.1. (Required to begin no later than August 15, 2014)	Yes
60	G3	Notified Ecology in accordance with G3 of any discharge into or from the Permittees MS4 which could constitute a threat to human health, welfare or the environment. (G3)	Yes
61	G3	Number of G3 notifications provided to Ecology.	3
62	G3.A	Took appropriate action to correct or minimize the threat to human health, welfare, and/or the environment per G3.A.	Yes
63	S4.F.1	Notified Ecology within 30 days of becoming aware that a discharge from the Permittee's MS4 caused or contributed to a known or likely violation of water quality standards in the receiving water. (S4.F.1)	Not Applicable
64	S4.F.3.a	If requested, submitted an Adaptive Management Response report in accordance with S4.F.3.a.	Not Applicable
65	S4.F.3.d	Attach a summary of the status of implementation of any actions taken pursuant to S4.F.3 and the status of any monitoring, assessment, or evaluation efforts conducted during the reporting period. (S4.F.3.d)	Not Applicable
66	G20	Notified Ecology of the failure to comply with the permit terms and conditions within 30 days of becoming aware of the non-compliance. (G20)	Not Applicable
67	G20	Number of non-compliance notifications (G20) provided in reporting year.	0
67b	G20	List the permit conditions described in non-compliance notification(s).	Not Applicable

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Aaron Nix

3/29/2016 9:07:22 AM

Signature

Date



2016 Stormwater Management Program Plan



Prepared By
Public Works Department
January 2016

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City of Milton

2016 Stormwater Management Program

1. Introduction

1.1 Purpose

This document is the City of Milton's Stormwater Management Program Plan (SWMP). Preparation and maintenance of this SWMP is required by the Western Washington Phase II Municipal Stormwater Permit (Permit) which is overseen by the Washington State Department of Ecology. The Permit requires that the City prepare a document outlining the programs and actions that the City intends to take in order to maintain compliance with the Permit. This report covers activities planned for 2016. All Milton residents and businesses are encouraged to call Public Works at 253-922-8738 with any questions or suggestions regarding any information in this report.

1.2 The NPDES Program

The National Pollutant Discharge Elimination System (NPDES) is a program created under the Federal Clean Water Act with the intent of protecting and restoring water quality in lakes, streams, and other surface waters so that they can support "beneficial uses" such as fishing and swimming. Governmental and private entities wishing to discharge water or wastewater to surface waters for certain activities regulated by the federal government are required to obtain permits and comply with permit conditions or face the potential for fines and other penalties. NPDES permits are required for large construction sites, a variety of industrial activities, publicly-owned wastewater treatment plants, and municipal stormwater systems.

In Washington State, the US Environmental Protection Agency has delegated the authority over NPDES permits to the Washington State Department of Ecology (Ecology). Ecology has issued several general permits for discharges from stormwater systems that apply to large and small municipalities and that are located in different regions of the State (Eastern and Western Washington). Phase I generally refers to municipalities with populations greater than 100,000, while Phase II applies to municipalities with a population of less than 100,000 and that are located in urban areas.

1.3 The Western Washington Phase II Municipal Stormwater Permit

Milton must comply with the conditions in the Western Washington Phase II Municipal Stormwater Permit. The Permit allows municipalities to discharge stormwater from municipal systems into "waters of the state" such as rivers, lakes and streams, as long as programs are implemented to reduce pollutants in stormwater to the "maximum extent practicable". The city is required to develop and maintain programs and conduct activities in the following program areas:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination (IDDE)
- Controlling Runoff from New Development, Redevelopment, and Construction Sites
- Municipal Operations and Maintenance

In addition to the SWMP components, the Permit contains special conditions covering:

- Compliance with Total Maximum Daily Load (TMDL) requirements
- Monitoring and Assessment
- Reporting Requirements

The City's SWMP Plan must be prepared and submitted annually and must contain the planned actions and activities that will be used in the current year to maintain compliance with the permit. The SWMP is available upon request at any time and is required to be posted on the Milton website no later than May 31, 2016.

In addition, the Permit requires the City to submit an Annual Report by March 31st of each year that details actions taken in the previous year to achieve compliance. The full text of the Permit can be viewed upon request by contacting the City of Milton Public Works Department and also can be found at:
<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIIww/wwphiipermit.html>.

1.4 Permit History and Implementation

The original NPDES Phase II Permit was valid for 5 years, from February 17, 2007 to February 15, 2012, and allowed for phased implementation of stormwater management programs and actions. In 2012, Ecology extended the existing Permit to July 31, 2013 with no new permit conditions.

The current Permit was issued on August 1, 2012, was modified January 16, 2015 and expires on July 31, 2018. Like the previous Permit, it allows for phased implementation of requirements over the five-year permit cycle. Appendix 1 provides an overall schedule timeline including implementation due dates. Milton continues to be in position to meet deadlines and maintain Permit compliance.

1.5 Current and Planned Activities

The SWMP Plan is a set of actions and activities comprising the stormwater program components listed in the Permit and the actions necessary for permit compliance. The plan is organized in accordance with program components addressed in Condition S5C of the Permit.

The following sections of the SWMP Plan describe requirements in the Permit, followed by the ongoing and planned activities to meet each permit component.

1.6 City Coordination and Responsibilities

Compliance with the Permit requires coordination and documentation of activities across City departments. The Public Works Department Stormwater Group coordinates city programs and activities and meets with staff from other departments regularly to ensure that current and planned activities meet Permit requirements. Activities required for Permit compliance cover a broad range of municipal activities.

2. Public Education and Outreach

2.1 Permit Requirements

The SWMP shall include an education and outreach program designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts and encourage the public to participate in stewardship activities. The education program may be developed and implemented locally or regionally.

The minimum performance measures are:

a. Each Permittee shall provide an education and outreach program for the area served by the municipal separate storm sewer system (MS4). The program shall be designed to educate target audiences about the stormwater problem and provide specific actions they can follow to minimize the problem.

i. To build general awareness, Permittees shall select from the following target audiences and subject areas:

(a) General public (including school age children), and businesses (including home-based and mobile businesses)

- General impacts of stormwater on surface waters.
- Impacts from impervious surfaces.
- Impacts of illicit discharges and how to report them.
- Low impact development (LID) principles and LID BMPs.
- Opportunities to become involved in stewardship activities.

(b) Engineers, contractors, developers and land use planners

- Technical standards for stormwater site and erosion control plans.
- LID principles and LID BMPs.
- Stormwater treatment and flow control BMPs/facilities.

ii. To effect behavior change, Permittees shall select from the following target audiences and BMPs:

(a) General public (which may include school age children), businesses (including home-based and mobile businesses)

- Use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials.
- Equipment maintenance.
- Prevention of illicit discharges.

(b) Residents, landscapers and property managers/owners

- Yard care techniques protective of water quality.
- Use and storage of pesticides and fertilizers and other household chemicals.
- Carpet cleaning and auto repair and maintenance.
- Vehicle, equipment and home/building maintenance.
- Pet waste management and disposal.
- LID principles and LID BMPs.
- Stormwater facility maintenance.
- Dumpster and trash compactor maintenance.

- b. Each Permittee shall create stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings and education activities.
- c. Each Permittee shall measure the understanding and adoption of the targeted behaviors for at least one target audience in at least one subject area. No later than February 2, 2016, Permittees shall use the resulting measurements to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors. Permittees may meet this requirement individually or as a member of a regional group.

2.2 Ongoing and Planned Education and Outreach Programs and Activities

Milton has various activities and programs that meet the Permit requirements. Because Milton is a small city with limited resources, the City participates in regional efforts and adapts programs and educational materials from larger municipalities when appropriate.

Table 2.2 identifies ongoing programs and activities that help Milton comply with the Permit, and includes specific actions planned for 2016.

Table 2.2 Public Education and Outreach: Programs and Activities	
Ongoing	Plan for 2016
1. A Stormwater Education booth is staffed at the annual Milton Days festival held every August at Milton Community Park. The Stormwater Education booth provides various educational materials related to stormwater pollution prevention. Also, the City purchased an Enviroscope® Watershed/Nonpoint Source Model for use at the booth, which is popular with children.	Staff Stormwater Education booth at Milton Days.
2. Milton partners with the Pierce Conservation District (PCD) to maintain a volunteer water quality monitoring program on Surprise Lake, a privately-owned lake within the city.	Continue volunteer monitoring program.
3. Milton helps to staff the Pierce Conservation District "Stream Team" booth at the Washington State Fair in Puyallup.	Continue to staff Stream Team booth
4. The City prepares various handouts and brochures to educate Milton citizens, businesses and the development community on development requirements, best management practices and stormwater pollution prevention.	Prepare two new brochures: <ol style="list-style-type: none"> 1. Erosion and Sediment Control for Small Construction Sites 2. Benefits of Low Impact Development.
5. The City prepares a newsletter, "Stormwater Press", that is mailed out in the city's utility bill. This mailing occurs once or twice a year.	Prepare and mail two Stormwater Press newsletters.
6. The City prepares a newsletter for lakeshore owners, "Surprise Lake Matters", that is mailed annually to lakeshore owners and residents.	Prepare and mail one newsletter.

<p>7. The City maintains a hotline to report spills and pollution (253-922-8738). The number is advertised in the Stormwater Press and also on the City's webpage. An online reporting form is also available on the website.</p>	<p>Continue to maintain spill and pollution reporting hotline and webpage.</p>
<p>8. The City includes materials related to public education and outreach on its website.</p>	<p>Update and improve stormwater education webpage.</p>
<p>9. The City monitors and participates in STORM and other regional activities</p>	<p>Continue to participate in regional activities</p>
<p>10. The City owns a car wash kit, which is available for loan for fundraising car washes.</p>	<p>Continue to maintain car wash kit loan program.</p>
<p>11. The City shall measure the understanding and adoption of at least one targeted behavior. No later than February 16, 2016, the City shall use the resulting measurements to direct education resources effectively, and evaluate changes in the targeted behavior.</p>	<p>Develop and implement plan to meet requirement.</p>

3. Public Involvement and Participation

3.1 Permit Requirements

Permittees shall provide ongoing opportunities for public involvement and participation through advisory councils, public hearings, watershed committees, participation in developing rate-structures or other similar activities. Each Permittee shall comply with applicable state and local public notice requirements when developing elements of the SWMP.

The minimum performance measures are:

- a. Permittees shall create opportunities for the public to participate in the decision-making processes involving the development, implementation and update of the Permittee’s SWMP.
- b. Each Permittee shall post on their website their SWMP Plan and the annual report required under S9.A no later than May 31 each year. All other submittals shall be available to the public upon request. To comply with the posting requirement, a Permittee that does not maintain a website may submit the updated SWMP in electronic format to Ecology for posting on Ecology’s website.

3.2 Ongoing and Planned Activities for Public Involvement and Participation

Milton currently implements activities and programs meeting the Permit requirements.

Table 3.2 identifies ongoing programs and activities that help Milton comply with the Permit, and includes specific actions planned for 2016.

Table 3.2 Public Involvement and Participation: Programs and Activities	
Ongoing	Plan for 2016
1. Use City Council Meetings as a forum for public participation.	Discuss the SWMP Plan at one Council Meeting in 2016.
2. Post the Milton SWMP Plan and Annual Report to Ecology on the City website each year.	Post the SWMP Plan and Annual Report on the website no later than May 31, 2016.
3. Make the SWMP Plan, Annual Report and related documents available to the public upon request.	Continue to ensure documents are available to the public. Documents will be posted on City’s webpage.
4. Ensure public participation in the storm utility billing process.	Audit of storm utility bills was completed in 2015. In early 2016 results of audit will be implemented.
5. The city encourages employees and citizens to attend fund raising events such as the Seattle Mariners’ “Puget Sound Starts Here” night or the “Water 4 Life” event in Tacoma.	City staff will attend both of these events.

4. Illicit Discharge Detection and Elimination (IDDE)

4.1 Permit Requirements

The SWMP shall include an ongoing program designed to prevent, detect, characterize, trace and eliminate illicit connections and illicit discharges into the MS4.

The minimum performance measures are:

- a. Mapping of the MS4 shall continue on an ongoing basis. MS4 maps shall be periodically updated. Update maps if necessary to meet the requirements of this section no later than February 2, 2018. At a minimum, maps shall include the following information:
 - i. Known MS4 outfalls and known MS4 discharge points.
 - ii. Receiving waters, other than ground water.
 - iii. Stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee.
 - iv. Tributary conveyances to all known outfalls and discharge points with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. The following attributes shall be mapped:
 - Tributary conveyance type, material, and size where known.
 - Associated drainage areas.
 - Land use.
 - v. All connections to the MS4 authorized or allowed by the Permittee after February 16, 2007.
 - vi. Connections between the MS4 owned or operated by the Permittee and other municipalities or public entities.
 - vii. Geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters.
 - viii. To the extent consistent with national security laws and directives, each Permittee shall make available to Ecology upon request, MS4 map(s) depicting the information required in S5.C.3.a.i through vi above. The preferred format for mapping will be an electronic format with fully described mapping standards. An example description is available on Ecology website.
 - ix. Upon request, and to the extent appropriate, Permittees shall provide mapping information to federally-recognized Indian Tribes, municipalities, and other Permittees. This permit does not preclude Permittees from recovering reasonable costs associated with fulfilling mapping information requests by federally-recognized Indian Tribes, municipalities, and other Permittees.
- b. Each Permittee shall implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the Permittee's MS4 to the maximum extent allowable under state and federal law.
 - i. Allowable Discharges: The regulatory mechanism does **not** need to prohibit the following categories of non-stormwater discharges:
 - Diverted stream flows
 - Rising ground waters
 - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(b)(20))
 - Uncontaminated pumped ground water
 - Foundation drains
 - Air conditioning condensation
 - Irrigation water from agricultural sources that is commingled with urban stormwater
 - Springs
 - Uncontaminated water from crawl space pumps
 - Footing drains

- Flows from riparian habitats and wetlands
 - Non-stormwater discharges authorized by another NPDES or state waste discharge permit
 - Discharges from emergency firefighting activities in accordance with S2 Authorized Discharges
- ii. Conditionally Allowable Discharges: The regulatory mechanism may allow the following categories of non-stormwater discharges only if the stated conditions are met:
- Discharges from potable water sources, including but not limited to water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted, if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4.
 - Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through, at a minimum, public education activities (see section S5.C.1) and water conservation efforts.
 - Dechlorinated swimming pool, spa and hot tub discharges. The discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4. Discharges shall be thermally controlled to prevent an increase in temperature of the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.
 - Street and sidewalk wash water, water used to control dust, and routine external building washdown that does not use detergents. The Permittee shall reduce these discharges through, at a minimum, public education activities (see section S5.C.1) and/or water conservation efforts. To avoid washing pollutants into the MS4, Permittees shall minimize the amount of street wash and dust control water used.
 - Other non-stormwater discharges. The discharges shall be in compliance with the requirements of a pollution prevention plan reviewed by the Permittee, which addresses control of such discharges.
- iii. The Permittee shall further address any category of discharges in (i) or (ii) above if the discharges are identified as significant sources of pollutants to waters of the State.
- iv. The ordinance or other regulatory mechanism shall include escalating enforcement procedures and actions.
- v. The Permittee shall implement a compliance strategy that includes informal compliance actions such as public education and technical assistance as well as the enforcement provisions of the ordinance or other regulatory mechanism. To implement an effective compliance strategy, the Permittee's ordinance or other regulatory mechanism may need to include the following tools:
- The application of operational and/or structural source control BMPs for pollutant generating sources associated with existing land uses and activities where necessary to prevent illicit discharges. The source control BMPs referenced in this subsection are in Volume IV of the *Stormwater Management Manual for Western Washington*, or an equivalent manual approved by Ecology under the 2013 Phase I Permit.
 - The maintenance of stormwater facilities which discharge into the Permittee's MS4 in accordance with maintenance standards established under S5.C.4 and/or S5.C.5 where necessary to prevent illicit discharges.
- vi. The Permittee's ordinance or other regulatory mechanism in effect as of the effective date of this permit shall be revised if necessary to meet the requirements of this section no later than February 2, 2018.

- c. Each Permittee shall implement an ongoing program designed to detect and identify non-stormwater discharges and illicit connections into the Permittee's MS4. The program shall include the following components:
- i. Procedures for conducting investigations of the Permittee's MS4, including field screening and methods for identifying potential sources.
The Permittee shall implement a field screening methodology appropriate to the characteristics of the MS4 and water quality concerns. Screening for illicit connections may be conducted using: *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, October 2004, or another methodology of comparable or improved effectiveness. The Permittee shall document the field screening methodology in the relevant Annual Report. All Permittees, except for the City of Aberdeen, shall complete field screening for at least 40% of the MS4 no later than December 31, 2017, and on average 12% each year thereafter.
 - ii. A publicly listed and publicized hotline or other telephone number for public reporting of spills and other illicit discharges.
 - iii. An ongoing training program for all municipal field staff, who, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge and/or illicit connection to the MS4, on the identification of an illicit discharge and/or connection, and on the proper procedures for reporting and responding to the illicit discharge and/or connection. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of the trainings provided and the staff trained.
 - iv. Permittees shall inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste.
- d. Each Permittee shall implement an ongoing program designed to address illicit discharges, including spills and illicit connections, into the Permittee's MS4. The program shall include:
- i. Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the Permittee. Procedures shall address the evaluation of whether the discharge must be immediately contained and steps to be taken for containment of the discharge.
 - ii. Procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures.
 - iii. Procedures for eliminating the discharge; including notification of appropriate authorities; notification of the property owner; technical assistance; follow-up inspections; and use of the compliance strategy developed pursuant to S5.C.3.b.v, including escalating enforcement and legal actions if the discharge is not eliminated.
 - iv. Compliance with the provisions in (i), (ii), and (iii), above, shall be achieved by meeting the following timelines:
 - Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment, consistent with General Condition G3.
 - Investigate (or refer to the appropriate agency with the authority to act) within 7 days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge.
 - Initiate an investigation within 21 days of any report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection.
 - Upon confirmation of an illicit connection, use the compliance strategy in a documented effort to eliminate the illicit connection within 6 months. All known illicit connections to the MS4 shall be eliminated.
- e. Permittees shall train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections, to conduct these activities. Follow-up

training shall be provided as needed to address changes in procedures, techniques, requirements or staffing. Permittees shall document and maintain records of the training provided and the staff trained.

- f. Recordkeeping: Permittees shall track and maintain records of the activities conducted to meet the requirements of this section.

4.2 Ongoing and Planned IDDE Activities

Milton currently implements activities and programs meeting the Permit requirements. The City will continue its ongoing program designed to prevent, detect, characterize, trace and eliminate illicit connections and illicit discharges into the municipal stormwater system. In addition, Milton is currently upgrading its stormwater maps from paper-based to GIS.

Table 4.2 identifies ongoing programs and activities that help Milton comply with the Permit, and includes specific actions planned for 2016.

Table 4.2 Illicit Discharge Detection and Elimination: Programs and Activities	
Ongoing	Plan for 2016
1. Maintain a map of stormwater facilities that meets Permit requirements.	GIS based maps will be updated as needed to keep them current.
2. Milton MMC 13.26 prohibits non-stormwater, illicit discharges to drainage facilities and surface waters.	No code updates planned for 2016
3. Maintain an enforcement strategy that emphasizes voluntary compliance with stormwater regulations. Voluntary compliance is <u>always</u> preferred.	Continue to encourage voluntary compliance.
4. Milton MMC 13.26 requires local source control (LSC) in accordance with the Volume IV of the Stormwater Management Manual for Western Washington.	Investigate opportunities to partner with Tacoma-Pierce County Health Department on local source control.
5. Maintain a program to detect, identify and resolve illicit discharges and connections.	Prepare Standard Operating Procedures to meet the new field screening requirements.
6. Maintain a publicized hotline for reporting spills and pollution.	Phone number (253-922-8738) is publicized on web page and in Stormwater Press and Surprise Lake Matters newsletters.
7. Maintain a training program for field staff who may observe illicit discharges and connections during the course of their duties.	Conduct IDDE training for field staff in 2016.
8. Maintain a training program for staff who are responsible for identification and followup activities of illicit discharges and connections.	Continue to investigate training opportunities and provide training to staff.
9. Maintain records.	Continue to maintain records in accordance with permit requirements.

5. Controlling Runoff from New Development, Redevelopment and Construction Sites

5.1 Permit Requirements

Each Permittee shall implement and enforce a program to reduce pollutants in stormwater runoff to a regulated small MS4 from new development, redevelopment and construction site activities. The program shall apply to private and public development, including roads.

The minimum performance measures are:

- a. Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects. The ordinance or other enforceable mechanism to implement (i) through (iii), below, shall be adopted and effective no later than December 31, 2016. The local program adopted to meet the requirements of S5.C.4.a(i) through (iii), below shall apply to all applications¹⁷ submitted on or after January 1, 2017 and shall apply to applications submitted prior to January 1, 2017, which have not started construction by January 1, 2022.

The ordinance or other enforceable mechanism shall include, at a minimum:

- i. The Minimum Requirements, thresholds, and definitions in Appendix 1 or a program approved by Ecology under the 2013 NPDES Phase I Municipal Stormwater Permit, for new development, redevelopment, and construction sites. Adjustment and variance criteria equivalent to those in Appendix 1 shall be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of Ecology-approved basin plans or other similar water quality and quantity planning efforts. Such local requirements and thresholds shall provide equal protection of receiving waters and equal levels of pollutant control to those provided in Appendix 1.
- ii. The local requirements shall include the following requirements, limitations, and criteria that, when used to implement the minimum requirements in Appendix 1 (or program approved by Ecology under the 2013 Phase I Permit) will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy the State requirement under chapter 90.48 RCW to apply AKART prior to discharge:
 - (a) Site planning requirements
 - (b) BMP selection criteria
 - (c) BMP design criteria
 - (d) BMP infeasibility criteria
 - (e) LID competing needs criteria
 - (f) BMP limitations

Permittees shall document how the criteria and requirements will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy State AKART requirements.

Permittees who choose to use the requirements, limitations, and criteria above in the *Stormwater Management Manual for Western Washington*, or a program approved by Ecology under the 2013 Phase I Permit, may cite this choice as their sole documentation to meet this requirement.

- iii. The legal authority, through the approval process for new development and redevelopment, to inspect and enforce maintenance standards for private stormwater facilities approved under the provisions of this section that discharge to the Permittee's MS4.
- b. The program shall include a permitting process with site plan review, inspection and enforcement capability to meet the standards listed in (i) through (iv) below, for both private and public projects, using qualified personnel (as defined in *Definitions and Acronyms*). At a minimum, this program shall be applied to all sites that meet the minimum thresholds adopted pursuant to S5.C.4.a.i, above.
 - i. Review of all stormwater site plans for proposed development activities.

- ii. Inspect, prior to clearing and construction, all permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 - Determining Construction Site Sediment Damage Potential. As an alternative to evaluating each site according to Appendix 7, Permittees may choose to inspect all construction sites that meet the minimum thresholds adopted pursuant to S5.C.4.a.i, above.
 - iii. Inspect all permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.
 - iv. Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. Verify that a maintenance plan is completed and responsibility for maintenance is assigned for stormwater treatment and flow control BMPs/facilities. Enforce as necessary based on the inspection.
 - v. Compliance with the inspection requirements in (ii), (iii) and (iv) above, shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving at least 80% of scheduled inspections.
 - vi. An enforcement strategy shall be implemented to respond to issues of non-compliance.
- c. The program shall include provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to (b) above. These provisions shall be in place no later than December 31, 2016. The provisions shall include:
- i. Implementation of an ordinance or other enforceable mechanism that clearly identifies the party responsible for maintenance, requires inspection of facilities in accordance with the requirements in (ii) through (iv) below, and establishes enforcement procedures.
 - ii. Each Permittee shall establish maintenance standards that are as protective or more protective of facility function than those specified in Chapter 4 of Volume V of the *Stormwater Management Manual for Western Washington*. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard.

The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facility's required condition at all times between inspections. Exceeding the maintenance standard between the period of inspections is not a permit violation.
 - iii. Annual inspections of all stormwater treatment and flow control BMPs/facilities that discharge to the MS4 and were permitted by the Permittee according to S5.C.4.b, including those permitted in accordance with requirements adopted pursuant to the 2007-2012 Ecology municipal stormwater permits, unless there are maintenance records to justify a different frequency.

Permittees may reduce the inspection frequency based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 Certification and Signature.
 - iv. Inspections of all permanent stormwater treatment and flow control BMPs/facilities and catch basins in new residential developments every six months until 90% of the lots are constructed (or when construction is stopped and the site is fully stabilized) to identify maintenance needs and enforce compliance with maintenance standards as needed.
 - v. Compliance with the inspection requirements in (iii) and (iv) above shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving at least 80% of scheduled inspections.
 - vi. Unless there are circumstances beyond the Permittee's control, when an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed:

- Within 1 year for typical maintenance of facilities, except catch basins.
- Within 6 months for catch basins.
- Within 2 years for maintenance that requires capital construction of less than \$25,000.

Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, the Permittee shall document the circumstances and how they were beyond their control.

- vii. The program shall include a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained.
- d. The program shall make available as applicable 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. Permittees shall continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology.
- e. Each Permittee shall ensure that all staff whose primary job duties are 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. Follow-up training shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.
- f. Low impact development code-related requirements.
- i. No later than December 31, 2016, Permittees shall review, revise and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs. For Permittees in Lewis and Cowlitz Counties, the deadline for this requirement is no later than June 30, 2017.

The intent of the revisions shall be to make LID the preferred and commonly-used approach to site development. The revisions shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations. Permittees shall conduct a similar review and revision process, and consider the range of issues, outlined in the following document: *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership, 2012).

- ii. Each Permittee shall submit a summary of the results of the review and revision process in (i) above with the annual report due no later than March 31, 2017. This summary shall include, at a minimum, a list of the participants (job title, brief job description, and department represented), the codes, rules, standards, and other enforceable documents reviewed, and the revisions made to those documents which incorporate and require LID principles and LID BMPs. The summary shall include existing requirements for LID principles and LID BMPs in development-related codes. The summary shall be organized as follows:
 - (a) Measures to minimize impervious surfaces;
 - (b) Measures to minimize loss of native vegetation; and
 - (c) Other measures to minimize stormwater runoff.

5.2 Ongoing and Planned Activities for Controlling Runoff from New Development, Redevelopment and Construction Sites

Milton has a permit program that includes proposed development and redevelopment site plan review and inspections that meets or exceeds the Permit requirements. Milton reviews all proposed construction for stormwater impacts, and requires erosion and sediment control on almost all permitted activities.

Table 4.2 identifies ongoing programs and activities that help Milton comply with the Permit, and includes specific actions planned for 2016.

Table 5.2 Controlling Runoff from New Development, Redevelopment, and Construction Sites: Programs and Activities

Ongoing	Plan for 2016
1. Review development plans in accordance with 2005 Stormwater Management Manual for Western Washington (SWMMWW).	Revise permit process to implement separate stormwater permit (in addition to building). Revise fees to improve revenue from development activities.
2. Primarily review stormwater site plans in-house with consultant review available.	No change proposed for 2016.
3. Prepare educational handouts for development community explaining requirements. Provide in-person and phone support to help development community understand requirements.	Prepare handout for commercial development for controlling runoff. Update handout for single family residential and small site construction.
4. Require Stormwater Declaration of Covenant for all site plans that meet SWMMWW thresholds.	No change proposed for 2016.
5. Hold erosion and sediment control (ESC) onsite preconstruction meetings for all projects that meet SWMMWW thresholds. Include ESC conditions with all projects.	No change proposed for 2016.
6. Conduct ESC inspections.	No change proposed for 2016.
7. Conduct stormwater site plan inspections.	No change proposed for 2016.
8. Conduct stormwater site plan final inspections.	No change proposed for 2016.
9. Conduct post-construction stormwater facility inspections.	No change proposed for 2016.
10. Maintain enforcement strategy.	Investigate revisions to municipal code to strengthen and expand enforcement options.
11. Maintain recordkeeping of stormwater site plan reviews and inspections.	Purchase new permit tracking software which will simplify and improve recordkeeping.
12. Ensure staff are appropriately trained for plan review, inspections and enforcement. Maintain in-house CESCL certification for stormwater inspection staff. Stormwater site plan review staff are trained in low impact development.	Provide ESC training to Building and Planning staff.
13. Investigate low impact development opportunities.	Finalize code review process to incorporate LID principles as required by Permit.
14. Notify affected development proposals of requirements for Ecology Construction and Industrial Stormwater Permits.	No change proposed for 2016.

6. Municipal Operations and Maintenance

6.1 Permit Requirements

Each Permittee shall implement an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

The minimum performance measures are:

- a. Each Permittee shall implement maintenance standards that are as protective, or more protective, of facility function than those specified in Chapter 4 of Volume V of the *Stormwater Management Manual for Western Washington*. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard. No later than December 31, 2016, Permittees shall update their maintenance standards as necessary to meet the requirements of this section.
 - i. The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facility's required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a permit violation.
 - ii. Unless there are circumstances beyond the Permittee's control, when an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed:
 - Within 1 year for typical maintenance of facilities, except catch basins.
 - Within 6 months for catch basins.
 - Within 2 years for maintenance that requires capital construction of less than \$25,000.

Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, the Permittee shall document the circumstances and how they were beyond their control.

- b. Annual inspection of all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities, and taking appropriate maintenance actions in accordance with the adopted maintenance standards. Permittees may reduce the inspection frequency based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 Certification and Signature.
- c. Spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities after major storm events (24-hour storm event with a 10 year or greater recurrence interval). If spot checks indicate widespread damage/maintenance needs, inspect all stormwater treatment and flow control BMPs/facilities that may be affected. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections.
- d. Inspection of all catch basins and inlets owned or operated by the Permittee at least once no later than August 1, 2017 and every two years thereafter. Clean catch basins if the inspection indicates cleaning is needed to comply with maintenance standards established in the *Stormwater Management Manual for Western Washington*. Decant water shall be disposed of in accordance with Appendix 6 *Street Waste Disposal*.

The following alternatives to the standard approach of inspecting all catch basins once no later than August 1, 2017 and every two years thereafter may be applied to all or portions of the system:

- i. The catch basin inspection schedule of every two years may be changed as appropriate to meet the maintenance standards based on maintenance records of double the length of time of the proposed inspection

frequency. In the absence of maintenance records for catch basins, the Permittee may substitute written statements to document a specific, less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experiences and shall be certified in accordance with G19 Certification and Signature.

ii. Inspections at least once by August 1, 2017 and every two years thereafter may be conducted on a “circuit basis” whereby 25% of catch basins and inlets within each circuit are inspected to identify maintenance needs. Include an inspection of the catch basin immediately upstream of any system outfall or discharge point, if applicable. Clean all catch basins within a given circuit for which the inspection indicates cleaning is needed to comply with maintenance standards established under S5.C.5.a, above.

iii. The Permittee may clean all pipes, ditches, catch basins, and inlets within a circuit once during the permit term. Circuits selected for this alternative must drain to a single point.

- e. Compliance with the inspection requirements in b, c, and d above shall be determined by the presence of an established inspection program designed to inspect all sites and achieving at least 95% of inspections.
- f. Implement practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. Lands owned or maintained by the Permittee include, but are not limited to, streets, parking lots, roads, highways, buildings, parks, open space, road right-of-ways, maintenance yards, and stormwater treatment and flow control BMPs/facilities. The following activities shall be addressed:
- Pipe cleaning
 - Cleaning of culverts that convey stormwater in ditch systems
 - Ditch maintenance
 - Street cleaning
 - Road repair and resurfacing, including pavement grinding
 - Snow and ice control
 - Utility installation
 - Pavement striping maintenance
 - Maintaining roadside areas, including vegetation management
 - Dust control
 - Application of fertilizers, pesticides, and herbicides according to the instructions for their use, including reducing nutrients and pesticides using alternatives that minimize environmental impacts
 - Sediment and erosion control
 - Landscape maintenance and vegetation disposal
 - Trash and pet waste management
 - Building exterior cleaning and maintenance
- g. Implement an ongoing training program for employees of the Permittee whose primary construction, operations or maintenance job functions may impact stormwater quality. The training program shall address the importance of protecting water quality, operation and maintenance standards, inspection procedures, selecting appropriate BMPs, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of training provided and the staff trained.
- h. Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under the *General NPDES Permit for Stormwater Discharges Associated with Industrial Activities* or another NPDES permit that authorizes stormwater discharges associated with the

activity. A schedule for implementation of structural BMPs shall be included in the SWPPP. Generic SWPPPs that can be applied at multiple sites may be used to comply with this requirement. The SWPPP shall include periodic visual observation of discharges from the facility to evaluate the effectiveness of the BMP.

- i. Maintain records of inspections and maintenance or repair activities conducted by the Permittee.

6.2 Ongoing and Planned Activities for Municipal Operations and Maintenance

Milton currently implements activities and programs meeting the Permit requirements.

Table 6.2 identifies ongoing programs and activities that help Milton comply with the Permit, and includes specific actions planned for 2016.

Table 6.2 Municipal Operations and Maintenance: Programs and Activities	
Ongoing	Plan for 2016
1. Maintain maintenance standards in accordance with Volume V of the SWMMWW.	No changes planned for 2016.
2. Conduct annual inspections of stormwater treatment and flow control BMPs/facilities.	No changes planned for 2016.
3. Spot check stormwater treatment and flow control/BMPs/facilities after major storm events.	No changes planned for 2016.
4. Inspect all catch basins and inlets by August 1, 2017.	Inspect 25% of catch basins and inlets in 2016.
5. Maintain practices, policies and procedures to reduce stormwater impacts from City-owned or maintained lands.	Update procedures as appropriate.
6. Maintain practices, policies and procedures to reduce stormwater impacts from road maintenance activities.	Update procedures as appropriate.
7. Maintain an ongoing training program for City staff whose job functions may impact stormwater quality.	Provide training on stormwater pollution prevention best management practices.
8. Maintain a Stormwater Pollution Prevention Plan (SWPPP) for the City Shop and material storage yards.	Update SWPPP as appropriate.
9. Maintain records of inspections and maintenance or repair activities.	Upgrade process to maintain records in accordance with permit requirements.

7. Special Conditions

7.1 Compliance with Total Maximum Daily Load Requirements

The federal Clean Water Act requires that Ecology establish “Total Maximum Daily Loads” (TMDL) for rivers, streams, lakes, and marine waters that don’t meet water quality standards. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards.

After the TMDL has been calculated for a given water body, Ecology determines how much each source must reduce its discharges of the pollutant in order bring the water body back into compliance with the water quality standards. TMDL requirements are included in the Permit for discharges into affected water bodies.

Stormwater discharges covered under the Permit are required to implement actions necessary to achieve the pollutant reductions called for in applicable TMDLs. Applicable TMDLs are those approved by the EPA before the issuance date of the Permit or which have been approved by the EPA prior to the issue date of the Permit or the date Ecology issues coverage under the Permit, whichever is later. Information on Ecology’s TMDL program is available on Ecology’s website at www.ecy.wa.gov/programs/wq/tmdl.

In accordance with Permit condition S7 Compliance with Total Maximum Daily Load Requirements the City must comply with the following TMDL: **NONE**

8. Monitoring and Assessment

8.1 Permit Requirements

- A. All Permittees including Secondary Permittees shall provide, in each annual report, a description of any stormwater monitoring or stormwater-related studies conducted by the Permittee during the reporting period. If other stormwater monitoring or stormwater-related studies were conducted on behalf of the Permittee during the reporting period, or if stormwater-related investigations conducted by other entities were reported to the Permittee during the reporting period, a brief description of the type of information gathered or received shall be included in the annual report.
- B. Status and trends monitoring. By December 1, 2013, the city shall notify Ecology in writing which of the following two options for status and trends monitoring the Permittee chooses to carry out during this permit cycle. Either option will fully satisfy the Permittee's obligations under this section (S8.B). Each Permittee shall select a single option for the duration of this permit term.
1. Status and Trends Monitoring Option #1: Each Permittee that chooses this option shall pay into a collective fund to implement RSMP small streams and marine nearshore status and trends monitoring in Puget Sound. The payments into the collective fund are due to Ecology annually beginning August 15, 2016. The payment amount for Milton is \$1,597.

Or

2. Status and Trends Monitoring Option #2: Each Permittee that chooses this option shall conduct status and trends monitoring as follows:
 - a. Beginning no later than October 31, 2014, conduct wadeable stream water quality, benthos, habitat, and sediment chemistry monitoring according to the Ecology-approved Quality Assurance Project Plan (QAPP) for RSMP Small Streams Status and Trends Monitoring.
 - i. Permittees with population less than 10,000 in the permit coverage area shall conduct this monitoring at the first two qualified monitoring locations (as listed sequentially among the potential monitoring locations defined in the RSMP QAPP) that are located within the jurisdiction's boundaries. Counties shall monitor the first location inside UGA boundaries and the first location outside UGA boundaries.
- C. Stormwater management program effectiveness studies. By December 1, 2013, the city shall notify Ecology in writing which of the following two options for effectiveness studies the Permittee chooses to carry out during this permit cycle. Either option will fully satisfy the Permittee's obligations under this section (S8.C). Each Permittee shall select a single option for the duration of this permit term.
1. Effectiveness Studies Option #1: Each Permittee that chooses this option shall pay into a collective fund to implement RSMP effectiveness studies. The payments into the collective fund are due to Ecology annually beginning August 15, 2014. The payment amount for Milton is \$2,661

Or

2. Effectiveness Studies Option #2: Each Permittee that chooses this option shall conduct stormwater discharge monitoring in accordance with Appendix 9 and the following:
 - a. By February 2, 2014, each Permittee shall submit to Ecology a draft stormwater discharge monitoring QAPP for review and approval. If Ecology does not request changes within 90 days, the draft QAPP is considered approved. Final QAPPs shall be submitted to Ecology as soon as possible following finalization.
 - i. Each Permittee with population fewer than 10,000 in the permit coverage area shall conduct stormwater discharge monitoring at one discharge monitoring location.
 - b. Permittees shall document in the QAPP why selected discharge monitoring locations are of interest for long term stormwater discharge monitoring and associated stormwater management program

effectiveness evaluations. Permittees are encouraged to monitor at locations chosen and submitted in the annual reports that were due March 31, 2011.

- c. Flow monitoring at discharge monitoring locations shall be implemented beginning no later than October 1, 2014. Stormwater discharge monitoring shall be fully implemented no later than October 1, 2015. All monitoring shall be conducted in accordance with an Ecology-approved QAPP.

D. Source identification and diagnostic monitoring. The City shall pay into a collective fund to implement the RSMP Source Identification Information Repository (SIDIR). The payments into the collective fund are due to Ecology annually beginning August 15, 2014. The payment amount for Milton is \$247.

8.2 Ongoing and Planned Activities for Monitoring and Assessment

Milton has chosen to pay in to the collective funds for the Status and Trends Monitoring and Effectiveness Studies. This is much more cost effective than conducting in-house monitoring as allowed in Option #2 for each of the monitoring options.

Table 8.2 identifies ongoing programs and activities that help Milton comply with the Permit, and includes specific actions planned for 2016.

Table 8.2 Monitoring and Assessment: Programs and Activities	
Ongoing	Plan for 2016
1. Pay in to collective fund for Status and Trends Monitoring.	3rd payment of \$1,597 due August 15, 2016.
2. Pay in to collective fund for Effectiveness Studies.	3rd payment of \$2,661 due August 15, 2016.
3. Pay in to collective fund for Source Identification Information Repository.	3rd payment of \$247 due August 15, 2016.

**CITY OF MILTON
ORDINANCE 1859-15**

**AN ORDINANCE OF THE CITY OF MILTON, WASHINGTON, ANNEXING
CERTAIN REAL PROPERTY KNOWN AS CLEAR FIRS/SUNRIDGE TO THE
CITY, REQUIRING THE ANNEXED PROPERTY TO BE ASSESSED AND
TAXED AT THE SAME RATE AND BASIS AS OTHER PROPERTY WITHIN
THE CITY, ESTABLISHING ITS ZONING AS RESIDENTIAL MULTI-FAMILY
(RM) AND FIXING THE EFFECTIVE DATE OF THE ANNEXATION.**

WHEREAS, The City Council was notified in writing by the owners of not less than ten percent in value of the real property legally described in Exhibit "A" attached hereto, of the owners' intention to commence annexation proceedings; and

WHEREAS, a meeting was held on the August 5th, 2013 and February 10th, 2014, between the initiating parties of this annexation and the Council of the City of Milton and authorized the circulation of an annexation petition for annexation of the real property legally described in Exhibit "A" attached hereto. At the meeting the Council also determined that it would require the simultaneous adoption of the zoning designations and require the assumption of indebtedness of the City by the area to be annexed upon annexation; and

WHEREAS, the petition was circulated, filed with Pierce County, and certified by the County Assessor as containing the signature of owners as set forth in RCW 35A.01.040(9), of not less than 60% in value, according to the assessed valuation for general taxation, of the property to be annexed; and

WHEREAS, the City properly filed a Notice of Intent and related documents with the Pierce County Boundary Review Board on April 10th, 2014; and

WHEREAS, on May 21st, 2014 the Office of the County Executive invoked the jurisdiction of the Boundary Review Board under RCW 36.93.100(2), seeking to add four (4) parcels the proposed annexation; and

WHEREAS, the Boundary Review Board held a public hearing on September 30th, 2014, and continued the hearing to November 4th, 2014, in order for Pierce County to provide notice to the owners of the four (4) parcels; and

WHEREAS, the City of Milton argued against the inclusion of the four (4) parcels, stating that the objectives of RCW 36.93.180 are not met with the addition of the four parcels to the proposed annexation; and

WHEREAS, the Boundary Review Board issued a decision on November 19th, 2014, to add the four (4) parcels to the proposed annexation area; and

WHEREAS, according to RCW 36.93.150 and 36.93.160 the proposed annexation area is deemed approved as amended by the Boundary Review Board; and

WHEREAS, the revised legal description and map were provided to the City by Pierce County on December 12th, 2014, and is attached hereto as Exhibit “B”; and

WHEREAS, pursuant to RCW 35A.14.130, the City held public hearing on February 17th, 2015, which hearing was duly noticed by the City Clerk through publication in a newspaper of general circulation in the City and the proposed annexation area, and through posting of a hearing notice in three public places within the territory proposed for annexation, specifying the time and place of the hearing and inviting interested persons to appear and voice approval or disapproval of the annexation; and

WHEREAS, the City Council has been fully advised and finds that all statutory requirements have been satisfied in order to accomplish the proposed annexation; now therefore

THE CITY COUNCIL OF THE CITY OF MILTON, PIERCE COUNTY, WASHINGTON DO ORDAIN AS FOLLOWS:

Section 1. The unincorporated real property located in Pierce County, Washington, contiguous to the City of Milton and legally described in Exhibit “B” attached hereto and incorporated herein by this reference, is hereby annexed to and made part of the City of Milton, Pierce County, Washington.

Section 2. All property within the territory annexed shall be assessed and taxed at the same rate and on the same basis as other property within the City of Milton, including assessments or taxes in payment of all or any portion of the outstanding indebtedness of the City contracted for, incurred prior to, or existing on, the date of annexation.

Section 3. All property within the territory annexed is hereby zoned Residential Multi-Family (RM).

Section 4. The City Clerk is hereby directed to file a certified copy of this Ordinance with the Pierce County Council. The Clerk is further directed to file a certificate of annexation with the State Office of Financial Management as directed by RCW 35A.14.700.

Section 5. Each and every provision of this Ordinance shall be deemed severable. In the event that any portion of this Ordinance is determined by final order of a court of competent jurisdiction to be void or unenforceable, such determination shall not affect the validity of the remaining provisions thereof, provided the intent of this Ordinance can still be furthered without the invalid provision.

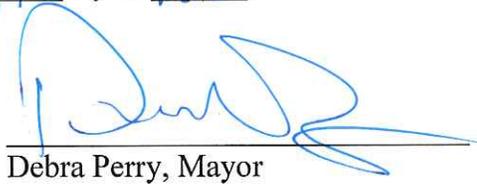
Section 6. Effective Date of Annexation. This Ordinance shall be in full force and effect five (5) days from and after its passage, approval and publication as provided by law. A summary of this Ordinance may be published in lieu of publishing it in its entirety.

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PASSED AND APPROVED by the City Council of the City of Milton,
Washington, at a regularly scheduled meeting this 17th day of Feb., 2015.

CITY OF MILTON



Debra Perry, Mayor

ATTEST/AUTHENTICATED:



Katie Bolam, City Clerk

Approved as to form:



Phil A. Olbrechts

Phil Olbrechts, City Attorney

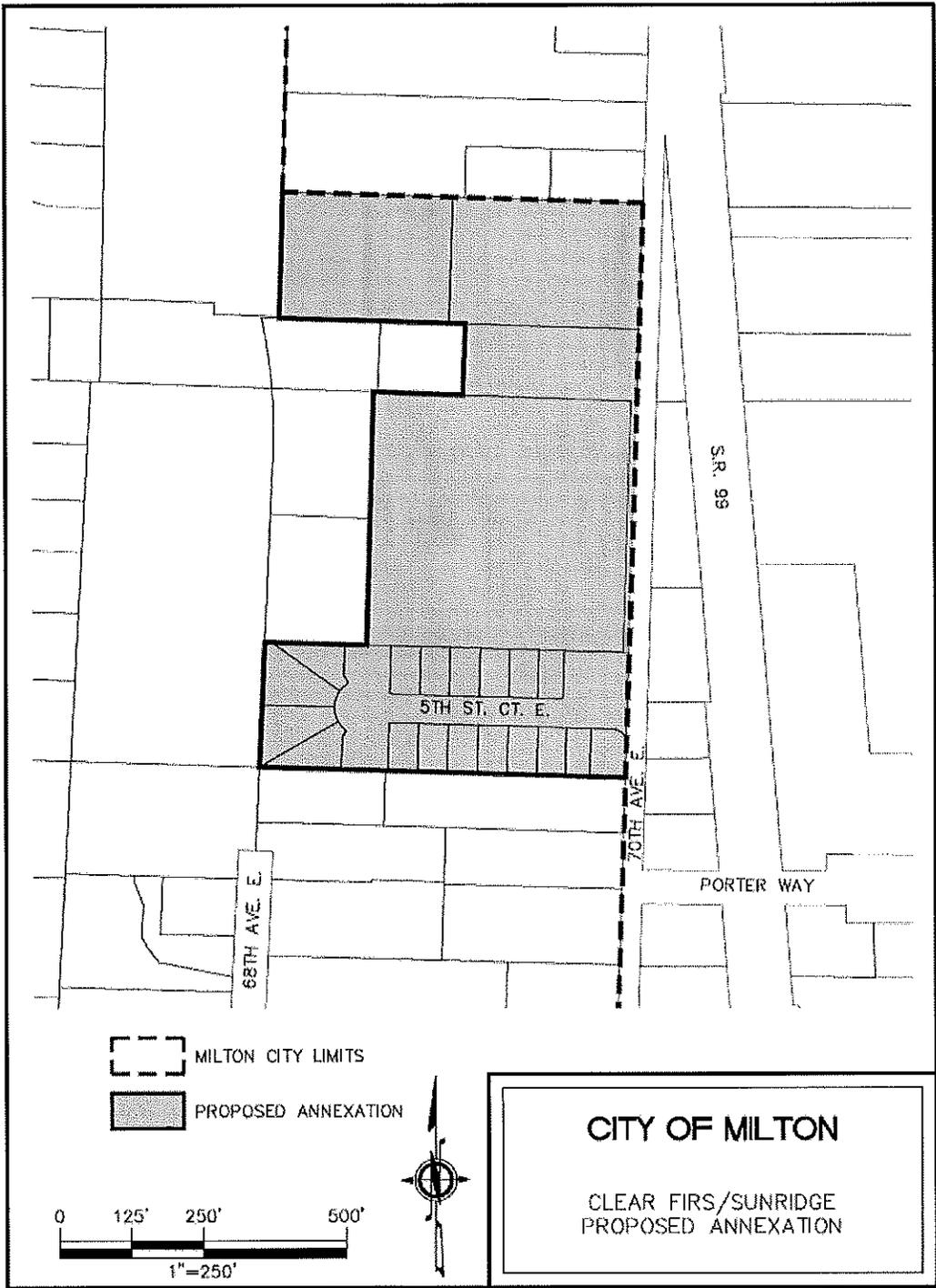
Date of Publication: 2/20/2015

Effective Date: 2/25/2015

“EXHIBIT A”
Legal Description

Portions of Government Lot 1, and the Southeast Quarter of the Northeast Quarter of Section 6, Township 20 North, Range 04 East, W.M, more particularly described as follows:

BEGINNING at the intersection of the West right of way line of 70th Avenue East said line also being the West line of the Milton City limits per ordinance 1116 and the North line of the South half of the Southeast Quarter of said Government Lot 1;
THENCE South along said West right of way line and said City limit line to its intersection with the South line of the Northeast Quarter of the Southeast Quarter of the Northeast Quarter of Section 6;
THENCE West along said South line to the Southwest Corner of said subdivision;
THENCE North along the West line of said subdivision to the Northwest corner of the South 220 feet of said subdivision;
THENCE East along the North line of the South 220 of said subdivision to the West line of the East 480 feet of said subdivision;
THENCE North along the East 480 feet of said subdivision to the North line of said subdivision;
THENCE East along the North line of said subdivision to the Southwest Corner of Lot 4, Pierce County Short Plat No. 76-83, according to map recorded in Volume 7 of Short Plats, Page 53, Records of Pierce County, Washington;
THENCE North along the West line of said Lot 4 to the North line of the South 125 feet of the South half of the Southeast Quarter of said Government Lot 1;
THENCE West along said North line to the West line of the South half of the Southeast Quarter of said Government Lot 1;
THENCE North along said West line to the North line of the South half of the Southeast Quarter of said Government Lot 1;
THENCE East along said North line to the POINT OF BEGINNING.

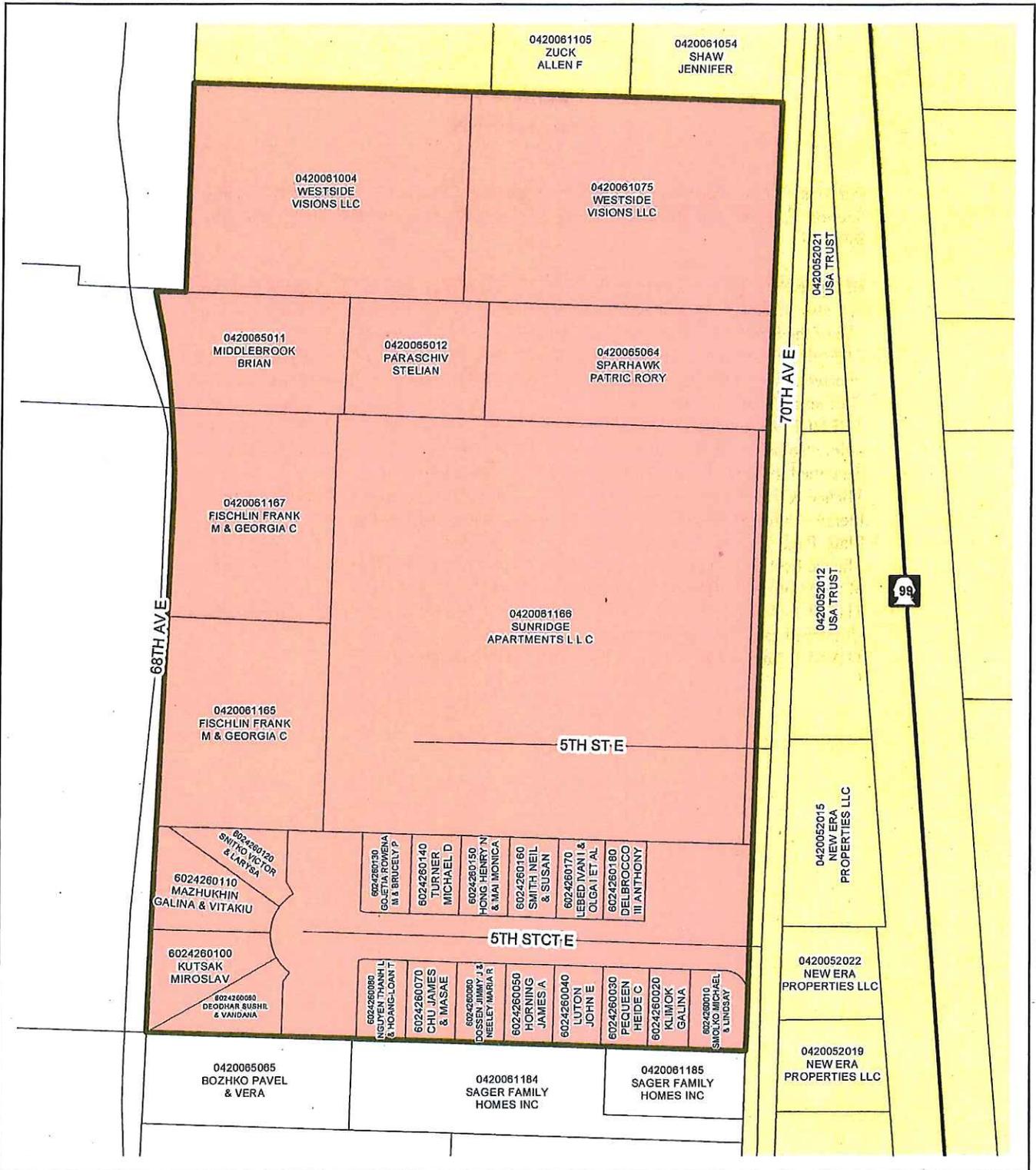


 MILTON CITY LIMITS
 PROPOSED ANNEXATION

0 125' 250' 500'
1"=250'



CITY OF MILTON
CLEAR FIRS/SUNRIDGE
PROPOSED ANNEXATION



**Milton Expand Annexation Area
Case #A-14-2**

Tax Parcels

City

approved by BRB 11/19/2014



Pierce County
Assessor-Treasurer

Map produced on November 26, 2014
by tdepaul

"EXHIBIT B"
Legal Description

Portions of Government Lot 1, and the Southeast Quarter of the Northeast Quarter of Section 6, Township 20 North, Range 04 East, W.M, more particularly described as follows:

BEGINNING at the intersection of the West right of way line of 70th Avenue East, said line also being the West line of the Milton City limits per ordinance 1116, and the North line of the South half of the Southeast Quarter of said Government Lot 1;

THENCE South along said West right of way line, and said City limit line to its intersection with the South line of the Northeast Quarter of the Southeast Quarter of the Northeast Quarter of Section 6;

THENCE West along said South line to the Southwest Corner of said subdivision, said point also being the beginning of a centerline description of Schaller Road Extension as described in AFN 1854990, now vacated by ordinance 90-44;

Thence North along said vacated centerline to a line project west from the North line of Pierce County Short Plat No. 76-83, according to map recorded in Volume 7 of Short Plats, Page 53, Records of Pierce County, Washington;

Thence East on said projected line and the North line of said Short Plat to the West line of the South half of the Southeast Quarter of said Government Lot 1;

THENCE North along said West line to the North line of the South half of the Southeast Quarter of said Government Lot 1;

THENCE East along said North line to the POINT OF BEGINNING.



January 15, 2016

Mr. Chris Montague-Breakwell
Municipal Stormwater Permit Manager
Washington Department of Ecology
Water Quality Program, Southwest Regional Office
P.O. Box 47775
Olympia WA 98504-7775

Re: Internal Coordination Mechanisms at City of Milton

Dear Mr. Montague-Breakwell:

This memo is to address the requirement in the Western Washington Phase II Municipal Stormwater Permit (Permit) to include a written description of internal coordination mechanisms in accordance with S5.A.5.b (Question #4b).

One of the benefits of working at a small city is that internal coordination between the departments is relatively easy when compared to larger jurisdictions with large departments and multiple layers of management. As the full time City employee responsible for all aspects of stormwater management including compliance with the Permit, I interact with most City staff on a regular basis. Some formal coordination mechanisms include:

- Weekly Public Works staff meetings with the Electric Utility Supervisor, Water/Streets/Storm Utility Supervisor, Building Official and City Planner.
- I have biweekly meetings scheduled with the Water/Streets/Storm Utility Supervisor to discuss Permit-related and other stormwater issues.
- The Public Works Director meets weekly with the other City executive staff.
- The Public Works Director holds weekly staff meetings with individual office staff.
- Stormwater issues are presented at City Council meetings on occasion.

Because of Milton's small size, most coordination is informal, including face-to-face meetings, emails, and phone calls. In addition to the Building Official, City Planner, and Water/Streets/Storm Utility Supervisor, I have regular interaction with the Electric Utility Supervisor, our Code Enforcement Officer (a City police officer), City administrative staff, and the Parks/Facilities staff.

We also coordinate with neighboring jurisdictions on occasion as needed, including Edgewood, Federal Way, Fife, and Pierce County

Sincerely,

Jamie Carter
Stormwater Compliance Inspector
Public Works
City of Milton

Public Works Office
1000 Laurel St. Milton, WA 98354-8850
Ph 253.922.8738 / Fax 253.922.3466

Annual Report Question 5: Description of Public Education and Outreach Activities for 2015

Activity	Description
Surprise Lake Matters Newsletter	Prepared and mailed newsletter to all lake shore property owners. Newsletter included information related to stormwater and water quality issues.
Stormwater Press	Prepared and distributed newsletter city wide. The Milton Stormwater Press focuses on things that everyday citizens can do to help with stormwater pollution like natural yard care and using public car washes.
Stormwater Education booth at Milton Days	Staffed a Stormwater Education booth for 2 days at the annual Milton Days festival held every August at Milton Community Park. The Stormwater Education booth provides various educational materials related to stormwater pollution prevention. Also, the City purchased an Enviroscope® Watershed/Nonpoint Source Model for use at the booth, which is popular with children.
Car Wash Kit	The city-owned car wash kit was available to be loaned out for fundraising car washes in 2015.
Surprise Lake Volunteer Water Quality Monitoring	Milton continued to partner with the Pierce Conservation District to maintain a volunteer water quality monitoring program on Surprise Lake, a privately-owned lake within the city.
Development and Construction Handouts	Updated handouts for stormwater site plan and inspection requirements for single family residential and small construction projects.
Regional Activities	Monitor and participate in STORM, South Sound Phase II and other regional public educational activities.
Stormwater Grants	Milton is continuing to use Ecology design and preconstruction grant funding to plan and design low impact development (LID) projects including bio-retention facilities, pervious concrete retrofits, and the design of a City owned decant facility. The intent is for the City to learn about design and construction issues associated with LID in order to be able to educate the public and development community.

Q7 – Measuring, Understanding and Adoption

INTRODUCTION

New to the NPDES Phase II permit requirements this year is the measuring, understanding and adoption of targeted behaviors. Each permittee must, through public outreach and education, measure the understanding and adoption of at least one targeted audience in one subject area. Then the permittee will use the resulting measurement to direct future public outreach and education efforts more effectively and to evaluate changes in adoption of the targeted behaviors.

BASELINE

By establishing a baseline and setting quantifiable, measurable goals this new requirement can be met. The baseline for this study shall be the data collected from past volunteer monitoring. The measurable goal shall be reduction in pollution levels attributed to traditional landscaping practices as measured by the most recent Surprise Lake monitoring numbers. The mechanism for enacting change in this instance is brochures and public outreach at community events.

Target Audience-Target Subject-Target Behavior

Surprise Lake is a 29-acre private lake that is located near the busiest part of Milton, just a couple of hundred yards from State Route 161 and adjacent to Milton Way. Our target audience for this year's evaluation will be the general public, specifically businesses and private citizens that reside in the Surprise Lake basin. The basin encompasses the following area:

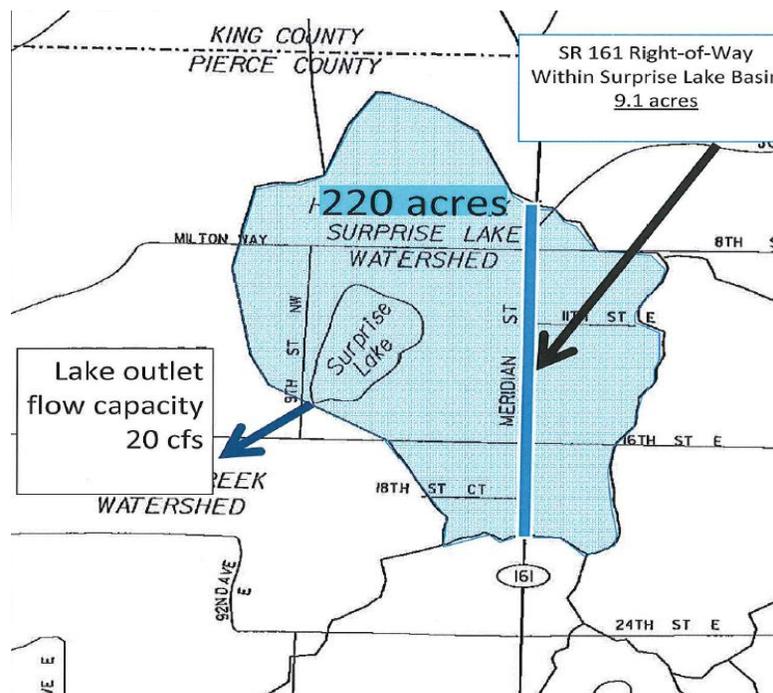


Figure 1 – Surprise Lake Basin

In 2014 two different brochures were sent to residents in the aforementioned basin. One is newsletter that goes out to all of the citizens of Milton called 'The Milton Stormwater Press'. In this particular issue natural yard care that reduces the need for chemicals and increases natural biological functions was the focus (See Appendix A). In addition, all of the residents that live on Surprise Lake annually receive 'Surprise Lake Matters', a newsletter that is tailored to this group. In the March 2014 issue, natural yard care was targeted in the larger context of keeping all pollutants out of the lake in an article titled, 'Stormwater Pollution Prevention for Lakes' (also Appendix A).

In addition, a new brochure was created in 2014 and distributed around the City and at events. It is called, 'Your Local Stream Starts Here' (See Appendix A). Its intention is to educate citizens about the direct connection between storm drains and our water bodies.

ANALYZE/RESULTS

Every year since 2011 Milton and select Surprise Lake homeowners have participated in a volunteer monitoring program for the lake. Using the data collected from previous years and comparing the results to the 2015 monitoring results we can begin to analyze if the targeted public education and outreach program is having an effect.

The volunteer monitoring program samples the lake once a month in between May and October. They test for total phosphorous (shallow and deep), chlorophyll a, algae ID & count, and fecal coliform (July-September only). The samples follow a chain of custody to get to a laboratory for immediate testing.

Each of these tests can tell us something about the lake and help us assess whether or not the information offered to the public is having a marked effect on their behaviors.

Secchi Depth

Water transparency is measured using a secchi disk and is traditionally reported as secchi depth in meters. It is influenced by several factors such as dissolved substances, algae, and sediment particles. Transparency readings can also be affected by waves, wind, and glare. Higher secchi depth readings indicate clearer water (more transparent) while lower secchi depth readings indicate more turbid (cloudy or dirty) water. Clear water allows more light to penetrate deeper in the lake, allowing photosynthesis in aquatic plants and algae to occur; this leads to higher levels of dissolved oxygen. Conversely, a decrease in transparency is often seen with an increase in algae, or an influx of sediment and detritus due to a major storm event or because of human activities in the watershed. Nonetheless, secchi depth is commonly used as an indicator of algal abundance which is an indicator of nutrients in the water.

Secchi depth measurements ranged from 1.7 to 5.2 meters during the 2015 monitoring season with an average secchi depth of 3.7 meters. The secchi depth has not varied greatly over the study period and as mentioned previously is affected by many factors. Generally, a clearer lake is a healthier lake because the presence of sediments and algae are indicative of pollutants being introduced into the water.

Nutrients

Nutrients are chemicals necessary for growth of algae and aquatic plants. Phosphorus and nitrogen are the main nutrients of concern in a lake system. In many lakes, phosphorus is the limiting nutrient in the

system, which means it is only available to plants and algae in very limited quantities. Once the limited supply of phosphorus is exhausted, the algae population will stop expanding.

In lakes that are deep enough to stratify, typically in summer, total phosphorus concentrations in the hypolimnion increase and remain higher than in the epilimnion until the time of turnover, typically in the fall. This increase in phosphorus in the hypolimnion is caused in large part by the decomposition of phosphorus-rich organic matter at depth, a process that also consumes any oxygen present. Once oxygen is depleted or very low, phosphorus is also released from the bottom sediments. When vertical mixing eventually occurs in the lake, the high phosphorus load in the hypolimnion is brought to the epilimnion. With this influx of phosphorus, algae populations in that layer can increase to the point of producing an algal bloom in the fall.

Excessive phosphorous can also be introduced into the lake system from excessive fertilizer use on turf or for agricultural purposes. This influx of nutrients causes a larger algal mass and, subsequently a larger depletion of oxygen once the algae dies and decomposes.

Total phosphorus concentrations for Surprise Lake in 2015 ranged from 10 $\mu\text{g/l}$ to 30 $\mu\text{g/l}$ in the shallow samples, and from 40 $\mu\text{g/l}$ to 800 $\mu\text{g/l}$ in the deep samples. In general, nutrient conditions were similar to those observed in previous years.

There is some question, however, as to whether the shallow and deep total-phosphorus samples collected in July 2015 were accidentally switched (mis-labeled) in the field at the time of sampling, or in the laboratory at the time of analysis. For reasons described previously, it is unusual for concentrations of total phosphorus in summer tend to be higher in the epilimnion than in the hypolimnion. In addition, the same question of mislabeling applies to the September 11, 2011, sampling results.

Graphs showing both shallow and deep total phosphorus levels for all years are shown below. These graphs were drawn using the original data provided by the laboratory; that is, the possible switching of samples (blue arrows) was ignored.

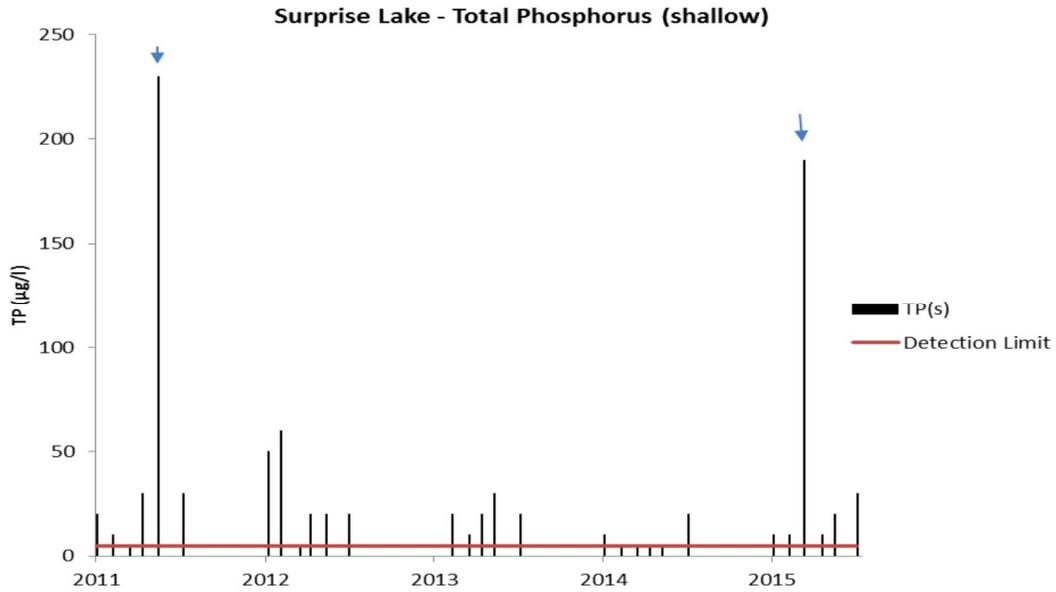


Figure 2 – Total Phosphorous (shallow)

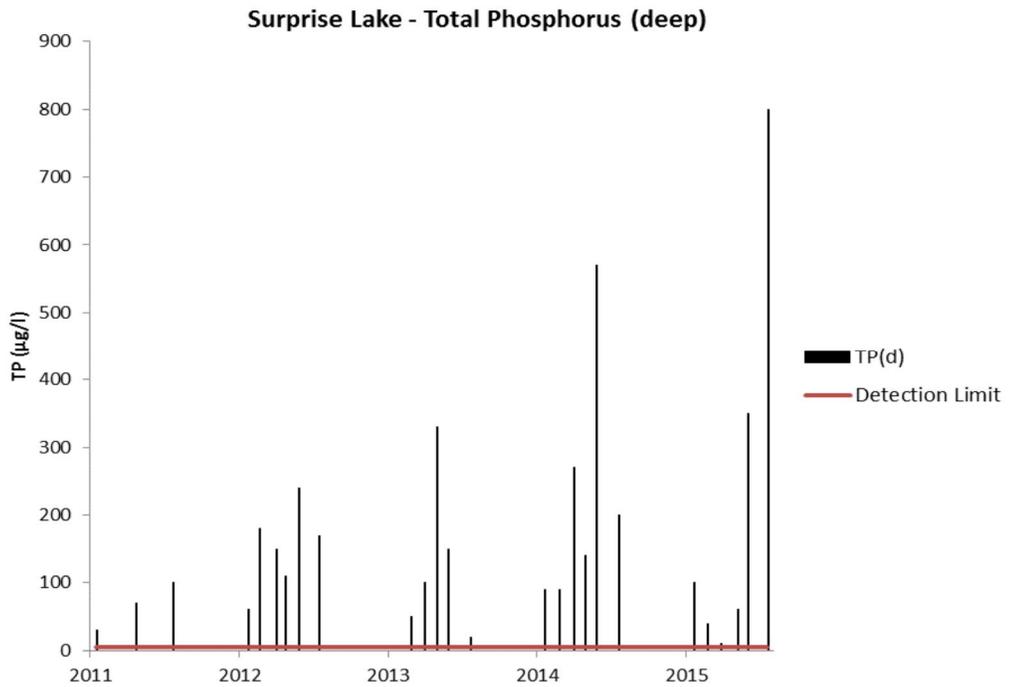


Figure 3 – Total Phosphorous (deep)

Through 5 years of sampling there is an obvious upward trend in phosphorous levels deep in the lake.

Chlorophyll a

Chlorophyll *a* is one of the green pigments found in nearly all algae. The concentration of chlorophyll *a* is commonly used to estimate algal biomass and to assess the productivity (trophic state) of the lake. Higher levels of Chlorophyll *a* can indicate an increase in nutrients that is represented by larger algae colonies. Test results must be interpreted carefully, however, because chlorophyll *a* levels can be fairly variable. For example, various species of algae contain differing amounts of chlorophyll per cell. The amount of chlorophyll can also vary with the health and age of the algal population, as well as with weather conditions. Additionally, algae can concentrate at different levels in the water column and thereby escape collection.

Chlorophyll *a* levels at the one-meter depth in 2015 ranged from below detection to 21 mg/m³. These results are best analyzed when coupled with other results to calculate a Trophic State Index.

Trophic State Index

The Trophic State Index (TSI) is a rating system that describes biological productivity - the capacity of a lake to produce and support aquatic life including algae, plants, and animals. The index is a scale that ranges from 1 to 100 with low TSI values indicating low biological productivity and high TSI values indicating high biological productivity. Both extreme ends of the spectrum cause problems for lakes for different reasons. Lakes have traditionally been classified into four different groups based on their level of productivity. The groups from the lowest to highest productivity level are oligotrophic, mesotrophic, eutrophic, and hypereutrophic. Generally, lakes with TSI values between 0 and 40 are considered to be oligotrophic, those between 40 and 60 are mesotrophic, and those between 60 and 100 are eutrophic. Hypereutrophic lakes are those whose TSI values are greater than 70. Once the TSI value has been calculated for a lake, the result can be compared to other lakes or the value can be recalculated each year to determine whether there is an upward or downward trend for the lake.

For purposes of this report, TSI values were calculated using average summer values (mid-June through mid-September) of chlorophyll *a*, shallow total phosphorus, and secchi depth. It is important to remember that one dramatically different result in a small number of samples can significantly impact the TSI value. The suspiciously high total phosphorus results for May 2011 and July 2015 negatively impacts the TSIs if they are indeed the correct values. If the total phosphorus result for July is actually 10µg/l, as opposed to 190 µg/l, the TSI value based on total phosphorus would shift from 66 to 42, thereby changing its trophic classification from eutrophic to mesotrophic. *This would suggest a possible reduction in certain types of pollution in Surprise Lake*

The TSI average values for the last four years are shown below. TSI for secchi depth has been fairly consistent, hovering around 40 for all years of sampling. The 2015 TSI value for chlorophyll *a* is similar to that of 2014, while the total phosphorus TSI value is higher, regardless of the possible switching/mislabeling of samples.

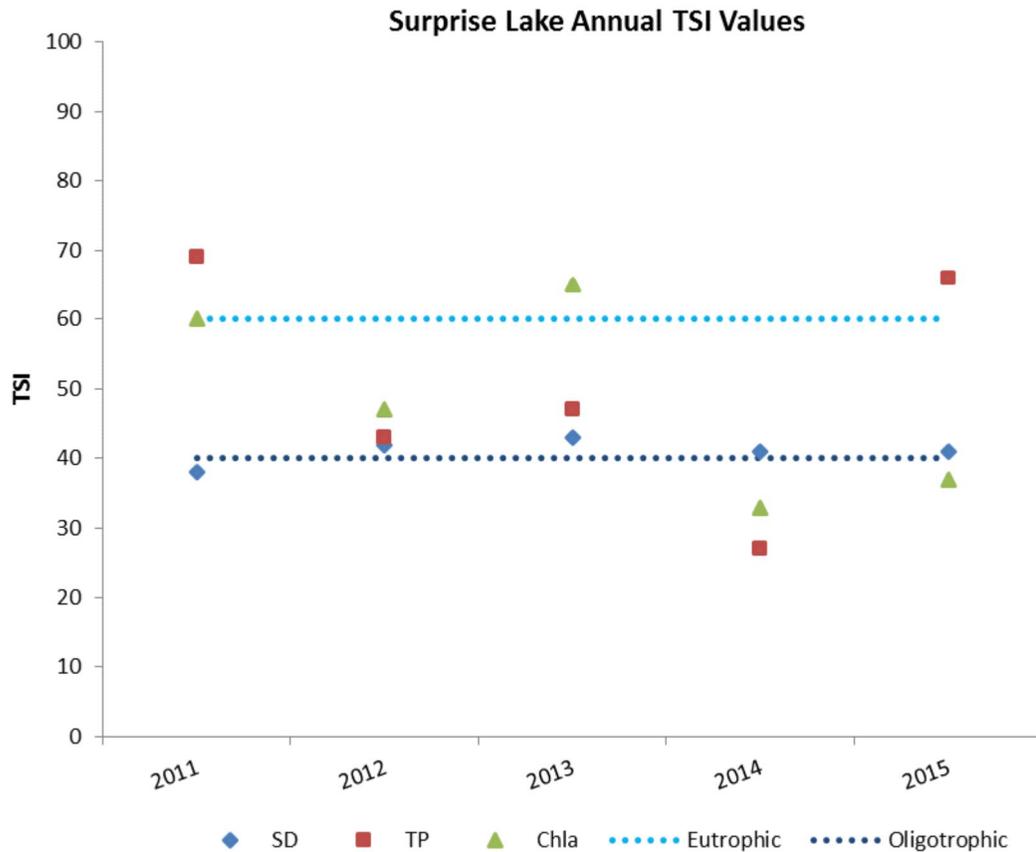


Figure 4 – Annual TSI Values

Fecal Coliform Bacteria

The presence of fecal coliform bacteria in water is an indication of contamination from sewage, and poses a potential human health risk. Their presence, however, does not necessarily indicate that humans are the source of that contamination. Many other animals such as dogs, cats, waterfowl, or livestock are common sources of fecal contamination in lakes. Unless there is evidence that human sewage is being discharged into a lake, through failing septic systems or a sanitary sewer overflow, for instance, the major source of fecal coliform bacteria is typically assumed to be of nonhuman origin.

The state of Washington has set a two-part standard for levels of fecal coliform bacteria in lakes. The regulation states that fecal coliform levels must not exceed a geometric mean value of 50 colonies/100mls, with not more than 10% of the samples exceeding 100 colonies/100mls.

The aerial photograph below shows the sampling locations around Surprise Lake. Fecal coliform sampling is conducted at the north (blue dot) and south (green dot) ends of the lake in July. The dock at Surprise Lake Village (SLV--red dot) was still undergoing repairs during 2015, so there was no access to sample there this year.



Figure 5 – Fecal coliform sampling locations

Fecal coliform concentrations exceeded state standards in July at the site (blue) located at the north end of the lake. High bacterial counts can often be attributed to the presence of waterfowl, and in previous years the City staff did indeed note the presence of large numbers of waterfowl while sampling at the north end of the lake, but not at the south end. There were no accompanying notes regarding waterfowl numbers from sampling for 2015.

Encouraging those shoreline residents with septic systems to keep them in proper working order would reduce the seepage of nutrients and bacteria into the lake. Discouraging access to shoreline lawns and docks by waterfowl by planting vegetation would have the same effect. One area that was targeted in the Surprise Lake Matters brochure was water fowl. We have a significant population of Canadian Geese as well as various species of ducks and other birds in and around Surprise Lake. Different methods of deterring them were presented to portions of the target audience including smart landscape practices like planting native shoreline vegetation. Shoreline vegetation has the added benefit of filtering storm water runoff, another source of bacterial contamination, before it enters the lake.

PUBLIC OUTREACH STUDY RESULTS

It is believed that changes in behavior among the general population can have a cumulative affect and make substantial progress toward contributing to solutions for large municipal challenges.

While 5 years of data isn't going to give you long term trends, it is enough data to evaluate if measures are having an effect in the short term.

The two results that are the most telling are the violation of state standards in fecal coliform levels and the apparent slow transformation of Surprise Lake from mesotrophic to oligotrophic. There is also an upward trend in the levels of phosphorous deep in the lake although this did not translate into a similar trend for the trophic state.

The fecal coliform levels collected in July that were in violation of state standards are, at this time, an anomaly. Through continued sampling and field investigation the City may be able to determine the source of the bacteria.

Changing the classification of the lake to oligotrophic could be an indicator of lower levels of pollution, specifically nutrients associated with fertilizers. If anthropogenic sources of these nutrients are being used less frequently with more regard for proper placement and quantity, then it is not an oversimplification to say that the lake would respond with a lower trophic state index number.

Overall the results for 2015 were similar to the previous four years. While this may indicate that education and outreach is working to at least maintain the status quo, more sampling and analysis will be required. Lakes are complicated systems and a longer sampling period may be necessary to ascertain more long term patterns and how much effect human activities have on them.

NEW DIRECTION/ADOPTION OF BEHAVIORS/CONCLUSION

Based on the assessment of the understanding of the targeted behaviors the City will continue to distribute the aforementioned brochures to Milton and Surprise Lake residents, and in fact more brochures with targeted messages are planned for 2016. They include a brochure introducing Low Impact Development concepts to citizens and developers and another that will detail Erosion and Sediment Control for small construction projects. We have determined that these handouts are an efficient use of time and money, and that they are promoting adoption of the targeted behaviors.

We must also consider the variability and relatively short sampling period of our data. Making direct correlations between the outreach and the lab results is not prudent. Therefore, the conclusion reached is that more public education and outreach must be enacted. As the area around Surprise Lake becomes more developed we must become more vigilant and educate our citizens to the maximum extent possible. The City of Milton will use these results to direct education and outreach in the following manner:

- Continue to distribute information in the form of brochures or newsletters to relevant portions of our community.
 - Continue with 'Surprise Lake Matters' and 'The Milton Stormwater Press'
 - Generate 2 new brochures for 2016
 - An Introduction to Low Impact Development
 - Erosion and Sediment Control for Small Construction Sites
- Continue to staff booths at Milton Days and the Puyallup Fair
- Expand public outreach with more community involvement type activities.
 - Attend Water 4 Life. Over 1000 5th graders will attend to learn about water quality issues in the Puget Sound.
 - Attend and encourage others to attend Seattle Mariners Puget Sound Starts Here night to raise awareness and money.

- Other public events
- Conduct surveys on line and at events to determine a deeper understanding of how and why people do or do not adopt behaviors.
- Update City Surface Water Utility Page on City website.

APPENDIX A – BROCHURES

Surprise Lake Matters

Water Quality Information for Surprise Lake Residents

March 2014

Volunteer Lake Monitoring

May 2014 is the start of the fourth year of volunteer lake monitoring on Surprise Lake. The goals of this program are to involve Surprise Lake homeowners in monitoring, recording, and reporting on lake conditions; promote public awareness of lake processes and how our daily activities affect lake water quality; and to provide water quality data that will increase our understanding of the lake and provide a basis for management decisions. Volunteers record environmental conditions, measure temperature and dissolved oxygen, and collect water samples on a monthly basis from May through October. The re-



Volunteers Monitor Surprise Lake

quirements for becoming a volunteer lake monitor are: access to a boat with an anchor, 1-2 hours a month, and a desire to learn more about your lake. We provide training and equipment. If interested, contact Isabel Ragland at 253-845-9770x103 or isabelr@piercecountycd.org to schedule a training.

Stormwater Pollution Prevention for Lakes

One of the main sources of pollution to lakes is stormwater runoff. Stormwater is rain or snow melt that runs off surfaces such as roads, parking areas, rooftops and landscaped areas. As water runs off these surfaces, it can pick up pollution such as oil, fertilizer, pesticides, soil, trash, and pet waste. This pollution washes into Surprise Lake through stormwater drainage pipes and surface flow across landscaped areas.



Drainage Pipe

While small amounts of pollutants may appear insignificant, collectively they can contribute to an unwanted growth of aquatic plants, algae blooms, and bacterial contamination in the lake. The following actions will help to protect the lake from pollution:



Rain Garden

- Provide a buffer of natural vegetation along the lake shore to help filter runoff;
- Investigate natural yard care practices;
- Pick up pet waste, bag it, and put it in the trash;
- Plant a rain garden;
- Report dumping and spills to storm drains to the Milton Public Works Department at 253-922-8738.

Resources for protecting Surprise Lake:

The Washington Lake Book:

www.ecy.wa.gov/programs/wq/plants/lakes/bookcontents.html

Blueprint for a Lake Friendly Landscape:

www.ecy.wa.gov/programs/wq/plants/lakes/landscaping.html

Natural Yard Care:

www.tpchd.org/environment/healthy-environment/natural-yard-care/



*City of Milton
Public Works
1000 Laurel Street
Milton, WA 98354
253-922-8738*



www.piercecountycd.org

Nuisance Waterfowl

Geese and other waterfowl love to feed on the succulent grasses of well kept lawns. Although most people enjoy seeing the birds and feeding ducks is a favorite family activity, waterfowl can become a year-round nuisance for lakeside residents.

The problem with Canada Geese

Resident Canada geese are big birds and defecate copiously. They denude grassy landscaped areas located near water bodies, and trample vegetation by frequently entering and exiting the water. Their droppings can contribute to bacteria and algae problems in lakes and ponds.



How to discourage the geese

Geese prefer to rest and feed on open lawn areas that allow them easy access to the water and clear sight lines to spot approaching predators. Maintaining a buffer of unmowed grass or other vegetation along the shore is one way to discourage these birds. Geese prefer not to walk through tall grass and this vegetative buffer has the additional water quality advantage of filtering runoff before it enters the lake. Planting wildflowers or native vegetation to help break up the expanse of lawn will help to deter geese. An open sight line (the distance from the geese to a place where a predator could hide) of less than 30 feet will generally cause geese to move to a more comfortable grazing area.

More ideas for discouraging Canada geese are available at the Washington Department of Fish and Wildlife website at:

http://wdfw.wa.gov/living/canada_geese.html

Only Rain Down the Drain

Report Pollution and Spills

City of Milton

Public Works

253-922-8738



Shoreline Management Plan

In 2012, the City of Milton adopted the Shoreline Master Program (SMP) as required by the State Department of Ecology. The SMP is based on the overarching concept that water is a resource owned by the citizens of the state and should be managed as such. The three broad policies of the Shoreline Master Program are to encourage water-dependant uses, protect natural shoreline resources, and promote public access. Since the adoption of the SMP, the City has issued three statements of exemption for minor work, required the restoration of removed vegetation, and has relied on the SMP policies in the review of storm water plans that discharge to Surprise Lake.

For more information about the City of Milton Shoreline Master Program, contact Chris Larson, Associate Planner, at 253-517-2715 or clarson@cityofmilton.net.

Aquatic Plants

There are two types of aquatic plants: beneficial and noxious. Beneficial plants, including native plants, play a significant role in lakes and streams by providing food and habitat for fish and wildlife, stabilizing shorelines, and contributing to nutrient cycling. Sometimes beneficial plants can grow in overabundance. This is usually the result of excessive inputs of nutrients, such as nitrogen or phosphorus from fertilizer. In contrast, aquatic noxious weeds are invasive non-native plants that threaten our native vegetation, fish, wildlife and their habitat.

The Washington Department of Fish and Wildlife has created a pamphlet titled "Aquatic Plants and Fish".

This pamphlet addresses the problems associated with aquatic noxious weeds. The pamphlet is available at http://wdfw.wa.gov/licensing/aquatic_plant_removal

The Department of Ecology has a webpage on freshwater aquatic plant identification:

<http://www.ecy.wa.gov/programs/wq/plants/plantid/index.html>



What Kind of Frog is That?

If you see a frog or salamander using the lake and want to know what kind it is, check out the Amphibians of Washington webpage at the Burke Museum of Natural History and Culture:

<http://www.burkemuseum.org/herpetology/amphibians>

The Milton Stormwater Press

August 2014

Go Natural!

A beautiful yard that's easy to care for is the dream of most homeowners.

Practicing the five steps of Natural Yard Care will help give you a yard that's not only beautiful and low maintenance, but one that is safe and healthy for families, pets, wildlife, and our great Northwest environment.

1. Build healthy soil



In the Pacific Northwest, beautiful yards and gardens all start with healthy soil. Poor soil leads to more work and greater cost: you'll find yourself fertilizing and watering more frequently, and buying new or replacement plants and shrubs far too often.

- When planting lawn or flower beds, dig compost into soil. You can make compost at home or buy it in bags or in bulk.
- Spread mulch around existing plantings in the spring or fall. Composted yard debris, leaves, grass clippings, or bark all work well.
- Need fertilizer? Go organic! Organic fertilizers feed plants longer and are less likely to wash off into our streams.

2. Plant right for the site

Get to know your yard. Where is it sunny or shady? Is the soil dry or soggy? Then select plants that grow well in the Northwest and in the conditions in your yard. The right plants in the right place will thrive without a lot care, water, fertilizer or pesticides. In the wrong situation, plants will struggle no matter how much time and money you spend on them.

- Get to know your site conditions before choosing plants.
- Choose pest-resistant, disease resistant, and drought-tolerant plants.
- Plant trees to provide shade, reduce water needs, slow stormwater runoff, and create wildlife habitat.
- Lawns and vegetables are picky. They'll only grow in sunny, well drained sites.



3. Practice smart watering

The right amount of water leads to healthy, beautiful growth. Too much or too little makes plants susceptible to pests and disease. Smart watering saves money on your water bill and on the cost of replacing plants and shrubs.

- Make every drop count by mulching, selecting drought-tolerant plants, using soaker or drip hoses, and water timers. Water only in the morning or evening to reduce evaporation.
- Be sure to moisten the whole root zone, and let the soil dry before watering again.



*City of Milton
Public Works
1000 Laurel Street
Milton, WA 98354*

- Use automatic irrigation systems efficiently. Check for leaks and have the system tested regularly. Don't water if it's rained recently.
- Let the rain soak in. Direct downspouts onto lawns or garden beds. Help the soil absorb rainfall by building rain gardens or using compost and mulch.

4. *Think twice before using pesticides*

Scientists have found 23 pesticides in Puget Sound streams, many at levels that can harm salmon and other wildlife. When stormwater flows over our yards and gardens, it picks up pesticides, herbicides, and fertilizers and carries them into the waterways we swim, fish, and play in. Overuse of these products is bad for the soil, bad for fish, and bad for our families' health.



- Start with prevention. Select disease-resistant plants, and pull weeds before they spread.
- Identify the problem before you spray. Most bugs are good bugs!
- Select the least toxic control method. Many less toxic alternatives are available. Check out <http://www.growmartgrowsafe.org>, a great resource for learning about which products are less toxic to people, pets, and the environment.
- Only use pesticides as last resort and follow label directions carefully. Some pesticides can seep down through the ground and into the groundwater that supplies our local drinking water.

5. *Practice natural lawn care*

- Mow higher and leave the clippings. "Grasscycling" doesn't cause thatch, and makes lawns healthier by providing free fertilizer!
- Fertilize moderately in May and September with a "natural organic" or "slow-release" fertilizer. Follow the label directions carefully. More is not better!
- Prevent problems. Weeds are often a symptom of a larger problem, such as soil conditions that are too wet, dry, shady, compacted, or low in fertility.
- Think twice before using "weed and feed" or other pesticides. These products spread pesticides over the whole yard instead of just where they are needed.
- Water deeply and infrequently. Grass needs about one inch per week (including rainfall) in summer and less in the spring and fall.



Sources:

The information included in this edition of the Milton Stormwater Press was taken from the following sources:

Puget Sound Starts Here Natural Yard Care Website:

http://www.naturalyardcare.info/build_healthy_soil.php

Tacoma-Pierce County Health Department Natural Yard Care Website

<http://www.tpchd.org/environment/healthy-environment/natural-yard-care/>

City of Tacoma Natural Yard Care Website

http://wscity01.cityoftacoma.org/government/city_departments/environmentalservices/solid_waste_-_garbage_recycling/yard__food_waste_recycling/natural_yard_care/



Only Rain Down the Drain

Report Pollution and Spills

City of Milton

Public Works

253-922-8738

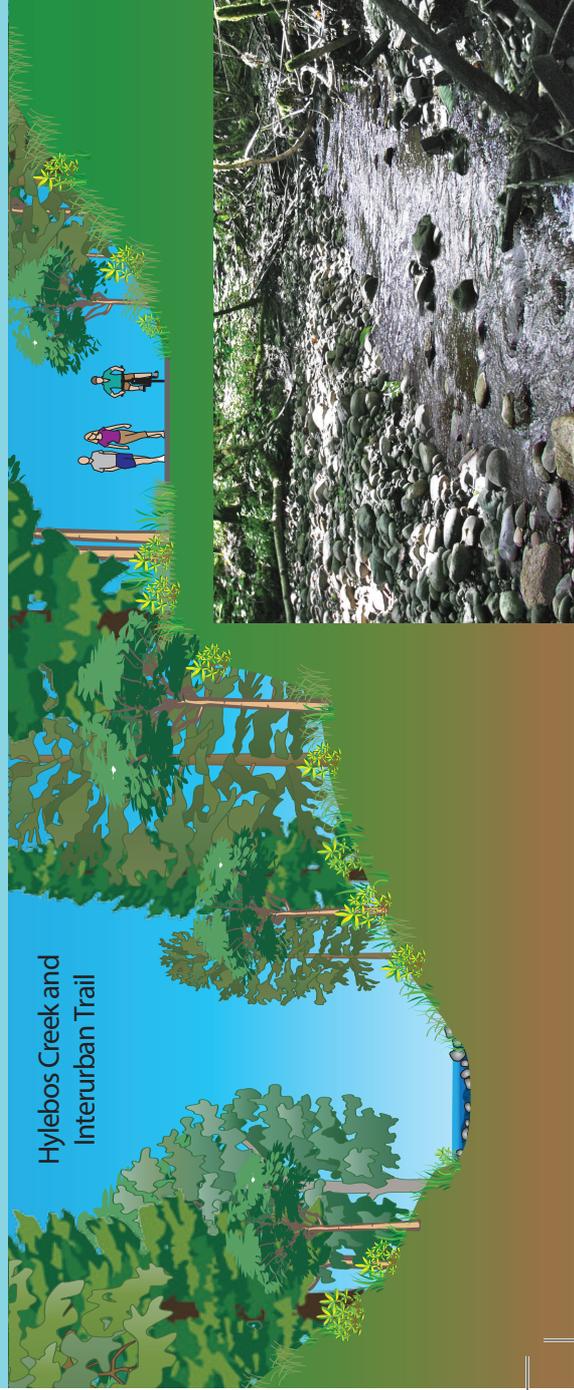
NOTHING BUT RAIN DOWN THE STORM DRAIN

Water in storm drains flows untreated into our local streams, lakes and wetlands!

Your actions can contribute significantly to stormwater pollution. Be part of the solution.

- Never pour or wash anything into a storm drain including dirty water, oil, paint, spills, or soapy water (even biodegradable soap pollutants).
- Wash vehicles at a car wash facility where the wash water goes to the sanitary sewer for treatment. It's OK to wash on a grassy area if you use mild soap and the water will infiltrate into the ground instead of washing to a storm drain.
- If you must pressure wash a driveway or parking lot, take measures to ensure the sediment and wash water does not enter a storm drain.

Wastewater from sinks, toilets, and indoor drains flows to a sewage treatment plant where it is treated before being released into Puget Sound.



Hylebos Creek and Interurban Trail



Landscaping:

Pesticides and fertilizers used on lawns and landscaping can be washed to storm drains when it rains. A government study in King County found pesticides in urban streams at concentrations that exceed limits set to protect aquatic life.



Learn about natural landscaping and yard care at Pierce County's website:

<http://www.co.pierce.wa.us/naturallyardcare>

Ask your landscaping company about practices to keep your yard and our Northwest environment healthy.



YOUR LOCAL STREETS STARTS HERE



To prevent water pollution, recycle or dispose of waste materials properly. Read the label!

Painting and Remodeling:

Clean brushes in a sink, not outside. Oil-based paint, paint thinners and many remodeling products are hazardous waste and must be disposed of properly. Dried water-based latex paint can go in the garbage.

Car Washing and Maintenance:

Wash water from cleaning cars and equipment must flow to a drain connected to the sanitary sewer – NOT a storm drain. ALL soaps are harmful to aquatic life. Properly recycle or dispose of used motor oil and filters, antifreeze, gasoline and other liquids. Clean up spills and leaks immediately with absorbent material. Never wash spilled material to a storm drain. If working outside, use drip pans to collect drips and spills.

Carpet Cleaners:

Dispose of dirty, soapy water in a sink, toilet or other drain connected to the sanitary sewer - never to a street, gutter, parking lot or storm drain.

Restaurants and Grocery Stores:

Dispose of mop water in a utility sink, not outside. Do not wash cooking equipment or floor mats in parking lots or outside areas. Make sure dumpsters and compactors do not leak fluids to a storm drain. Dispose of fats, oil and grease properly; small amounts can go in the garbage. Keep grease barrels closed and clean up spills.

For additional information on how to prevent pollution:

Information for Homeowners:

The Puget Sound Partnership:
<http://www.pugetsoundstartshere.org/category/how-to-help/>
 Washington State Department of Ecology:
http://www.ecy.wa.gov/washington_waters/whatyoucando.html



Information for Businesses:

Tacoma - Pierce County Health Department
<http://www.tpchd.org/environment/business-pollution-prevention/resources>



HELP KEEP OUR STREAMS AND LAKES HEALTHY

Report water pollution and violations to the City of Milton Public Works Department - 253-922-8738

Protect Human Health: Reduce pollution and help protect our community from needless exposure to harmful chemicals.

Protect Fish and Wildlife: Salmon and other wildlife live in our local streams and lakes. Soap (including those labeled as biodegradable and environmentally friendly), oil, cleaning products and most other chemicals are toxic to fish and wildlife.

Comply with the Law: Federal, state and city regulations protect water quality by prohibiting pollutant discharges to the storm drainage system and our lakes, streams and wetlands. The City of Milton Storm Drainage of Surface Water code 13.26.265 prohibits stormwater and surface water pollution.

The City of Milton relies primarily on public education and voluntary corrective actions to achieve compliance; however, discharging pollutants into storm drains or waterbodies is a code violation and can result in enforcement actions including civil penalties. The City is happy to work with you on the correct way to recycle or dispose of waste materials and protect our surface waters.

Contact Valerie Monsey at the City of Milton Public Works Department at **253-517-2708** for assistance.



City of Milton Public Works
 1000 Laurel Street
 Milton, WA 98354
 253-922-8738

APPENDIX B – MONITORING RESULTS

Lake Field Data

Lake Name: Surprise

Site #: _____

Date: 5/3/15 Time: 2:10 PM

Monitor Names: Don Hull

Linda Bmeray-Hull

Site Depth: 10.3 meters
(To the nearest 0.1 m)

Secchi Disk Depth: 4.1 meters

Weather Conditions
Secchi Depth measured in:
 Strong sunlight Overcast
 Hazy sunlight
 Bright cloud conditions

Water Surface is:
 Calm Moderate Waves
 Ripples White Caps
 Small Waves
Air Temperature 24 °C

Water Quality

Lab: _____

Total Phosphorus	Sample Depth
Mg/l	m.
Mg/l	m.

Chlorophyll a	Sample Depth
Mg/m ³	m.
Mg/m ³	m.

Please record additional comments or observations:

Wind Conditions:
 Calm Strong
 Breezy
Wind Direction (from): NW

Water conditions
Color: 6
(1 - 11, choose closest color)

Amount of suspended algae:
 None Light
 Moderate Heavy
 Substantial (algal bloom)

Water Odor:
 None Rotten egg
 Fishy Septic-like
 Musty Other

Largest number of waterfowl on lake at any one time in the last week?

30 geese & ducks

Volunteer Lake Monitoring Program
Pierce Conservation District
5430 66th Ave E, POB 1057
Puyallup, WA 98371
253-845-9770x103

Stream Team Lake Monitoring Program

Depth (meters)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	% D.O. Saturation
Surface	17.6	9.33	98.2
1	17.5	9.71	100.5
2	16.7	9.58	97.4
3	15.6	9.51	95.3
4	13.8	8.8	85.4
5	12.4	5.3	49.2
6	10.3	1.9	16.8
7	8.4	.53	4.2
8	7.6	.32	2.4
9	7.5	.24	2.1
10			
11			

Lake Field Data

Lake Name: Surprise

Site #: _____

Date: 6/7/15 Time: 1⁰⁵ pm

Monitor Names: LINDA + DAN

Site Depth: 10.1 meters
(To the nearest 0.1 m)

Secchi Disk Depth: 5.2 meters

Weather Conditions
 Secchi Depth measured in:
 Strong sunlight Overcast
 Hazy sunlight
 Bright cloud conditions

Water Surface is:
 Calm Moderate Waves
 Ripples White Caps
 Small Waves
 Air Temperature 21 °C

Wind Conditions:
 Calm Strong
 Breezy
 Wind Direction (from): NW

Water conditions
 Color: 2
 (1 - 11, choose closest color)

Amount of suspended algae:
 None Light
 Moderate Heavy
 Substantial (algal bloom)

Water Odor:
 None Rotten egg
 Fishy Septic-like
 Musty Other
very nice

Largest number of waterfowl on lake at any one time in the last week?
~ 200 geese + ducks
lots of young ones

Water Quality

Lab: _____

Total Phosphorus	Sample Depth
Mg/l	m.
Mg/l	m.

Chlorophyll a	Sample Depth
Mg/m ³	m.
Mg/m ³	m.

Please record additional comments or observations:

Very nice day, water clear

Volunteer Lake Monitoring Program
 Pierce Conservation District
 5430 66th Ave E, POB 1057
 Puyallup, WA 98371
 253-845-9770x103

Stream Team Lake Monitoring Program

Depth (meters)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	% D.O. Saturation
Surface	23.1	8.23	95.7
1	23.0	8.27	99.8
2	21.5	8.73	98.7
3	20.5	8.87	98.0
4	18.1	6.49	69.8
5	14.9	4.3	41.5
6	11.5	1.54	13.9
7	10.4	.76	6.7
8	9.1	.64	5.2
9	8.3	.23	2.0
10	n/a bottom		
11			

Lake Field Data

Lake Name: Surprise

Site #: _____

Date: 8/18/15 Time: 16:05

Monitor Names: Dan Hill

Site Depth: _____ meters
 (To the nearest 0.1 m)
9.2

Secchi Disk Depth: _____ meters
4

Weather Conditions
 Secchi Depth measured in:
 Strong sunlight Overcast
 Hazy sunlight
 Bright cloud conditions

Water Surface is:
 Calm Moderate Waves
 Ripples White Caps
 Small Waves
 Air Temperature 28.5 °C

Wind Conditions: _____ Strong
 Calm
 Breezy
 Wind Direction (from): NW

Water conditions

Color: 5
 (1 - 11, choose closest color)

Amount of suspended algae:
 None Light
 Moderate Heavy
 Substantial (algal bloom)

Water Odor:
 None Rotten egg
 Fishy Septic-like
 Musty Other

Largest number of waterfowl on lake at any one time in the last week?
75

Water Quality

Lab: _____

Total Phosphorus	Mg/l	Sample Depth	m.
0.01	Mg/l	1	m.
0.06	Mg/l	Deep	m.

Chlorophyll a	Mg/m ³	Sample Depth	m.
2	Mg/m ³	1	m.
	Mg/m ³		m.

Please record additional comments or observations:

Volunteer Lake Monitoring Program
 Pierce Conservation District
 5430 66th Ave E, POB 1057
 Puyallup, WA 98371
 253-845-9770x103

Stream Team Lake Monitoring Program

Depth (meters)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	% D.O. Saturation
Surface	23.8	8.11	91.2
1	23.8	8.30	95.1
2	22.7	7.97	92.0
3	22.4	8.05	88.5
4	22.1	7.34	86.7
5	20.3	5.82	40.7
6	14.7	1.4	22.3
7	12.3	1.44	3.6
8	10.2	1.28	2.7
9			
10			
11			

Lake Field Data

Lake Name: Surprise

Site #: _____

Date: 9/13 Time: 2:01 PM

Monitor Names: Don Luda
Isabel

Site Depth: _____

10.8 meters
(To the nearest 0.1 m)

Secchi Disk Depth: _____

3.0 meters

Weather Conditions

Secchi Depth measured in: _____

Strong sunlight Overcast

Hazy sunlight

Bright cloud conditions

Water Surface is:

Calm Moderate Waves

Ripples White Caps

Small Waves

Air Temperature 22.5°C

Wind Conditions:

Calm

Breezy

Strong

Wind Direction (from): SW

Water conditions

Color: 6
(1 - 11, choose closest color)

Amount of suspended algae:

None Light

Moderate Heavy

Substantial (algal bloom)

Water Odor:

None

Fishy

Musty

Rotten egg

Septic-like

Other

Largest number of waterfowl on lake at any one time in the last week? 55

Water Quality

Lab: _____

Total Phosphorus	Sample Depth
0.02 Mg/l	1 m.
0.35 Mg/l	Deep m.

Chlorophyll a	Sample Depth
3 Mg/m ³	1 m.
Mg/m ³	m.

Please record additional comments or observations:

Volunteer Lake Monitoring Program
Pierce Conservation District
5430 66th Ave E, POB 1057
Puyallup, WA 98371
253-945-9770x103

Stream Team Lake Monitoring Program

Depth (meters)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	% D.O. Saturation
Surface	20.9	9.0	102.3
1	20.8	9.18	103.6
2	20.7	9.18	103.2
3	19.5	8.72	95.3
4	19.1	7.80	83.8
5	18.7	6.27	68.0
6	17.4	1.23	16.5
7	13.8	.22	2.0
8	10.3	.19	1.8
9	9.1	.17	1.4
10			
11			

Lake Field Data

Lake Name: Surprise

Site #: _____

Date: 11/15 Time: 1:30

Monitor Names: Dan

Site Depth: 112 meters
(To the nearest 0.1 m)

Secchi Disk Depth: 17 meters

Wind Conditions:
 Calm Strong
 Breezy
 Wind Direction (from): NW

Water conditions
 Color: 5
 (1 - 11, choose closest color)

Amount of suspended algae:
 None Light
 Moderate Heavy
 Substantial (algal bloom)

Water Odor:
 None Rotten egg
 Fishy Septic-like
 Musty Other

Weather Conditions
 Secchi Depth measured in:
 Strong sunlight Overcast
 Hazy sunlight
 Bright cloud conditions

Water Surface is:
 Calm Moderate Waves Windy
 Ripples White Caps
 Small Waves
 Air Temperature 12 °C

Largest number of waterfowl on lake at any one time in the last week? 50

Water Quality

Lab: _____

Total Phosphorus	Sample Depth
Mg/l	m.
Mg/l	m.

Chlorophyll a	Sample Depth
Mg/m ³	m.
Mg/m ³	m.

Please record additional comments or observations:

Volunteer Lake Monitoring Program
 Pierce Conservation District
 5430 66th Ave E, POB 1057
 Puyallup, WA 98371
 253-845-9770x103

Use R hand column for Nov. values

Stream Team Lake Monitoring Program

Depth (meters)	Water Temperature		Dissolved Oxygen		% D.O. Saturation	
	July (°C)	Nov	July (mg/l)	Nov	July	Nov
Surface	27.4	13.4	7.38	8.45	92.8	80 %
1	27.4	13.5	7.67	8.20	92.1	78.1
2	26.3	13.5	7.56	8.1	93.0	77.3
3	25.8	13.5	6.82	8.0	81.7	76.7
4	22.1	13.4	4.84	8.0	56.4	76.7
5	17.8	13.4	4.99	7.95	53.6	76.1
6	13.4	13.4	3.93	7.89	37.1	75.6
7	11.5	13.4	1.36	7.9	10.5	76.2
8	9.4	13.4	.49	7.85	4.1	75.0
9	8.4	13.3	.26	7.23	2.3	69.4
10		10.7		1.23		10.1
11						

Annual Report Question 8: Description of opportunities created for the public to participate in the decision making processes involving the development, implementation and updates of the permittee's stormwater management program.

- City Council meetings provide a formal setting for the public to provide input to the stormwater management program.
- The Planning Commission provides an opportunity for the public to provide input on development and construction related activities.
- The public was heavily involved in the adoption of the 2015 Comprehensive Plan which discusses stormwater management in the land use and utilities section.
- The annual Milton Days festival in the park provides an opportunity for the public to learn about the City's stormwater programs and give feedback.
- The Stormwater Department is very responsive to citizen concerns and complaints. The department routinely meets with citizens on-site or in office to resolve problems, discuss development, or to hear suggestions.



TO: Chris Montague-Breakwell, Municipal Stormwater Permit Manager
FROM: Jamie Carter, City of Milton Public Works
DATE: January 15, 2016
SUBJECT: Illicit Discharge Detection and Elimination Procedures

In accordance with question 13b of the Annual Report, this document details our ongoing program designed to detect and identify illicit discharges and illicit connections into the City's MS4. Attached are our current Standard Operating Procedures (SOPs) that were created for the City's previous permit.

Our current SOPs, are being revised to meet the new 2013-2018 permit requirements. The existing SOPs are listed below:

1. Illicit Discharge Characterization and Containment
2. Tracing Illicit Discharges
3. Illicit Discharge Source Removal

Our Outfall Recon SOP is not included since it is not required in the current permit. The Field Screening SOP is currently being developed and will be completed and implemented in 2016. In the Field Screening SOP, a methodology will be setup and a schedule implemented that will fulfill at least 40% of the system by June, 2017 and an average of 12% for each year thereafter. Tools that are being created or updated to assist with this fulfillment are: Detailed maps of the storm drainage system including where recent inspections have taken place; Maintenance inspection forms with line items for illicit discharge observations; and a scheduled maintenance calendar.

Milton is a small City with smooth flowing traffic. Because of this, many of the inspections can be coupled with cleaning and IDDE screening with minimal disruptions to the citizens. Our new field screening methodology will rely heavily on this concept in order to achieve multiple goals with limited resources and time.

The new field screening methodology will refer to the new "Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual" prepared for the Washington State Department of Ecology by Herrera Environmental Consultants. Our complete program will also include training and follow-up as new techniques and requirements are identified.

Public Works Office
1000 Laurel St. Milton, WA 98354-8850
Ph 253.922.8738 / Fax 253.922.3466

CITY OF MILTON

Standard Operation Procedure	
IDDE-1 : Illicit Discharge Characterization and Containment	
Purpose of the SOP:	This SOP provides basic information for the Stormwater Compliance Inspector, managers and field staff to assist with illicit discharge characterization, containment and investigation

Planning Considerations:

- ❑ Employees should be familiar with Chapter 13.26.265 (Illicit Discharges and connections) of the Milton Municipal Code (MMC) and Appendix D (Spill Prevention and Response Plan- includes an illicit discharge-focused flow chart) of the Stormwater Pollution Prevention Plan for Maintenance Yard for various types of discharges and initial actions to take depending on the specific type of discharge.

- ❑ Determine the flow of the receiving water
- ❑ Evaluate whether the illicit discharge is having a significant impact on the receiving water
- ❑ Evaluate options for containment and/or collection of the illicit discharge
- ❑ If the illicit discharge is obvious and is having a significant impact on the receiving water, and there are options for containment or collection, then proceed with containment/collection prior to investigation

Field Methods/Investigation

- ❑ If safe, determine what the discharged material is (or may be) utilizing the information from the Maintenance Inspection form and/or visual observation / field testing
- ❑ If discharge may be considered hazardous, threatening to human life, or otherwise require first responders, call 9-1-1 immediately
- ❑ Report all spills of petroleum products to the Department of Ecology (360)407-6300 within 24 hours of knowledge of the spill and Washington Emergency Management Division (800)258-5990
- ❑ Report discharges to the MS4 from broken sewage lines to the Washington State Department of Health (DOH) (360) 236-3330 immediately
- ❑ Record initial information and observations on the Spills/Illicit Discharge Tracking Sheet
- ❑ Investigate illicit discharges and/or connect within 7 working days of determination
- ❑ Make note of discharges where source is not uncovered during investigation for future inspections

Equipment List:

1. Illicit Discharge Detection & Elimination Stormwater Focus Map
2. Spills/Illicit Discharge Tracking Sheet
3. Maintenance Inspection Forms
4. Clipboard and pencils

Containment

- ❑ Determine the quantity of flow within the MS4
- ❑ Consider downstream uses

Reference: Brown et al., *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, Ellicott City, 2004.

CITY OF MILTON

Standard Operation Procedure	
IDDE-2: Tracing Illicit Discharges	
Purpose of the SOP:	To provide a general outline of investigation activities to conduct in order to identify the source of an illicit discharge

Planning Considerations:

- ❑ Employees should be familiar with Chapter 13.26.265 (Illicit Discharges and connections) of the Milton Municipal Code (MMC) and Appendix D (Spill Prevention and Response Plan- includes an illicit discharge-focused flow chart) of the Stormwater Pollution Prevention Plan for Maintenance Yard for various types of discharges and initial actions to take depending on the type of discharge.
- ❑ Review / consider information collected when illicit discharge was initially identified (i.e. via the Spill/Illicit Discharge Tracking Sheet and Maintenance Inspection Form- if the latter was used)
- ❑ Review Illicit Discharge Detection & Elimination Stormwater Focus Map and relevant information (i.e. storm drainage basin, land uses, etc.)
- ❑ Conduct investigation- consider utilizing two staff members, if necessary
- ❑ Manholes may only be entered by properly trained and equipped personnel with authorization by an confined space entry supervisor
- ❑ Never put yourself in danger

Equipment List:

1. Illicit Discharge Detection & Elimination Stormwater Focus Map
2. Spills/Illicit Discharge Tracking Sheet
3. Maintenance Inspection Forms
4. City identification
5. Digital camera (spare batteries)
6. Cell phone
7. Clip board and pencils
8. Flashlight (spare batteries)
9. Disposable gloves
10. Liquid dye
11. Hand sanitizer
12. Safety vests
13. Manhole hook/wrench
14. Safety cones

Field Methods/Investigation:

- ❑ Revisit outfall to verify if reported discharge is still present
- ❑ Survey the general area / surrounding properties to identify potential sources of the illicit discharge
- ❑ Do not enter private property without permission or a signed Authorization form; Stormwater Easement and Maintenance Agreements also provide authorization for access and inspection
- ❑ Conduct visual inspection of upstream points if applicable
- ❑ Utilize additional resources if necessary (tracing dye, additional staff, outside contractors with video camera capabilities, etc.)
- ❑ Document investigation results for tracking purposes and future reference
- ❑ If source cannot be found, add the location to a future inspection program

Reference: Brown et al., *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, Ellicott City, 2004.

CITY OF MILTON

Standard Operation Procedure	
IDDE-3: Illicit Discharge Source Removal	
Purpose of the SOP:	This SOP provides basic information for the Stormwater Compliance Inspector, managers and related staff to assist with illicit discharge source removal via employment of escalating compliance and/or enforcement activities

Planning Considerations:

- ❑ Employees should be familiar with Chapters 13.26.180-290 (including "General Requirements", "Inspection program", and "Enforcement") of the Milton Municipal Code (MMC) and Appendix D (Spill Prevention and Response Plan- includes illicit discharge-focused flow chart) of the Stormwater Pollution Prevention Plan for Maintenance Yard for various types of discharges and initial actions to take depending on the type of discharge.
- ❑ Follow-up inspections will be performed by the Stormwater Compliance Inspector and/or City Utility and/or Building Inspectors to verify that the illicit discharge is eliminated and any corrective measures are installed in accordance with City design standards
- ❑ Escalating enforcement and legal actions in accordance with Milton Municipal Code will be utilized if the discharge is not eliminated

Compliance Actions:

- ❑ Upon identification of an illicit discharge to the MS4 the Department of Ecology will be notified at (360)407-6300
- ❑ Upon identification of an illicit discharge to the MS4 the owner of the property where the illicit connection is located will be notified and informed of their obligation to immediately stop the illicit discharge and begin corrective measures
- ❑ The Stormwater Compliance Inspector or other pertinent staff will provide technical assistance for eliminating the discharge and ensuring appropriate discharge of waste materials

Equipment List:

1. Copy of appropriate section(s) of the Milton Municipal Code
2. City identification
3. Cell phone
4. Clip board and pencil (pen)
5. Applicable technical assistance information

Reference: Brown et al., Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, Ellicott City, 2004.

Annual Report Question 17: Informed public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste.

Public Employees

- Provided ongoing assistance to City staff on stormwater pollution prevention activities for municipal operations and facilities.
- Continued training vector truck field staff to screen for illicit discharges and connections during catch basin cleaning.
- All field staff received erosion and sediment control training including spill response in 2014 and 2 employees in the Public Works office received CESCL training in 2015.

Businesses

- Continued distribution of "Your Local Stream Starts Here" brochure which targets businesses and homeowners and includes information on illicit discharges and waste disposal.
- Source control audits are conducted concurrently with private stormwater facility inspections.

General Public

- Continued distribution of "Your Local Stream Starts Here" brochure which targets businesses and homeowners and includes information on illicit discharges and waste disposal.
- The Stormwater Education booth at the annual Milton Days festival in the park is used to educate the public about illicit discharges and proper waste disposal.
- The car wash kit loan program provides an educational opportunity regarding storm drains.
- Prepared and distributed The Milton Storm Water Press with an emphasis on natural yard care, specifically proper use and handling of pesticides and fertilizers.

