

STORMWATER MANAGEMENT PROGRAM

The Stormwater Management Program (SWMP) is a comprehensive program designed to reduce the discharge of pollutants from the City of Bainbridge Island's MS4 (Municipal Separate Storm Sewer System) in order to restore and protect beneficial uses of the Waters of the State. The SWMP resides in and is administered by the City's Water Resources Program, but its direction and guidance is applied across almost all City departments to include Public Works Engineering and Operations and Maintenance, and Planning and Community Development.

This program document implements all required components of the Phase II NPDES (National Pollutant Discharge Elimination System) permit (sometimes referred to as the Municipal Stormwater Discharge Permit). The guidance manuals and stormwater BMPs (Best Management Practices) contained in this program document are intended to direct City staff in permit compliance as well as provide technical assistance to the City's business community and general citizenry.

Funding for SWMP and all other elements of the City's stormwater management effort is obtained through user fees from the City's Surface and Stormwater Utility. This funding is codified in the Storm and Surface Water Utility, Bainbridge Island Municipal Code 13.24.

Tracking of program elements and all related tasks are accomplished through the City's financial tracking software, Municipal Information Systems, or Munis. The software allows the creation of work orders and task tracking to track labor, equipment, and supplies for each of the program elements. The software allows the processing of information for reporting purposes via an annual report to the Washington State Department of Ecology, the permitting agency.

For ease of use and reference this document is divided into six volumes corresponding to specific program development and implementation requirements of the NPDES permit. For example, all Illicit Discharge Detection and Elimination (IDDE) permit requirements are addressed within *Volume 3 Illicit Discharge Detection and Elimination*. However, certain, program elements may be found in more than one volume due to cross-over of permit requirements.

Volume 1 Public Education and Outreach

1.1 Bainbridge Island NPDES Compliance Staff Training Plan (November 2007)

This plan outlines all the necessary training and education for staff including review staff, planners and inspectors. Internal training sessions are conducted by City Staff to share knowledge

or provide updates to previous training sessions. Internal training sessions include short presentations at staff meetings, round table discussions, and scheduled sessions for individual departments. These are a cost effective way to meet most of the training requirements. Out-of-house training is utilized when in-house resources are unavailable or required training requires licensed or certified instructors.

Training topics include:

- Illicit Discharge Detection and Elimination (*Volume 3*)
- Controlling Runoff from New Development, Redevelopment, and Construction Sites (*Volume 4*)
- Pollution Prevention for Municipal Operations (*Volume 5*)

Additional stormwater training topics have been identified beyond what is required by the Phase II Permit. These are areas in which City Staff need to acquire additional knowledge or skills in order to implement the City's SSWM Program appropriately.

The *City of Bainbridge Island Staff Training Plan Checklist* included in the training plan serves as a guide for implementing the overall training program. The checklist can be used as a tool to track training attendance to help ensure compliance with Permit requirements.

1.2 Surveys

The City evaluated the public's understanding of water quality issues with a survey conducted by Elway Research in December 2008. The information obtained is used for focusing the education program.

Bainbridge Island School District also conducted surveys of the public through their website in order to discover problem behaviors. The City benefited from this survey, and the District was reimbursed for the cost of the survey as a portion of an education program developed under an Interlocal Agreement.

1.3 IDDE Education and Outreach Program (December 2007)

The City conducts outreach activities to educate the public and business community on water quality protection in accordance with this plan. The City has identified target audiences and tailored the education program to those groups. To date, the City has conducted outreach activities aimed at educating local residents about natural yard care techniques, habitat protection, and their personal impact on the natural environment. These programs have been successful and well received by the general public.

Outreach to the local business community will focus on identifying and eliminating illicit connections and illegal discharges to the City's stormwater infrastructure. This outreach is also

an important step in the City's overall Illicit Discharge Detection and Elimination (IDDE) Program,(Volume 4).

1.4 Interlocal Agreements (ILA)

The City has entered into an ILA with the Kitsap County Health District to assist the City in developing the required Commercial Business section of the IDDE program. The commercial business inspections contain an educational component.

An ILA developed with the Kitsap Conservation District provides expertise to farmers, animal hobbyists, and other agricultural entities in BMPs for soil management, animal waste handling and storage, pasture management, and irrigation, helping to preserve water quality. This service provides an education component, outreach component, and supports the IDDE program.

Education is also included on the City's website. Different issues are posted quarterly to inform the public of their impacts on water quality. The City has provided substantial education and outreach to the general public, homeowners, property managers and landscapers with a program titled Natural Landscapes. All of the developed materials are available at City Hall and will soon be available on the website.

Volume 2 Public Involvement and Participation

Many volunteer opportunities exist for the public to assist the City in protecting water quality such as stormwater system mapping and water quality monitoring.

The Annual Report and this document are posted to the City's website and comments are solicited annually. The City's website and press releases provide an avenue to the citizens to become involved in program elements. These include public hearings, Council meetings/presentations, Water Resources Open Houses, and volunteer opportunities.

Volume 3 Illicit Discharge Detection and Elimination

3.1 IDDE Program Manual (January 2009)

The IDDE Program Manual comprehensively addresses the conditions of S5C3 of the Phase II Permit. This manual is intended to assist City Staff in implementing the IDDE program. It is used as a guidance document for staff in their day-to-day activities related to IDDE. The document is also used as a training tool to ensure that all staff are following the same procedures

in responding to illicit discharge concerns. The following is a contents list of the IDDE program Manual.

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 Water Quality Incident Report Form

 Outfall Inspection Form

 Incident Response Form

Appendix C – Receiving Water Prioritization

 Receiving Water Locations Map

Appendix D – IDDE Investigation Resources

 Field Equipment List

 Smoke Testing, Dye Testing, Video Testing

 Water Quality Sampling Parameters

Appendix E – Standard Operating Procedures for IDDE Program

Additionally, a water quality incident hotline phone number is posted on the City website in coordination with Kitsap County and local municipalities for reporting spills and illicit discharges. The process is laid out in a series of Standard Operating Procedures provided by the local division of Department of Emergency Management and 911.

3.2 Business BMP Manual (March 2008)

The Business BMP Manual has been developed to address best management practices for businesses in order to prevent or eliminate illicit discharges caused from poor housekeeping or business practices.

3.3 Inter Local Agreements

3.3.1 Kitsap County Health District

The City entered an ILA with the Kitsap County Health District to assist the City in developing the required Commercial Business section of the IDDE.

3.3.2 Kitsap Conservation District

An ILA with the Kitsap Conservation District provides farm management expertise to farmers, animal hobbyists, and other agricultural entities.

3.3.3 Kitsap County's Solid Waste Division of Kitsap County Public Works

Program provides the Comprehensive Solid Waste Management Plan for the City. This program piece supports the IDDE program by providing an avenue to eliminate dumping to the MS4. Also provided are Household Hazardous Waste Collection in coordination with the City.

Volume 4 Development, Redevelopment and Construction Runoff Control

4.1 Bainbridge Island Municipal Code 15.20, Surface and Stormwater Management

This section of the City's Municipal Code adopts the Stormwater Management Manual for Western Washington as well as the Kitsap Low Impact Development Manual to regulate water quality and quantity changes for development, redevelopment and construction.

4.1.1 Low Impact Development (LID) Guidance Manual (June 2009)

This manual was prepared for use by Kitsap County and local municipalities in cooperation with Kitsap Home Builders Association and developed through a Department of Ecology grant.

<http://www.kitsaphba.org/LID/>

4.1.2 2005 Stormwater Management Manual for Western Washington (February 2005)

Developed by Department of Ecology to standard Best Management Practices for stormwater quality and quantity. Establishes engineering and development review requirements for construction, development as well as maintenance standards.

<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/StrmwtrMan.html>

4.2 Bainbridge Island Municipal Code 15.21, Stormwater Facilities Maintenance

This code section outlines the requirements for maintenance of all stormwater facilities. All private facilities must record a Declaration of Covenant to assure the facilities are operated and maintained appropriately.

Volume 5 Pollution Prevention and Municipal Operations

5.1 Public Works Road Maintenance Manual (March 2003)

The Road Maintenance Manual was developed to provide Best Management Practices for road maintenance activities. This manual also contains a training component.

5.2 Stormwater Pollution Prevention Plan (SWPPP) for the Public Works Operation and Maintenance Facility and the Materials Management Facility (Decant).

This plan is in the final working draft and out for review and refinement.

Volume 6 Monitoring

6.1 Water Quality and Flow Monitoring Program (April 2008)

The City's Water Quality and Flow Monitoring Program (WQFMP) implements permit monitoring requirements and directs and informs pollutant source identification efforts outlined in the IDDE program.

The primary goal of the WQFMP is to develop and implement a comprehensive monitoring program that will identify water quality and water flow problems in freshwater and marine nearshore environments. The WQFMP also defines thresholds for initiation of management responses in support of the City's efforts to protect and restore beneficial uses associated with water quality on Bainbridge Island.

The WQFMP was developed and tested through a Centennial Clean Water Fund grant and is an Ecology-approved program that consists of three components, a site evaluation report (SER), a sampling and analysis plan (SAP), and a Quality Assurance Project Plan (QAPP). Collectively, its components are designed to meet the following objectives:

- Characterize the water quality (chemical, physical, and biological) conditions in Bainbridge Island streams, lakes, wetlands, and nearshore areas.
- Identify short-term changes or long-term trends in water quality conditions.
- Collect water quality data related to surface and stormwater regulatory requirements (e.g. NPDES Phase II).
- Gather information for use in developing pollution prevention measures or water quality treatment best management practices (BMPs).

- Determine if water quality program goals are being met and whether streams and nearshores on and around the Island meet State standards.
- Provide opportunities for public outreach and water quality data to support public education program.
- Support reporting of water quality conditions to the general public, including shellfish harvest restrictions, recreational beach closures, and drinking water advisories.
- Determine the effectiveness of pollution prevention measures and water quality treatment BMP.
- Respond to emergency situations such as oil spills, chemical leaks, sewage spills, and flooding events.

6.2 Shoreline surveys

Kitsap County Health District is conducting surveys of many of the shorelines on the island allowing the further evaluation of water quality and for protection of beneficial uses.

Previous joint shoreline survey efforts in conjunction with the City have resulted in the identification and elimination of several bacterial discharges to adjacent water bodies and the subsequent re-opening of closed shellfish harvesting areas.

Appendix A: Surface and Stormwater Program Analysis (Gap Analysis) (October 11, 2006)

The Gap Analysis is being included as an appendix for program reference. The analysis outlines all the tasks, staffing and costs associated with the City's Water Resources Program.