

Bacteria Pollution Control Plan

Total Maximum Daily Load for Fecal Coliform Bacteria: Version 11-2012



AndyL

Bacteria Pollution Control Plan

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Water Quality Impairment in North Creek and Swamp Creek

In 1996, the Washington State Department of Ecology (WDOE) listed North Creek and Swamp Creek on the 303 (d) list of impaired water bodies for fecal coliform bacteria (FCB) and dissolved oxygen Total Maximum Daily Loads (TMDLs). (http://www.ecy.wa.gov/programs/wq/303d/1996/index-1996.html).

City Works to Improve Water Quality

In 2001, the City of Bothell prepared a TMDL Evaluation Report for North Creek. In 2003, WDOE approved an Implementation Plan to improve water quality. In 2006, WDOE prepared and approved a TMDL Report an Implementation Plan for Swamp Creek.

In 2007, WDOE issued a National Pollution Discharge Elimination System (NPDES) stormwater permit to all small municipalities. The NPDES permit conditioned TMDL(s) to develop Bacteria Pollution Control Plan (BPCP) for North Creek and Swamp Creek. This BPCP is designed to meet and/or exceed NPDES permit requirements for both creeks. The City's goal is to improve water quality to meet state standards for FCB levels. This is a living document that will be periodically updated to reflect lessons learned.

The City designed a multi-phase process to determine the source FCB sources in North Creek and to engage the community in a solution. Phase I work began in 2003 with funding from a WDOE grant and matching funds from the City. Initial findings were published in 2004. Baseline monitoring found several FCB sources, from rodents to humans. Certain areas contributed high FCB levels. A survey found a general lack of awareness within the community about the existence of North Creek and the potential for septic systems and pet waste to contribute to FCB levels in surface waters (Kalenius 2008). Building on lessons learned in Phase I, Phase II outreach work was designed to inform the community about North Creek.

Phase III involves long-term monitoring of FCB levels in three North Creek tributaries and one in Swamp Creek. The City continues to sample these four sites monthly. An annual report summarizing test results is available online at

the City's web site. Find the report in the Surface Water Management section of City Services.

http://www.ci.bothell.wa.us/CityServices/PublicWorks/SurfaceWaterManagement/NP DESdocumentation.ashx?p=1652

This Bacteria Pollution Control Plan discusses the most likely contributor FCB sources, as listed in the NPDES permit, and proposes actions to reduce or eliminate FCB discharges to stormwater. The City will implement the proposed actions depending upon available funding.

Pet Waste Ordinance

It has become general knowledge that pet wastes pollute surface waters. Pet waste consumes oxygen leading to low oxygen levels that are unhealthy for fish and other aquatic life. Bacteria, viruses, and parasites are found in pet waste such that if not handled properly can threaten the health of humans and wildlife. Pet waste can contribute excess of nutrients leading to eutrophication of streams, ponds, and lakes. This often makes swimming and recreation unappealing or even unhealthy.

To encourage pet owners to properly dispose of pet waste by bagging and placing it in the garbage, some cities and counties have adopted pet waste ordinances. Ordinances vary both in what constitutes an infraction (i.e., failure to carry a poop scooper on city park lands or failure to clean up pet waste on private and/or public property) and in the range of fines.

In August 2009 the City of Bothell adopted an ordinance prohibiting the discharge of pollutants to ground, surface or storm waters (BMC Title 18.04.260, Prohibited Acts). However, the ordinance does not prohibit the discharge of pollutants onto dry land, as is the case with pet waste.

Action Plan

Identify existing pet waste ordinances in comparable jurisdictions and determine their effectiveness in preventing pet waste from polluting surface waters. Considerations may include assessment of the penalty structure, acceptance by the public, and the ability to enforce.

Action Update, 2011

In May of 2011 the city conducted an investigation concerning the need for a city pet waste ordinance and surveyed neighboring municipalities to determine if pet waste ordinances had been adopted. The investigation recommended that the city adopt a pet waste ordinance.

On November 11, 2011 the city adopted a pet waste ordinance, appendix A. The ordinance amended the Bothell Municipal Code Section 6.16.011, relating to animal wastes, and Section 8.60.240 relating to pets in park facilities. The ordinance will be enforced by City's Animal Control Officer. The ordinance's intent is to ensure that pet wastes are removed promptly from public and private lands.

Action Update, 2012

City Animal Control Enforcement Officer wrote one infraction for failure to clean up pet waste, code 6.16.011 (A) and gave out many written warnings. The officer noted that the ordinance has been a useful tool in dealing with pet owners with more animals than the city allows. The added problem of excessive pet waste supports the decision to limit number of pets anyone person can own. There is a sense that more awareness of the code will improve compliance.

Water Pollution Control Enforcement

Effective enforcement requires that prohibited actions be easily identifiable, the authority to enforce be clearly established, and the process easily understood by the enforcement officer and the violator.

In August 2009 the city broadened enforcement capabilities with regards to polluted discharges to surface, ground and storm waters. The new codified language was not targeted towards bacteria sources. However, if a bacteria source is found discharging to surface, ground or storm water it would be considered a pollutant and, as such, enforcement actions can be taken.

The city based the new enforcement code language on *Writing Regulations to Prohibit Illicit Discharges, Dumping, and Illicit Connections,* August 2008, from the WDOE Guidelines for Municipal Stormwater General Permit Guidance for Cities and Counties.

Action Plan

Evaluate existing enforcement capabilities.

- 1) How many bacteria source cases have been processed through enforcement and to what degree?
- 2) Do violations form a pattern (i.e., repeat offenders and/or locations)?
- 3) How are enforcement codes typically applied?
- 4) Are penalties an effective deterrent?

Action Update, 2011

In 2010 there was one bacteria source violation. A home located in Little Swamp Creek basin was issued several building code violations. At the same time it was noted that the home's septic system had failed. Snohomish County Health Department was notified and the system was subsequently repaired. No penalties were issued.

Action Update, 2012

No actions taken in 2012.

Critical Areas Ordinance

The City's critical areas ordinance (CAO) is updated periodically, as required under the Growth Management Act (GMA), most recently in July 2005. It is not scheduled for a full review and update any time soon.

Action Plan

Include TMDL goals in COA updates.

- 1) How does the current CAO address FCB?
- 2) Do fecal bacteria source control measures need to be added?
- 3) What existing guidelines and/or case studies can serve as resources as we write our own CAO?

Action Update, 2011

No action taken in 2011.

Action Update, 2012

No action taken in 2012.

Education Outreach

Studies conducted in 2004 identified pet waste as a common contributor of FCB in our local waterways. All 12 locations sampled by the City of Bothell in 2004 showed the presence of either dog or cat DNA (Kalenius 2008). Regionally, DNA ribotyping studies of bacteria in urban Puget Sound streams also have consistently shown the presence of bacteria from dogs and cats (Svrycek, 2003).

In 2006, the City began a targeted water quality education and outreach effort aimed at pet owners to inform them of the need for responsible pet waste removal.

Survey results provided insight to pet owners' perceptions of the problem and what might motivate them to change their behavior. Recommendations included youth education, posting more pet waste pick-up signs and providing bag stations and trash cans for proper disposal. The City also contacted local veterinarians and pet store managers to encourage them to help residents adopt this Best Management Practice (BMP).

Action Plan

1) Youth Education

In 2007, the City initiated a stormwater youth education program. City staff gave presentations to local students which contained a pet waste component. In 2009, the City contracted with a local non-profit group, Nature Vision, Inc., to provide more comprehensive conservation and stormwater presentations to grades K-12. To encourage teacher participation, the presentations were designed to meet Essential Academic Learning Requirements (EALRs). In 2009, Nature Vision, Inc. conducted presentations or field trips for 1,587 students. So far this year, 1,430 students have benefited from a presentation or field trip program. The City has received a very positive response to the program from parents, students, and teachers. Program materials provided include a stormwater poster for each classroom, a stormwater activity booklet to provide students with continued learning opportunities, and materials for the students to bring home to provide parents with education

concerning stormwater pollution and the BMP's associated with the home.

2) Low Impact Development Education

In 2009, the City adopted a new Stormwater Design Manual that mandates Low Impact Development (LID) techniques be considered for new construction and redevelopment projects where possible. To promote adoption of this BMP for retrofitting existing structures, the City offered two rain garden workshops to homeowners and installed a demonstration rain garden at Bothell's King County Library in 2010.

In future years the City plans to continue to sponsor LID workshops for citizens and city staff.

Action Update, 2011

In April 2011 the City held two workshops, "Rain Gardens and More". City employees participated in tours of two LID facilities (one new, one established) with a local developer.

Action Update, 2012

The City of Bothell contracted in 2012 with the non-profit organization, Nature Vision, Inc., to administer water education courses to all service area schools. These classes are tailored to provide water education courses that meet teachers' Essential Academic Learning Requirements (EALR). In 2012, teachers were solicited electronically using a water education flyer (shown in Appendix A), and several classrooms signed up for programs reaching 2,241 Bothell students. In order to be sure that the stormwater messages were reaching the parents, a stormwater flyer and return postcard with stormwater education activities were given to all students and teachers (in both hard copy and electronic formats) providing an opportunity for parents to work with their children to understand and quantify their individual stormwater impacts.

The City of Bothell joined with the Cities of Kirkland and Redmond, which also offer Nature Vision presentations to their students, to create the postcards and flyers for the fall school year. This collaboration will allow us to see how the presentations are received in each of our municipalities and will provide the opportunity to compare our information to define adoption of BMPs and identify further barriers. The education program will continue in 2013 with a few additions:

- Stronger emphasis will placed on assigning this project as homework or extra credit to encourage participation.
- A large stormwater poster or Low Impact Development (LID) poster will be offered for each classroom that receives a presentation.
- A brief announcement will be provided before each presentation expressing the importance of children giving the postcard and messaging to their parents, as well as parents visiting the City website.
- A three tiered evaluation strategy will be continued to determine student retention, understanding, and teacher satisfaction over time.

LID outreach in 2012 included an extensive all day training session with Capital Improvement, Planning, Development Review, Maintenance, and Site Inspection staff to ensure they adequately understand these new techniques and are comfortable enforcing their use within the City.

Workshops for residents and staff are planned for 2013 to help everyone better understand the strengths and limitations for each technique and help them determine what is best under current available site conditions.

Bacterial Pollution Prevention

Pet Waste

The City provided pet waste information and education from 2008 to 2012 through events, articles, mailers, brochures, individual outreach to neighborhoods and local business offices, annual reports and a Bothell Cable News (BCTV) segment.

To test the effectiveness of our outreach in a particular location, we selected a target neighborhood based on pet waste complaints and reports from City field staff. William Penn Park, Stipek Park and the Canyon Park Junior High neighborhood were found to have significant pet waste in their green spaces and along sidewalks and paths. These areas were targeted in the initial education phase in 2006 and already contained pet waste signs, bag dispensers and trash receptacles. Every home within the target area received a mailer

reporting the TMDL levels of bacteria found in sample tests of Bothell streams. The mailer warned residents about potential health risks associated with pet waste found in their neighborhood and emphasized the importance of picking up pet waste at home and in public areas. In 2010, door hangers with similar messaging were placed on every door in the target neighborhood. City staff conducted pet waste counts on a monthly basis to identify trends over time and help determine whether pet waste owners had changed their habits. Several other methods were attempted to determine the best way to encourage adoption of this BMP. The most effective methods will be used to deliver messaging throughout the North Creek and Swamp Creek drainage communities.

Action Update, 2012

In 2012, a review of the phone survey information regarding pet waste was conducted and outreach was provided specifically to vet offices, boarding services, dog walkers, dog groomers, and other professionals to utilize them as a vehicle to reinforce our existing messaging.

We also expanded our pet waste bag dispensers to community members with the pledge to keep them stocked with bags. So far, we have passed out all of the available dispensers and have a waiting list for dispensers in 2013.

Another requirement of the TMDL was to address fecal coliform from birds congregating unnaturally due to human feeding. Education staff completed signage to address this issue and placed them in key areas where the general public was known to actively feed waterfowl.

Education and outreach regarding pet waste and animal feeding will continue through 2013 in accordance with the established programs.

Continue to count through June 2013 to determine whether providing bags and dispensers has had a real effect on the amount of waste present in these target areas.

Septic Systems

A concerted effort has been made to determine the amount of homes currently utilizing septic systems in Bothell. The City has worked with the King and Snohomish Counties, four separate Sewer Districts (City of Bothell, Woodinville Water/Sewer, Northshore Utilities, and Alderwood Water & Wastewater District), and City staff to compile a list of potential users. The next step will be to reach out to these homes and determine which are still on septic. Homes still on septic can be targeted in our outreach and investigation efforts.

TMDL Study

The City established TMDL baseline monitoring for North Creek and Swamp Creek to determine FCB sources. In 2010 the City entered into an inter-local agreement with Snohomish County Surface Water Management to conduct a source tracking survey in Perry Creek, a North Creek tributary. The plan is described in <u>Quality Assurance Project Plan (QAPP) Snohomish River</u> <u>Tributaries, North Creek and Swamp Creek: Fecal Coliform Bacteria Total</u> <u>Maximum Daily Load Monitoring, Version 1.0 July 16, 2009</u>. The findings of the source tracking effort can be found at:

http://www.ci.bothell.wa.us/CityServices/PublicWorks/SurfaceWaterManageme nt/NPDESdocumentation.ashx?p=1652

The source tracking survey of Perry Creek found no point source illicit discharges that were contributing fecal coliform bacteria to Perry Creek. They did identify several potential non-point sources for bacteria within the drainage area, including a potentially large population of wildlife within the wetland and forested areas, pet waste, and potential nutrient loading from residential lawns and parks. The report provided recommendations to eliminate bacteria source. The city implemented many of the recommendations in 2011.

The City continues to conduct FCB monitoring monthly at three North Creek Tributaries and compiles the results in an annual report. A study description and monitoring results can be found on City of Bothell's web site:

http://www.ci.bothell.wa.us/CityServices/PublicWorks/SurfaceWaterManageme nt/NPDESdocumentation.ashx?p=1652

Swamp Creek bacteria levels did not meet the WDOE threshold that would require the City to monitor Little Swamp Creek, but in late 2009, the Washington State Department of Ecology (WDOE) recorded high FCB levels during routine sampling of Little Swamp Creek. Follow-up monitoring and source tracking is ongoing. In coordination with WDOE, the City now monitors FCB levels in Little Swamp Creek monthly. Methods, procedures, and results can be found:

http://www.ci.bothell.wa.us/CityServices/PublicWorks/SurfaceWaterManageme nt/NPDESdocumentation.ashx?p=1652

In the summer and fall of 2010, the City collaborated with WDOE to conduct a detailed FCB source-tracking survey. Several sources were identified from initial site investigations. These sites were monitored to determine their potential contribution to FCB in Little Swamp Creek. Since 2010 the city has

conducted FCG monitoring at one site in Little Swamp Creek. Results of the monitoring can be found in the annual TMDL summary report.

In general, FCB levels in North Creek tributaries have been relatively stable, but still typically exceed state standards. Junco Creek is the only site to routinely meet State water quality standards.

Action Plan

- 1) Continue source tracking when appropriate and monthly FCB monitoring in North Creek and Swamp Creek.
- 2) Continue to improve geographic information system (GIS) data base to facilitate identification of properties on septic systems.
- 3) Work collaboratively with all jurisdictions within the North and Swamp Creek watersheds (i.e., Swamp Creek Watershed Forum hosted by the City of Kenmore).

Action Update, 2011

Monthly bacteria monitoring was conducted in North and Swamp Creek. An annual summary report of sample results is anticipated to be available in early 2012.

Updates were made to the GIS map layer for displaying properties on septic system.

The city implemented measures recommended from the source tracking survey of Perry Creek.

Action Update, 2012

A source tracking survey conducted by Snohomish County Surface Water Management staff occurred on Crystal Creek in 2012. The results will be available in late 2012. We anticipate implementation of the recommendations to begin in 2013.

The plan for 2012 to select neighborhood door-to-door outreach and dye testing, was not conducted due to the lack of acceptable alternatives for residents once a leak was discovered. Additional information obtained by Snohomish County through a septic Ecology grant, reinforced the need to properly prepare outreach materials, incentives, alternatives, community

partners, connection funding sources and delivery methods before directly engaging and testing Bothell septic users and their systems.

We plan to use 2013 to work with several partners (other divisions within the City, Health Districts, Alderwood Water and Sewer, and Public Works Trust Fund) to help definitively determine current septic users, discover maintenance and improvement plans to allow for connection to sewer, establish relationships with partners to work together, determine average cost to homeowners for possible connection, and apply for loan funds to help residents obtain a low interest cost effective option to complete the necessary work within an adequate timeframe.

Watershed Management Plans

"The best approach when developing control measures for these diffuse sources is to maintain or increase flow rates throughout the dry season, while focusing on lowering concentrations in the water. Flow attenuation can be achieved in this watershed with detention ponds, establishing or restoring wetlands, and managing riparian corridors. A long-term monitoring strategy would be essential to track and evaluate the effectiveness of the source control measures."

North Creek Watershed Management Plan, Svrjcek 2003

A key component to flow attenuation is recovery of lost or compromised wetlands and floodplains – a critical wetland type. To attain watershed level flow attenuation efforts need to expand beyond upland use of LID techniques. Wetlands and floodplains safely store flood flows and provide some of the most productive habitat for aquatic species. A degraded floodplain incorporated into a stormwater treatment system can exacerbate FCB levels by unnaturally congregating wildlife sources and concentrating stormwater flows into inadequately designed stormwater systems.

North Creek's and the Sammamish River's historic flood plains have been extensively modified by levees. This impact has been ongoing for nearly 100 years. Lowering Lake Washington to accommodate the Ballard Locks construction in 1917 reduced the Sammamish River's and North Creek's connectivity to their floodplains. Some estimates have described water level drops upwards of 8 to 9 feet at Lake Sammamish (King County, 2002).

Lose of floodplain storage for peak flows and wetland summer recharge of stream flows has negatively impacted many attributes of stream health. During summer low -flow periods, the lack of connectivity increases the human health risk associated with primary and secondary recreation contact. Summer recreation activities, in and around water, pose the highest risk of human exposure to unsafe levels of FCB.

Action Plan

- 1) Locate and make available previous watershed management plans.
- 2) Use previous watershed management plans to inform future actions and assess past implementations (Snohomish County's report<u>"North and Swamp Creeks Developed an Early Action BMP Plan,"</u> Snohomish County Public Works, 2008).
- 3) Analyze the historic and current status of wetland loss and implications of current land use plans.
- 4) Create a prioritized wetland restoration and recovery project list.

Action Update, 2011

No action taken in 2011.

Action Update, 2012

No action taken in 2012.

Ambient Water Quality Study

The City collects monthly ambient water quality data at 17-sites. In 2010 seven sites were subjected to bioassessment surveys. Results are used to identify stream health trends and statuses.

At this time, the City does not propose to conduct ambient monitoring of direct stormwater discharges except during source tracking surveys or as part of a BMP effectiveness monitoring efforts.

Action Plan

- 1) Continue monthly to monitor ambient water quality at locations in North Creek and one in Swamp Creek (City of Bothell, 2010). Assess results annually and describe trends and patterns
- 2) Use results to direct future actions.

Action Update, 2011

The city prepared a summary report of 2010 ambient monitoring efforts. The report can be found at:

http://www.ci.bothell.wa.us/CityServices/PublicWorks/SurfaceWaterManageme nt/NPDESdocumentation.ashx?p=1652

Action Update, 2012

The city prepared a summary report of 2011 ambient monitoring efforts. The report can be found at:

http://www.ci.bothell.wa.us/CityServices/PublicWorks/SurfaceWaterManageme nt/NPDESdocumentation.ashx?p=1652

Glossary

Ambient Monitoring: Monitoring that is done to determine existing environmental conditions or pollution levels in the environment and acts as a baseline for comparison with future conditions.

Bacteria Pollution Control Plan (BPCP): No later than August 16, 2010, a BPCP shall be developed. At a minimum, it shall consider the use of the following approaches:

- 1) pet waste ordinance,
- 2) evaluation of water pollution control enforcement capabilities,
- 3) evaluation of Critical areas ordinance related to TMDL goals,
- 4) educational program directed at reducing bacterial pollution,
- 5) investigation and implementation of methods that prevent additional stormwater bacterial pollution through stormwater treatment, reducing stormwater volumes, and preventing additional sources of stormwater in association with new development,
- 6) implementation of activities in the North Creek Watershed Management Plan, and
- 7) ambient water quality and stormwater quality sampling to specifically identify bacterial pollution sources.

Critical Areas Ordinance: city code pertaining to any of the following areas or ecosystems: aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, and wetlands, as defined in Chapter 36.70A RCW and by Chapter 14.04 Bothell Municipal Code.

Dissolved Oxygen: Oxygen that is dissolved in water and therefore available for fish and other aquatic animals to use. If the amount of dissolved oxygen in the water is too low, then aquatic animals may avoid the water or die. Waste water and naturally occurring organic matter contain oxygen-demanding substances that consume dissolved oxygen.

Eutrophication: The process by which a water body, usually a lake, builds up excess nutrients resulting in algae blooms and low water clarity. This is a natural aging process in lakes, but it maybe accelerated by human activities.

Fecal Coliform Bacteria (FCB): Fecal coliform bacteria are bacteria that are found in the intestinal tracts of mammals. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater or the presence of animal feces. These organisms may also indicate the presence of pathogens that are harmful to humans. High

numbers of fecal coliform bacteria therefore limit beneficial uses of a water body such as swimming and shellfish harvesting.

Flood Plain: the total land area adjoining a river, stream, watercourse, or lake subject to inundation by the base flood. A base flood is a flood having a one percent chance of being equaled or exceeded in any given year. It is also referred to as the "100-year" flood.

Geographic Information System (GIS): is any system that captures, stores, analyzes, manages, and presents data in a digital computer generated format that are linked to location. In the simplest terms, GIS is the merging of cartography, statistical analysis, and database technology.

Growth Management Act: In 1990 the Legislature found that "uncoordinated and unplanned growth, together with a lack of common goals, pose a threat to the environment, sustainable economic development, and the health, safety, and high quality of life enjoyed by residents of this state. It is in the public interest that citizens, communities, local governments, and the private sector cooperate and coordinate with one another in comprehensive land use planning." (RCW 36.70A.010)

Illicit Connections: any man-made conveyance that is connected to a municipal separate storm sewer (storm water drainage) without a permit, excluding roof drains and other similar type connections. Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the municipal separate storm sewer system (MS4).

Illicit Discharge: means any discharge to a municipal separate storm sewer (storm water drainage) that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire fighting activities.

Impaired Water Bodies 303 (d) List: The 303(d) list reports on category 5 waters, the impaired waters of the state. Waters placed on Category 5 require the preparation of a plan to improve water quality by limiting pollutant loads. "<u>Total Maximum Daily Loads</u>" (TMDLs) are a key tool in the work to clean up polluted waters.

Low Impact Development (LID) techniques: a storm water management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions. For example: reduced building foot prints, green roofs, porous concrete, and rain gardens. **National Pollution Discharge Elimination System (NPDES) permit:** the national program for issuing, modifying, revoking, and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the state from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology.

Primary/Secondary Contact Recreation:

"Primary contact recreation" activities where a person would have direct contact with water to the point of complete submergence including, but not limited to, skin diving, swimming, and water skiing.

"Secondary contact recreation" activities where a person's water contact would be limited (e.g., wading or fishing) to the extent that bacterial infections of eyes, ears, respiratory or digestive systems, or urogenital areas would normally be avoided.

Watershed: The geographic region within which water drains into a particular river, stream, or body of water. A watershed includes hills, lowlands, and the body of water into which the land drains.

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- Glenn, Norm, 2001. <u>North Creek Watershed Total Maximum Daily Load</u> <u>Evaluation for Fecal Coliform Bacteria.</u> Publication 01-03-020. Washington Department of Ecology Water Quality Program, P.O. Box 47600, Olympia, WA 98504-7600. <u>http://www.ecy.wa.gov/biblio/0103020.html</u>
- Kalenius, Shana, 2008. <u>North Creek Centennial Grant Summary, North Creek</u> <u>Stream and Habitat Project City of Bothell.</u> Agreement No. G0300107, City of Bothell, WA 98011
- King County, 2002. <u>Sammamish River Corridor Action Plan, Final Report.</u> King County Department of Natural Resources and Parks, Water and Land Resources Division, King County, Washington.
- Snohomish County, 2008. <u>Total Maximum Daily Load Early Action Best</u> <u>Management Practice Plan Snohomish River Tributaries, North and</u> <u>Swamp Creeks</u>. Snohomish County Public Works, Surface Water Management Division, Everett, Washington.
- Snohomish County, 2009. <u>Quality Assurance Project Plan (QAPP) Snohomish</u> <u>River Tributaries, North Creek and Swamp Creek: Fecal Coliform Bacteria</u> <u>Total Maximum Daily Load Monitoring, Version 1.0 July 16, 2009.</u>
- Svrjcek, Ralph, 2003. North Creek Fecal Coliform Bacteria Total Maximum Daily Load, Detailed Implementation Plan. Publication 03-10-047. Washington Department of Ecology Water Quality Program, P.O. Box 47600, Olympia, WA 98504-7600. <u>http://www.ecy.wa.gov/biblio/0310047.html</u>
- Svrjcek, Ralph, 2006. <u>Swamp Creek Fecal Coliform Bacteria Total Maximum</u> <u>Daily Load, Water Quality Improvement Report and Implementation Plan.</u> Publication 06-10-021. Washington Department of Ecology Water Quality

Program, P.O. Box 47600, Olympia, WA 98504-7600. http://www.ecy.wa.gov/biblio/0610021.html

Municipal Stormwater General Permit Guidance for Cities and Counties Writing Regulations to Prohibit Illicit Discharges, Dumping, and Illicit Connections, 2008. Washington Department of Ecology, Pub. # 08-10-061.

Appendix A

ORDINANCE NO. (2011)

AN ORDINANCE OF THE CITY OF BOTHELL, WASHINGTON, CREATING BOTHELL MUNICIPAL CODE SECTION 6.16.011 RELATING TO PET WASTE AND AMENDING SECTION 8.60.240 RELATING TO PETS IN PARK FACILITIES.

WHEREAS, the City of Bothell exceeds acceptable levels of fecal coliform in both the North Creek and Swamp Creek, and

WHEREAS, the current fecal coliform conditions trigger additional requirements under the Total Maximum Daily Load (TMDL) portion of the National Pollutant Discharge Elimination System (NPDES) permit, and

WHEREAS, the City of Bothell recognizes that pet waste can contribute to fecal coliform bacteria contamination of city surface waters through direct runoff or storm water discharges;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BOTHELL, WASHINGTON, DOES ORDAIN AS FOLLOWS:

<u>Section 1.</u> A new Section 6.16.011 BMC, relating to animal waste, is hereby added to the Bothell Municipal Code to read as follows.

6.16.011 Animal Waste.

It shall be unlawful for any person to:

A. Allow animal feces to accumulate in any open private area, run, pen, shelter, or yard where animals are harbored or fail to remove and properly dispose of animal feces from such areas at least once every 24 hours, unless such areas are subject to treatment with all reasonable best management practices, per BMC 18.04.260(D), so as to prevent polluted drainage waters from entering the surface or storm water system of the city.

<u>B.</u> Fail to remove fecal matter deposited by an animal under his or her ownership or control on public property or the private property of another before leaving the immediate area where the fecal matters was deposited.

C. Fail to have in his or her immediate possession an appropriately sized bag to be used for the removal of animal feces when accompanying an animal on public property or private property of another;

provided, however, that subsection A may be enforced only as a secondary action when an animal control or law enforcement officer is investigating another suspected civil or criminal violation related to the private property.

<u>Section 2.</u> Section 8.60.240 of the Bothell Municipal Code, relating to pets in park facilities, is hereby amended to read as follows.

Section 8.60.240 Pets in park facilities

A. Dogs, pets or domestic animals are not permitted on any designated swimming beach, sports fields, picnic or play areas in any Bothell park or in any building unless specifically permitted by posting; provided, that this section shall not apply to the use of a trained animal by a disabled person.

B. In permissible areas, dogs or other pets or domestic animals must be kept on a leash no greater than 15 feet in length, and under control at all times.

C. Any person whose dog or other pet is in any Bothell park shall be responsible for the conduct of the animal and <u>shall also be required to have in his or her immediate</u> <u>possession an appropriately sized bag to be used</u> for removing feces deposited by such animal from the park area <u>by applying the appropriate best management practice of</u> <u>bagging the feces and placing it in a proper waste disposal receptacle</u>.

D. No person shall allow his or her dog or other pet or domestic animal to bite or in any way molest or annoy park visitors. No person shall permit his or her dog or other pet or domestic animal to bark continuously or otherwise disturb the peace and tranquility of the park.

E. Horses shall be permitted only in Bothell parks that are specifically designated and posted to permit such activity. Horses shall not be permitted in any designated swimming area, campground, or picnic area. No person shall allow a horse or other animal to stand unattended or insecurely tied. No person shall ride any horse or other animal in such a manner that endangers or would be likely to endanger persons or property.

<u>Section 3. SEVERABILITY</u>. If any section, sentence, clause or phrase of this ordinance should be held to be invalid by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this ordinance.

<u>Section 4.</u> <u>EFFECTIVE DATE.</u> This ordinance, being an exercise of a power specifically delegated to the City legislative body, is not subject to referendum, and shall take effect five (5) days after passage and publication of an approved summary thereof consisting of the title.

<u>Section 5. CORRECTIONS.</u> The City Clerk and the codifiers of this ordinance are authorized to make necessary corrections to this ordinance including, but not limited to, the correction of scrivener's/clerical errors, references, ordinance numbering, section/subsection numbers and any references thereto.

APPROVED:

MARK LAMB MAYOR

ATTEST/AUTHENTICATED:

JOANNE TRUDEL CITY CLERK

APPROVED AS TO FORM:

JOSEPH N. BECK CITY ATTORNEY

FILED WITH THE CITY CLERK: PASSED BY THE CITY COUNCIL: PUBLISHED: EFFECTIVE DATE: ORDINANACE NO.:

SUMMARY OF ORDINANCE NO. (2011)

City of Bothell, Washington

On the ____ day of ____, 2011, the City Council of the City of Bothell passed Ordinance No. _____ (2011). A summary of the content of said Ordinance, consisting of the title, is provided as follows:

AN ORDINANCE OF THE CITY OF BOTHELL, WASHINGTON, CREATING BOTHELL MUNICIPAL CODE SECTION 6.16.011 RELATING TO PET WASTE AND AMENDING SECTION 8.60.240 RELATING TO PETS IN PARK FACILITIES.

The full text of this Ordinance will be mailed upon request.

JOANNE TRUDEL CITY CLERK

FILED WITH THE CITY CLERK: <u>, 2011</u> PASSED BY THE CITY COUNCIL: <u>, 2011</u> PUBLISHED: <u>, 2011</u> EFFECTIVE DATE: <u>, 2011</u> ORDINANCE NO.: <u>(2011)</u>