

# City of Lake Stevens Surface Water Management Program

Permit Term July 1, 2019 – July 31,  
2024

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## Purpose

The National Pollutant Discharge Elimination System (NPDES) Permit (Permit) is a federal permit that regulates stormwater and wastewater discharges to waters of the State. While it is a federal permit, the regulatory authority has been passed to the Washington State Department of Ecology (Ecology) for program implementation. The first term of the modern Western Washington Phase II Municipal Stormwater Permit began in January of 2007 and ended in 2012. The current permit term was initially five years, beginning on July 1, 2019 and ending on July 31, 2024. In 2017 Ecology announced that the current permit will be extended an additional year through 2019.

The NPDES Permit requires that all regulated municipalities create and implement a Stormwater Management Program (SWMP), which addresses eight required program elements:

- 1) Stormwater Planning,
- 2) Public Education and Outreach,
- 3) Public Involvement and Participation,
- 4) MS4 Mapping and Documentation,
- 5) Illicit Discharge Detection and Elimination
- 6) Runoff from Development
- 7) Operations and Maintenance
- 8) Source Control Program for Existing Development

Select cities, such as the City of Lake Stevens, are required to provide additional actions applicable to Total Maximum Daily Load (TMDL) requirements. This SWMP Plan describes the current TMDL monitoring program, and how this program will be implemented in the upcoming calendar year.

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

## Background

The City of Lake Stevens is in Snohomish County, east of the City of Everett and City of Marysville, south of the City of Arlington and north of the City of Snohomish. Major access points to Lake Stevens include US-2 (“the Trestle”), Highway 9, and Highway 92. Lake Stevens has the largest freshwater lake in Snohomish County, and has a growing population of approximately 30,000 people. Much of the city is comprised of residential neighborhoods, with Frontier Village, the major shopping center, located in the western portion of the city. A small light-industrial area is in the northeast portion of the city off Hartford and Old Hartford Road(s).

The majority of Lake Stevens is a part of the Lake Stevens watershed, with the remainder of the City (west of the Lake Stevens watershed) falling within the Snohomish River Watershed. The Lake Stevens watershed covers 3,485 acres, which is approximately a 4:1 ratio of watershed to lake surface area. The Lake itself covers 1013 acres and has a maximum depth of 150 feet with an average depth of 62 feet. The contributing creeks to Lake Stevens are

Stevens, Lundeen, Kokanee, and Stitch Creek. The singular outlet for Lake Stevens is Catherine Creek, which is located at the northeastern corner of the lake near downtown Lake Stevens.

Traditionally, Lake Stevens has suffered from high phosphorus as its main pollutant of concern. A Total Maximum Daily Load (TMDL) clean up requirement exists for this water quality parameter. In response to this, the City of Lake Stevens and Snohomish County installed a hypolimnetic aerator into Lake Stevens in 1994 to improve conditions for binding phosphorus to iron in lake sediment. As of 2017, this aerator was removed from the lake due to unsurmountable mechanical difficulties resulting from the end of the lifespan of this device. In 2013, in response to the findings of a lake sediment core study and the faltering aerator system the City of Lake Stevens began using aluminum sulfate (alum) as its primary phosphorus management technique. Currently, the lake is treated yearly using small doses of alum to control phosphorus with significant success. Future treatments of alum may be reduced in frequency based on findings from sediment core samples in the coming years.

## Coordination

**S5.A.5.a:** The City of Lake Stevens borders the Cities of Marysville and Unincorporated Snohomish County. The City of Marysville is a Phase II Permittee and Snohomish County is a Phase I Permittee. The primary mechanism for external coordination is the North Sound Permit Coordinator's meetings and email/phone communication. These quarterly meetings create a forum to coordinate stormwater management activities for shared water bodies among Permittees, and avoid conflicting plans, policies and regulations. External coordination is also accomplished through the Status and Trends Monitoring Option #1 of section S8 in the Phase II Municipal Permit.

The City coordinates with the Lake Stevens Fire Department (Fire District 8) for illicit discharge spill response. The Fire Department has a Hazardous Materials Team and works as a part of the countywide response team.

The City also coordinates with Snohomish County, Department of Ecology and STORM (a regional educational outreach group) to provide education and outreach programs. See a full description of those programs in the Education and Outreach section of this SWMP Plan.

**S5.A.5.b:** Within the City, the Stormwater division is the main work group responsible for Permit implementation. The primary mechanism for internal coordination is engagement with other City working groups through meetings and direct involvement in activities, thereby providing direct support or clarification when needed and reducing barriers to Permit compliance. Table 1 is a general overview of the Permit requirements and the City departments, or partners, which are responsible for each requirement.

**Table 1 Overview of Responsibilities**

Permit Section	Title	Division(s) Responsible
<b>S5.C.1</b>	Surface Water Planning	Lake Stevens Public Works (Stormwater) Planning and Community Development
<b>S5.C.2</b>	Public Education and Outreach	Lake Stevens Public Works (Stormwater) Lake Stevens School District Snohomish Conservation District Sound Salmon Solutions Adopt-A-Stream ECOSS
<b>S5.C.3</b>	Public Involvement and Participation	Lake Stevens Public Works (Stormwater)
<b>S5.C.4</b>	MS4 Mapping and Documentation	Lake Stevens Public Works (Stormwater) GIS Technician Planning and Community Development
<b>S5.C.5</b>	Illicit Discharge Detection and Elimination	Lake Stevens Public Works (Stormwater) Lake Stevens Sewer District All City Staff (Reporting incidents) Lake Stevens Fire (District 8)
<b>S5.C.6</b>	Controlling Runoff from New Development, Redevelopment and Construction Sites	Lake Stevens Public Works (Stormwater) Planning Department
<b>S5.C.7</b>	Municipal Operations and Maintenance	Lake Stevens Public Works
<b>S5.C.8</b>	Source Control for Existing Development	Lake Stevens Public Works

*Lake Stevens Public Works*

The Public Works Department is the primary work group responsible for Permit implementation. This department houses the Stormwater Coordinator, who creates permit related submittals, plans, reports and records. All stormwater inspections are performed by the City’s Construction Inspector and Stormwater Inspector. Starting in late 2019 or early 2020, the City will be hiring a GIS Technician to add to the Public Works Stormwater Division.

The Stormwater Coordinator implements in-house training efforts and assists other departments to receive external training when needed/appropriate. In-house training for all PW Crews on Best Management Practices

(BMP) and Illicit Discharge Detection and Elimination (IDDE) are held annually. While these trainings are utilized to convey the primary subject matter, they are also used to relay overall NPDES Permit concepts, changes in requirements and supporting documents like the Stormwater Pollution Prevention Plan (SWPPP) or BMP Documents.

The Stormwater Maintenance Division is managed by the Operations Manager, who in turn is managed by the Public Works Director. The Stormwater Coordinator works closely with the Operations Lead and Stormwater Inspector to coordinate and to prioritize tasks and timelines within the NPDES Permit – both positions report to the Public Works Director. The Stormwater Maintenance Division fulfills many of the Operation and Maintenance activities required by the permit.

#### *Planning Department*

A weekly meeting with all Planning, Engineering and the Fire Department staff responsible for permitting and review is attended by the Stormwater Division. This meeting creates an open dialogue regarding current issues throughout the development process and provides a forum for coordination as needed.

#### *Other Departments*

All staff members are responsible for reporting illicit discharges to the City's Spill Hotline at (425)622-9408 or by contacting the Stormwater Coordinator at (425)622-9442 or Stormwater Technician at (425)622-9458.

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# Stormwater Management Program Components

## 1. Stormwater Planning

### Summary Permit Requirements

- Create an interdisciplinary team to assist in the development of the stormwater program (by August 1, 2020)
- Create long-range planning programs to ensure that watershed and water quality protection policies, strategies, codes and other measures intended to protect and improve local water health through planning, or taking into account stormwater management needs or limitations are implemented
- Ensure the continuation of Low-Impact Development code related requirements as the preferred and commonly used approach to stormwater management in site development
- Implement “Stormwater Management Action Planning” (SMAP) similar to the range of issues outlined in *Stormwater Management Action Planning Guidance* (Ecology, 2019; Publication 19-10-010).

### Planned Activities

**S5.C.1.a:** (Due August 1, 2020) City staff will convene members of Public Works and Community Planning and Development for an interdisciplinary team to inform and assist in the development of the City’s stormwater program. Public Works and Planning Directors will choose members for this team who are best-suited to inform this process based on their skills and expertise in their given expertise.

**S5.C.1.b:** Coordination with long-range plan updates will be implemented by the interdisciplinary team assembled according to S5.C.1.a.

**S5.C.1.b.i:** The interdisciplinary team will coordinate with their respective departments to create a report to address how receiving water body needs are informing the long-range planning and implementation processes within the City of Lake Stevens. The team will decide upon a frequency of meeting (monthly, weekly, etc.) according to the needs of the group to create a report which describes the water quality and watershed protection policies, strategies, codes, and other measures intended to protect and improve local receiving water body health. The two dates for this process are as follows:

**S5.C.1.b.i(a) – ON OR BEFORE March 31, 2021:** The City will respond to annual report questions that detail how anticipated impacts to stormwater were addressed in the previous permit cycle (2013-2019) in updates to the City’s Comprehensive Plan (or equivalent) and in other state-mandated plans used to accommodate growth and development. The interdisciplinary team will accomplish this by coordinating the results of Public Works implemented stormwater management programs with Planning and Community Development’s required updates to the Comprehensive Plan during the 2013-2019 permit term.

**S5.C.1.b.i(b) – ON OR BEFORE January 1, 2023:** The interdisciplinary team will submit an additional report to the Department of Ecology addressing the same questions as in S5.C.1.i(a), but for the current 2019-2024 permit cycle. The questions will address how during this permit cycle in updates to the Comprehensive Plan and/or other long-range planning documents, water quality is being addressed (if at all).

**S5.C.1.c:** The City will continue to implement Low-Impact Development (LID) techniques as the “preferred and commonly used approach” to stormwater management on development sites. Each year, the City will review and address any newly identified regulatory or administrative barriers to implementation of LID principles or LID BMPs.

**S5.C.1.d:** Using Ecology guidelines from *Stormwater Management Action Planning Guidance* (Ecology, 2019; Publication 19-10-010), the City will conduct a process to review, inventory and prioritize receiving waters and contributing watershed within the jurisdiction of Lake Stevens.

**S5.C.1.d.i: ON OR BEFORE MARCH 31, 2022,** a receiving water assessment and watershed inventory will be submitted to Ecology. The City of Lake Stevens will assess in house or hire a consultant to document and assess local receiving waters most likely to benefit from stormwater management planning. A watershed inventory that includes a brief description of receiving water bodies and contributing watersheds will also be prepared and submitted at this time. The watershed inventory will be in table format and will include:

- Each receiving water body name
- Total watershed area for each receiving water body
- Percent of total watershed area that is in the Permittee’s jurisdiction
- Findings of the stormwater management influence assessment for each basin
- An indication of which receiving waters will be used for the S5.C.1.d.ii prioritization process

A map will also be included which shows delineated basins with references to the watershed inventory table.

**S5.C.1.d.ii: ON OR BEFORE JUNE 30, 2022,** informed by the assessment of receiving water conditions in (i), above, and other local and regional information, the City shall develop and implement a prioritization method and process to determine which receiving waters will receive the most benefit from implementation of stormwater facility retrofits, tailored implementation of SWMP actions, and other land/development management actions (different than the existing new and redevelopment requirements). The retrofits and actions shall be designed to:

- 1) Conserve, protect, or restore receiving waters through stormwater and land management strategies that act as water quality management tools
- 2) Reduce pollutant loading, and,
- 3) Address hydrologic impacts from existing development as well as planned for and expected future buildout conditions.

**No later than June 30, 2022,** the City will document the prioritized and ranked list of receiving waters.

- a) The City will document the priority ranking process used to identify high priority receiving waters. Depending on staffing and budget, the City may use a consultant or do this ranking in-house.
- b) The ranking process shall include the identification of high priority catchment area(s) for focus of the Stormwater Management Action Plan (SMAP) in (iii), below.

**S5.C.1.d.iii: ON OR BEFORE MARCH 31, 2023,** the City will develop a SMAP for one high-priority area as determined in (ii) above, that identifies all of the following:

- a) A description of the stormwater facility retrofits needed for the area, including the BMP types and preferred locations.
- b) Land management/development strategies and/or actions identified for water quality management.
- c) Targeted, enhanced, or customized implementation of stormwater management actions related to permit sections within S5, including:
  - IDDE field screening



- Prioritization of Source Control inspections
  - O&M inspections or enhanced maintenance, or
  - Public Education and Outreach behavior change programs. S5.C.2 Western Washington Phase II Municipal Page 14 of 56 Stormwater Permit – August 1, 2019 Identified actions shall support other specifically identified stormwater management strategies and actions for the basin overall, or for the catchment area in particular.
- d) If applicable, identification of changes needed to local long-range plans, to address SMAP priorities.
- e) A proposed implementation schedule and budget sources for:
- Short-term actions (i.e., actions to be accomplished within six years), and
  - Long-term actions (i.e., actions to be accomplished within seven to 20 years).
- f) A process and schedule to provide future assessment and feedback to improve the planning process and implementation of procedures or projects.

This process will be performed in-house as staff time allows, or by a consultant hired on the City’s behalf to assess this information.

## 2. Public Education and Outreach

### Summary Permit Requirements

- Build general awareness about methods to address and reduce impacts from stormwater runoff.
- Effect behavior change to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.
- Create stewardship opportunities that encourages community engagement in addressing the impacts from stormwater runoff.

### Planned Activities

**S5.C.2.a:** City staff have developed an education and outreach program that will be implemented throughout the entire City. The program was designed to educate target audiences about stormwater problems and provide specific actions they can follow to minimize these problems.

**S5.C.2.a.i:** To build awareness with the general public, including school-aged children and businesses, the City has several activities planned to occur in 2020:

**Adopt-A-Street:** The City of Lake Stevens Adopt-A-Street Litter Control Program is a stewardship program designed to clean up litter along the right of way, preventing it from being washed into the MS4. This program is organized within the Streets Division. Participating groups volunteer to remove litter from an assigned section of street. In return the Public Works Department posts permanent signs identifying the adopting group, provides safety vests, hard hats and trash bags. When the bags are filled, groups leave them at the clean-up site, and City of Lake Stevens arranges for trash collectors to pick them up.

**Catch Basin Marker Program:** The City of Lake Stevens provides a catch basin marker program. The City has purchased cast aluminum markers that say, “NO DUMPING – DRAINS TO LAKE.”

Citizens can request their storm drain be marked and City staff with a metal medallion designating the outfall type of the stormwater system.

**Development Plan Review:** The City adopted the *2012 Stormwater Management Manual for Western Washington as amended in 2014* (Stormwater Manual). This manual is available to all planning and review staff. A link to the Stormwater Management Manual is provided on the City website. During the plan review process, Public Works Stormwater staff members check for adherence to Stormwater Manual standards to ensure that engineers, contractors and developers are aware of the standards.

**Events:** A variety of Stormwater Education and Outreach materials have been developed to use at public events. The materials explain permit requirements, stormwater pollution problems and what target audiences can do to alleviate their impact to stormwater pollution. Additional events may be added at a later date and reflected in the following year's SWMP and current year's Annual Report.

**2020 City Events Include:**

- Spring Clean – May
- Aquafest – July
- Truck and Treat – October
- Winterfest – December

**Handbooks:** The "Rain Garden Handbook for Western Washington" was created by Washington State University Extension, Department of Ecology and other project partners and serves as a guide for design, installation and maintenance of rain gardens.

**Mutt Mitt Stations:** Pet waste stations have been installed in City Parks. The Stations and the information associated with them educate the public on the health and environmental risks associated with poor pet waste practices. Public Works collaborates with Parks to maintain these stations. Additional pet waste stations will be purchased to increase the availability for suitable places to dispose of pet waste in public areas.

**School District Education:** The City of Lake Stevens is working with the Lake Stevens School District and Snohomish Conservation District to further develop the stormwater curriculum already implemented in the school district. Existing relationships with science teachers and community groups are being considered to create a more robust stormwater curriculum that meets Next Generation Science Standards.

**Private Facility Inspections:** The City's Stormwater Inspector contacts the owners of private commercial and residential stormwater systems. In most residential situations, everyone in the neighborhood is contacted after an inspection has occurred. This program educates owners about the stormwater system and how illicit discharges may affect the system they are responsible for maintaining.

The City of Lake Stevens will continue to increase the effectiveness of the Private Stormwater Facility compliance program during 2020. The Stormwater Inspector is taking lead to continue to develop a more robust and effective inspection and maintenance compliance program as the City continues to grow its Stormwater Program.

**General Outreach:** The City participates in the regional Puget Sound Starts Here (PSSH) campaign and the Stormwater Outreach for Regional Municipalities (STORM) group. The Puget Sound Starts Here campaign was created by a partnership of regional governments dedicated to improving water quality in our local lakes, rivers, streams and ultimately Puget Sound. The campaign is run by the STORM group, which includes 57 cities and counties in conjunction with the Washington State Puget Sound Partnership and Washington State Department of Ecology. The City plans to continue attending the local Snohomish County STORM meetings as time allows.

In 2020 Stormwater staff plans to continue adding stormwater-related content on the City website and social-media pages. For 2020, City staff intend to increase awareness of stormwater related issues with multiple website updates and Facebook outreach posts.

**S5.C.2.a.ii:** The focus of behavior change programs planned for 2020 will be homeowners/property management companies and their maintenance and operation of privately-owned stormwater facilities in residential neighborhoods.

**S5.C.2.a.ii.(a):** The City's Stormwater Inspector is working in collaboration with the stormwater division of Public Works to develop and implement a city-wide private stormwater facility maintenance program. This program seeks to educate and assist homeowners in new and existing neighborhood developments about the responsibility of the homeowners and/or property management companies to clean and maintain their private stormwater facilities. These facilities include both "traditional" (non-LID) and LID facilities.

**S5.C.2.a.ii.(b):** The on-going behavior-change program known as the "I Love Lake" program has been implemented to fulfill the requirement for S5.C.2.a.ii(b) for this permit term. Per permit requirements **NO LATER THAN JULY 1, 2020** the City will conduct an evaluation of the "I Love Lake" campaign and document the lessons learned and recommendations for which option to select from S5.C.a.ii(c).

**S5.C.2.a.ii.(c):** Depending on the determination from S5.C.2.a.ii.(b), **BY February 1, 2021**, the City of Lake Stevens will choose one of the three options listed below:

1. Develop a strategy and schedule to more effectively implement the existing campaign; or
2. Develop a strategy and schedule to expand the existing campaign to a new target audience or BMPs; or
3. Develop a strategy and schedule for a new target audience and BMP behavior change campaign

**S5.C.2.a.ii.(d): NO LATER THAN APRIL 1, 2021** the City will begin to implement the strategy determined in

**S5.C.2.a.ii.(e) and (f): NO LATER THAN MARCH 31, 2024**, the City will evaluate and write a report on:

1. The changes in understanding and adoption of targeted behaviors resulting from the implementation of the strategy; and
2. Any planned or recommended changes to the campaign in order to be more effective; describe the strategies and process to achieve the results.

The City will use the results from this evaluation to direct continued efforts for targeted behavior-change programs.

**S5.C.2.a.iii:** Stewardship opportunities for residents will continue to be advertised by the City and in cooperation

with partners like the Snohomish Conservation District. Activities may include stream bank planting, the city's ongoing storm drain marking program, and public education opportunities in schools and at community-wide events.

### 3. Public Involvement and Participation

#### Summary Permit Requirements

- Provide ongoing opportunities for public involvement and participation through advisory councils, public hearings, watershed committees, participation in developing rate-structures or other similar activities. The City will comply with applicable state and local public notice requirements when developing elements of the SWMP and SMAP.
- The City shall create opportunities for the public, including overburdened communities, to participate in the decision-making processes involving the development, implementation and update of the SMAP and SWMP.
- Post the SWMP Plan and the annual report on the City web site no later than May 31 each year and make other submittals available to the public upon request.

#### Planned Activities

**S5.C.3.a.** To create opportunities for the public to participate in decision-making processes involving the development, implementation and update of the SWMP Plan, Stormwater staff will post requests for public comments annually. A request for comments will be added onto the front page of the City web site, added to the Stormwater web page and posted to the City's social media sites. The SWMP draft will be available for review and comment in February of 2020.

**S5.C.3.b.** The SWMP Plan and the annual report required under S9.A are posted on the Stormwater web page titled "NPDES Phase II Permit" no later than May 31 each year (<http://www.lakestevenswa.gov/459/NPDES-Phase-II-Permit>). All other submittals are available to the public upon request.

### 4. Mapping and Documentation

#### Summary Permit Requirements

- The City will include an ongoing mapping program in the SWMP for mapping and documenting the MS4

#### Planned Activities

**S5.C.3.a:** Ongoing Mapping: The City will maintain mapping data for the features listed below:

- i. Known MS4 outfalls and known MS4 discharge points.
- ii. Receiving waters, other than groundwater.
- iii. Stormwater treatment and flow control BMPs/facilities owned or operated by the City.
- iv. Geographic areas served by the City's MS4 that do not discharge stormwater to surface waters.

- v. 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 features or attributes (or both) shall be mapped:
  - a. Tributary conveyance type, material, and size where known.
  - b. Associated drainage areas.
  - c. Land use.
- vi. Connections between the MS4 owned or operated by the City and other municipalities or public entities. All connections to the MS4 authorized or allowed by the City after February 16, 2007. 9,10

**S5.C.3.b. NO LATER THAN JANUARY 1, 2020**, the City continue to collect size and material for all known MS4 outfalls during normal course of business (e.g. during field screening, inspection, or maintenance) and update records. **No later than August 1, 2023**, the City will complete mapping of all known connections from the MS4 to a privately-owned stormwater system. This work will be done as a collaborative effort utilizing the new GIS Technician, Stormwater Inspector, and City Maintenance Crew. All mapping format will be electronic, and records will be made available to Ecology, other municipalities, Permittees, and Indian Tribes as described in the permit.

## 5. Illicit Discharge Detection and elimination

### Summary 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.

### Planned Activities

**S5.C.5.a** To detect and identify non-stormwater discharges and illicit connections to the MS4, the City has adopted the methods described in the *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual* prepared for Washington State Department of Ecology by Herrera Environmental Consultants in May 2013. Methods implemented include IDDE screening practices during regularly scheduled inspections and daily work activities.

**S5.C.5.b** In 2020, Stormwater staff plan to conduct training for municipal field staff, which as part of their normal job responsibilities might encounter or otherwise observe an illicit discharge or illicit connection to the MS4. Follow-up training will be provided as needed to address changes in procedures, techniques, requirements, or staffing. The City also partners with the Environmental Coalition of South Seattle (ECOSS) to do spill kit and illicit discharge detection and elimination outreach to the general public and businesses.

**S5.C.5.c** The City has implemented LSMC 11.06.100 *Prohibited, Allowable, and Conditional Discharges and Connections* to meet the requirements of this section.

**S5.C.5.d** To detect and identify non-stormwater discharges and illicit connections to the MS4, the City has adopted the methods described in the *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual* prepared for Washington State Department of Ecology by Herrera Environmental Consultants in May 2013. Methods implemented include IDDE screening practices during regularly scheduled inspections and daily work activities.

The City must conduct field screening of at least 12% of the MS4 each year starting August 1, 2019. After

reviewing the definition of a MS4 in the Permit, a circuit approach as outlined in the Washington State Department of Ecology’s *Catch Basin Inspection Alternatives for Phase I and II Municipal Stormwater Permittees* (Publication Number: 13-10-019) was chosen as a proxy measure to represent the MS4 in conjunction with consulting the Regional Stormwater Permit Manager.

The City catch basin inspections will serve as the primary IDDE screening method. Stormwater staff used GIS information to verify which streets do, and do not, have catch basins. The total number of outfalls in the City were determined, and a circuit map for each outfall was made. Each circuit was inspected at or above the statistically significant value of 25% of catch basins per DOE recommendation. This yields a percentage of MS4 field screened.

To ensure all areas of the City are screened for illicit discharges, Stormwater staff members will emphasize awareness of IDDE during daily activities as part of IDDE training so that the remaining areas of the City are informally screened. Historically, staff members have found more incidents of illicit discharges during their daily work activities than through other methods of detecting discharges. Stormwater treatment and flow control BMPs/facilities will also be screened during the normally scheduled annual inspections.

**S5.C.5.d.ii** The City will maintain the spill reporting hotline in 2020. The hotline number is (425)622-9408. After hours, the on-call number directs Public Works staff to respond.

The City also maintains a “Report/Request Water Quality Investigation” web page. From the City home page, a resident can click the main “HOW DO I...” drop down menu. Under the reporting section, they click “Water Quality Investigation” and a form automatically opens. Once the form is filled out, the request is sent to the Stormwater Coordinator. The Stormwater Coordinator then investigates the report and determines the appropriate course of action to rectify the situation.

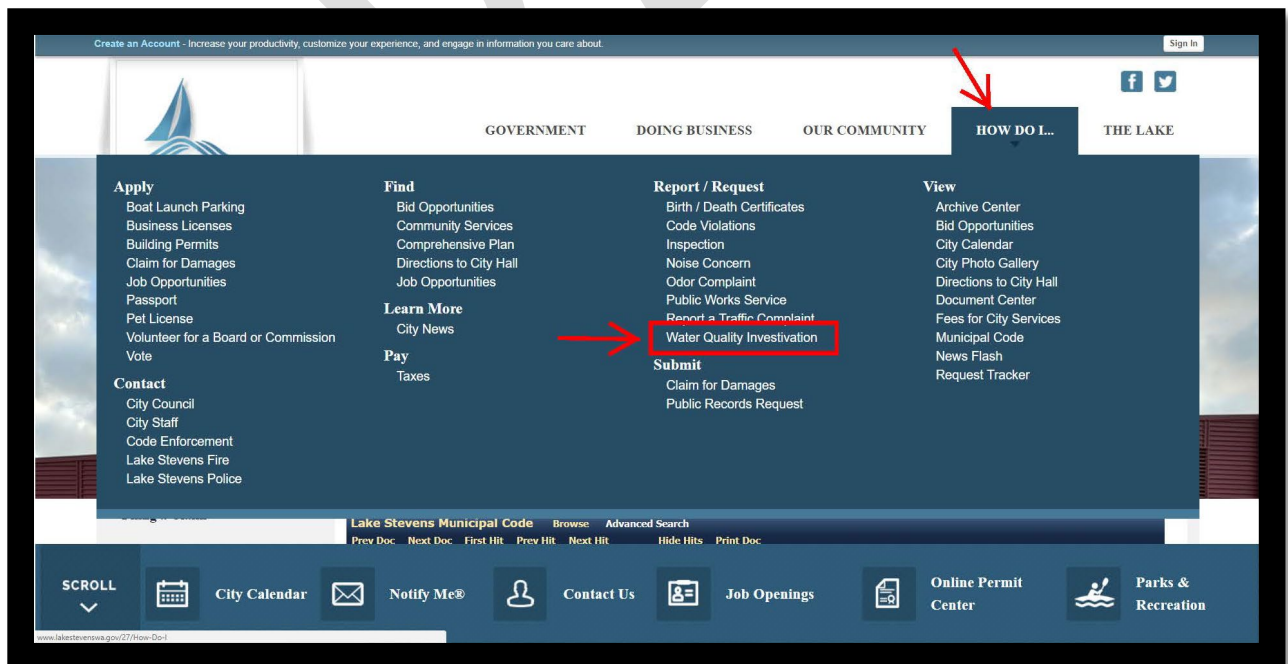


Figure 1 City of Lake Stevens Website

**55.C.5.d.iii** All staff responsible for identification, investigation, termination, cleanup and reporting illicit discharges, including spills, and illicit connections have received trainings based on the *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual*, by Herrera Environmental Consultants, May 2013 for initial training on these activities. IDDE training will continue to be implemented by the Stormwater staff members. Trainings developed by others will also be attended, as available, including training opportunities sponsored by the Department of Ecology, HAZWOPER refresher classes, ECOSS and the Washington State Stormwater Conference. An on-going training for municipal field staff will be implemented for all employees who as a part of their normal job responsibilities, might encounter or observe an illicit discharge. This training is put on by Stormwater staff at the Public Works shop once a year. The City documents and maintains sign-in sheets for this training and the staff trained.

**55.C.5.e** A written procedure for characterizing the nature of and potential public or environmental threat posed by an illicit discharge was updated in 2017. The procedures follow the guidance in *Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual* prepared for Washington State Department of Ecology by Herrera Environmental Consultants in May 2013. All illicit discharges, including spills, which may constitute a threat to human health, welfare, or the environment, are investigated immediately. All other investigations, or referring of investigations, will occur within 7 days of receiving a complaint, report or monitoring information indicating an illicit discharge. If an illicit connection is found the enforcement actions specified in MMC will be used to eliminate the illicit connection within 6 months.

**55.C.5.f** Stormwater staff will train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit connections, including spills, and illicit connections, to conduct these activities. Stormwater staff will ensure follow-up training shall be recorded as needed to address changes in procedures, techniques, requirements or staffing. The City will document and maintain records of the training provided and the staff trained.

**55.C.5.f** Stormwater staff will train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit connections, including spills, and illicit connections, to conduct these activities. Stormwater staff will ensure follow-up training shall be recorded as needed to address changes in procedures, techniques, requirements or staffing. The City will document and maintain records of the training provided and the staff trained.

**55.C.5.g** The City will track and maintain all records of the requirements of this section. The annual report shall include a summary of data from illicit discharges, spills and illicit connections including those that were found by, reported to, or investigated by the Permittee during the previous calendar year as specified in Appendix 12 of the Stormwater Manual and WQWebIDDE.

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

### Summary Permit Requirements

- Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects.
- Implement a program that includes a permitting process with site plan review, inspection and enforcement capability.
- Implement a program that includes provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities.
- Train staff members that are 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.

### Planned Activities

**S5.C.6.a** Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects. The City shall adopt and make effective a local program, **no later than June 30, 2022**, that meets the requirements of S5.C.6.b(i) through (iii), below, and shall apply to all applications submitted:

- i. On or after July 1, 2022.
- ii. Prior to January 1, 2017, that have not started construction<sup>19</sup> by January 1, 2022.
- iii. Prior to July 1, 2022, that have not started construction by July 1, 2027.

**S5.C.6.b – (e)** At this time, the City will continue to implement and enforce the current ordinance(s) pertaining to addressing runoff from new development, redevelopment, and construction sites. In 2020, City staff will begin to consider what updates to the existing ordinance will need to take place to meet the criteria listed the permit sections listed above. The interdisciplinary team created from Public Works and Planning and Community Development staff will begin this process as one of their initial items of discussion.

## 7. Municipal Operations and Maintenance

### Summary Permit Requirements

- Implement maintenance standards that are as protective, or more protective, of facility function than those specified in Chapter 4 of Volume V of the *2012 Stormwater Management Manual for Western Washington as amended in 2014*.
- 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.
- Spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities after major storm events.
- Complete inspections of all catch basins and inlets owned or operated by the City at least once by August 1, 2017 and every two years thereafter.
- Implement practices, policies and procedures to reduce stormwater impacts associated with road maintenance activities and runoff from all lands owned or maintained by the City.
- Train staff members who have construction, operations or maintenance job functions that



- may impact stormwater quality.
- Update Stormwater Pollution Prevention Plans (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the City.

### Planned Activities

**S5.C.7.a:** In 2020 the City will implement the maintenance standards that are as protective or more protective than the Stormwater Management Manual for Western Washington. If the Stormwater Manual does not have a maintenance standard that applies to a stormwater facility, then the City will use the manual developed by the manufacturer of the facility. In all cases, the applicant shall provide the proposed maintenance program to the City for approval before construction of the facility occurs.

**NO LATER THAN JUNE 30, 2022,** the City will update its maintenance standards to meet the requirements of this section. 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.

**S5.C.7.b:** Annual inspection of all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities are completed by the Stormwater Maintenance Crew or Stormwater staff and maintenance needs are recorded. The inspections are tracked using a tablet or binder in the field using VueWorks asset management software. This ensures that all new facilities will be inspected each year and inspection records are maintained.

**S5.C.7.b.i:** The program shall include provisions to verify adequate long-term O&M of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to S.5.C.6.c and shall be maintained in accordance with S5.C.7.a. The provisions shall include:

- a) Implementation of an ordinance or other enforceable mechanism that:
  - Clearly identifies the party responsible for maintenance in accordance with maintenance standards established under S5.C.7.a.
  - Requires inspection of facilities in accordance with the requirements in (b), below.
  - Establishes enforcement procedures.
- b) 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.6.c, including those permitted in accordance with requirements adopted pursuant to the 2007-2019 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.

When an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed per

the timeframes in the Permit section S5.C.7.a. For small maintenance tasks, the staff member completing the inspection will correct the problem at the time of inspection and make note of that correction in the inspection log. For larger maintenance needs, a work order will be created and assigned to responsible staff member(s).

**S5.C.7.c:** Facilities throughout Lake Stevens are “spot-checked” following a heavy rain event. If the storm event is a 24-hour 10-year recurrence interval or larger an alarm notification is sent to the Public Works Director. If damage is found at a City stormwater facility, all stormwater facilities that may be affected will be inspected. Repairs will be conducted based on the results of inspections.

**S5.C.7.d:** For the 2013 to 2018 permit term all catch basins and inlets owned or operated by the City must be inspected at least once by August 1, 2017 and every two years thereafter. The Permit allows Permittees to change the catch basin inspection frequency as appropriate to meet the maintenance standards based on maintenance records of double the length of time of the new proposed inspection frequency.

Inspections will be conducted on a “circuit basis” whereby 25% of catch basins and inlets within each circuit are inspected to identify maintenance needs. This is to include an inspection of the catch basin immediately upstream of any system outfall, 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 the 2012 Stormwater Management Manual for Western Washington. There are 4,755 Catch Basins and/or Inlets that are owned or operated by the City. These make up 336 circuits with the number of Catch basins ranging from 1 to 157 in each circuit.

**S5.C.7.e:** The inspection and maintenance program is designed to inspect all sites and to achieve at least a 95% inspection rate. A method for recording each maintenance activity described above has been established.

**S5.C.7.f:** The policies and practices to reduce stormwater impacts associated with runoff from all lands owned or maintained by the City were implemented for consistency with the *2012 Stormwater Management Manual for Western Washington as Amended in 2014* (Stormwater Manual). **No later than December 31, 2022**, the City will update its Standard Operating Procedures to reflect the tasks below. The various tasks that the maintenance crews partake in, including but not limited to,

- i. Pipe cleaning
- ii. Cleaning of culverts that convey stormwater in ditch systems
- iii. Ditch maintenance
- iv. Street cleaning
- v. Road repair and resurfacing, including pavement grinding
- vi. Snow and ice control
- vii. Utility installation
- viii. Pavement striping maintenance
- ix. Maintaining roadside areas, including vegetation management
- x. Dust control
- xi. Application of fertilizers, pesticides, and herbicides according to the instructions for their use, including reducing nutrients and pesticides using alternatives that minimize environmental impacts
- xii. Sediment and erosion control
- xiii. Landscape maintenance and vegetation disposal
- xiv. Trash and pet waste management

xv. Building exterior cleaning and maintenance

These Standard Operating Procedures (SOPs) will implement practices, policies and procedures to reduce stormwater impacts associated with runoff from lands owned or maintained by the City, and road maintenance activities under the functional control of the City.

**S5.C.7.e** The City will implement a training program for its employees whose primary construction, operations or maintenance job functions may impact stormwater quality. These trainings will include a combination of certification training such as CESCL, HAZWOPER and trainings as part of the monthly crew meetings addressing such topics as inspections, selection and installation of erosion control BMPs, spill response, etc. The training program shall address the importance of protecting water quality, operation and maintenance standards, inspection procedures, relevant SWPPPs, 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. The staff training records to be kept include dates, activities or course descriptions, and names and positions of staff in attendance.

**S5.C.7.f** The City in 2011 prepared a Stormwater Pollution Prevention Plan (SWPPP) for the City Maintenance Shop Facility. The City will review the SWPPP and update it as needed as well as review other City owned and operated facilities to determine if they require a SWPPP and if so, prepare one for those sites. The City will perform periodic visual observation of discharges from the facilities to evaluate the effectiveness of the BMPs in place. Per permit requirements, the City will update SWPPP **no later than December 31, 2022** to include the following information:

- i. A detailed description of the operational and structural BMPs in use at the facility and a schedule for implementation of additional BMPs when needed. BMPs selected must be consistent with the Stormwater Management Manual for Western Washington, or a Phase I program approved by Ecology. The SWPPP must be updated as needed to maintain relevancy with the facility.
- ii. At minimum, annual inspections of the facility, including visual observations of discharges, to evaluate the effectiveness of the BMPs, identify maintenance needs, and determine if additional or different BMPs are needed. The results of these inspections must be documented in an inspection report or check list.
- iii. An inventory of the materials and equipment stored on-site, and the activities conducted at the facility which may be exposed to precipitation or runoff and could result in stormwater pollution.
- iv. A site map showing the facility's stormwater drainage, discharge points, and areas of potential pollutant exposure.
- v. A plan for preventing and responding to spills at the facility which could result in an illicit discharge.

**S5.C.7.g** The City will maintain records of inspections and maintenance activities conducted as a requirement of the permit.

## 8. Source Control for Existing Developments

### Summary Permit Requirements

The City will implement a program to prevent and reduce pollutants in runoff from areas that discharge to the MS4.

### Planned Activities

**S5.C.8.a** The City will implement a program for inspection of operational source control BMPs, and if necessary, structural source control BMPs or treatment BMPs/facilities, or both, to pollution generating sources associated with existing land uses and activities. Pollution generating sources at publicly and privately owned institutional, commercial and industrial sites to enforce implementation of required BMPs to control pollution discharging into the MS4 will be inspected as part of this program. A reduction of polluted runoff from application of pesticides, herbicides, and fertilizers from the sites identified in S5.C.8.b.ii will be emphasized in this program.

**S5.C.8.b** No later than August 1, 2022, the City shall adopt and make effective an ordinance(s), or other enforceable documents, requiring the application of source control BMPs for pollutant generating sources associated with existing land uses and activities (see Appendix 8 to identify pollutant generating sources). The requirements of this subsection are met by using the source control BMPs in the SWMMWW, or a Phase I Program approved by Ecology.

Applicable operational source control BMPs shall be required for all pollutant generating sources. Structural source control BMPs, or treatment BMPs/facilities, or both, shall be required for pollutant generating sources if operational source control BMPs do not prevent illicit discharges or violations of surface water, groundwater, or sediment management standards because of inadequate stormwater controls. Implementation of source control requirements may be done through education and technical assistance programs, provided that formal enforcement authority is available to the Permittee and is used as determined necessary by the Permittee, in accordance with S5.C.8.b.iv.

No later than August 1, 2022, the City shall establish an inventory that identifies publicly and privately owned institutional, commercial, and industrial sites which have the potential to generate pollutants to the MS4. The inventory shall include:

- (a) Businesses and/or sites identified based on the presence of activities that are pollutant generating (refer to Appendix 8).
- (b) Other pollutant generating sources, based on complaint response, such as:  
home-based businesses and multi-family sites.

No later than January 1, 2023, the City shall implement an inspection program for sites identified pursuant to S5.C.8.b.ii:

- (a) All identified sites with a business address shall be provided information about activities that may generate pollutants and the source control requirements applicable to those activities. This information shall be provided by mail, telephone, electronic communications, or in person. This information may be provided all at one time or spread out over the permit term to allow for tailoring and distribution of the information during site inspections.
- (b) The City shall annually complete the number of inspections equal to 20% of the businesses and/or sites listed in their source control inventory to assess BMP effectiveness and compliance with source control requirements.

- (c) City shall inspect 100% of sites identified through credible complaints.

## 9. Total Maximum Daily Load (TMDL) Requirements

### Summary Permit Requirements

- Inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control BMPs for bacteria and implement an ongoing inspection program to re-inspect facilities with bacteria source control problems a minimum of every three years.
- Conduct public education and outreach activities to increase awareness of bacterial pollution problems and promote proper pet waste management behavior.
- Install and maintain animal waste collection and/or education stations at City parks and other City-owned and operated lands reasonably expected to have substantial domestic animal use.
- When conducting IDDE-related field screening under section S5.C.3 of the Permit include screening for bacteria sources.
- Review fecal coliform data collected under the 2013-2018 Permit and identify one high priority area that will be the focus of source identification and elimination efforts in at least one sub-basin. The source identification and elimination program shall be implemented no later than May 1, 2021. The City shall prepare written documentation of this review and the identified high priority area; documentation will be submitted with the Annual Report for 2020.
- Conduct surface water monitoring for characterization and long-term trends evaluation of fecal coliform in accordance with the QAPP approved under the 2013 Permit.

### Planned Activities

**Business Inspections:** Inspections of source control BMPs at commercial animal handling areas and composting facilities will be scheduled for 2020. They will be inspected again in 2023.

**Targeted Source Identification & Elimination:** By January 1, 2021, the City will review the fecal coliform data it collected from under the 2013-2018 Permit to identify (at minimum) one new high-priority area (a stream segment or tributary) that will be the focus of source identification and elimination efforts during the calendar years 2021 through 2023. A segment of Mitchell Creek will be selected for this targeted approach. A documented account of how this segment was chosen will be included with the 2020 Annual Report submission. Implementation of new source identification and elimination efforts in the MS4 sub-basins discharging to the identified high priority area will be done no later than May 1, 2021.

The City will implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit in response to any illicit discharge found. The annual report's TMDL summary will include qualitative and quantitative information about the source identification and elimination activities, including procedures followed and sampling results, implemented in the selected high priority area(s).

**Surface Water Monitoring:** The City will conduct surface water monitoring for characterization and long-term trends evaluation of fecal coliform in accordance with the QAPP approved under the 2013 Permit. QAPP documents will be in accordance with *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies*, July 2004, Ecology Publication No. 04-03-030. The City will follow the approved Lake Stevens QAPP unless changes are approved by Ecology.

DRAFT

# Sampling Locations - Kokanee Creek

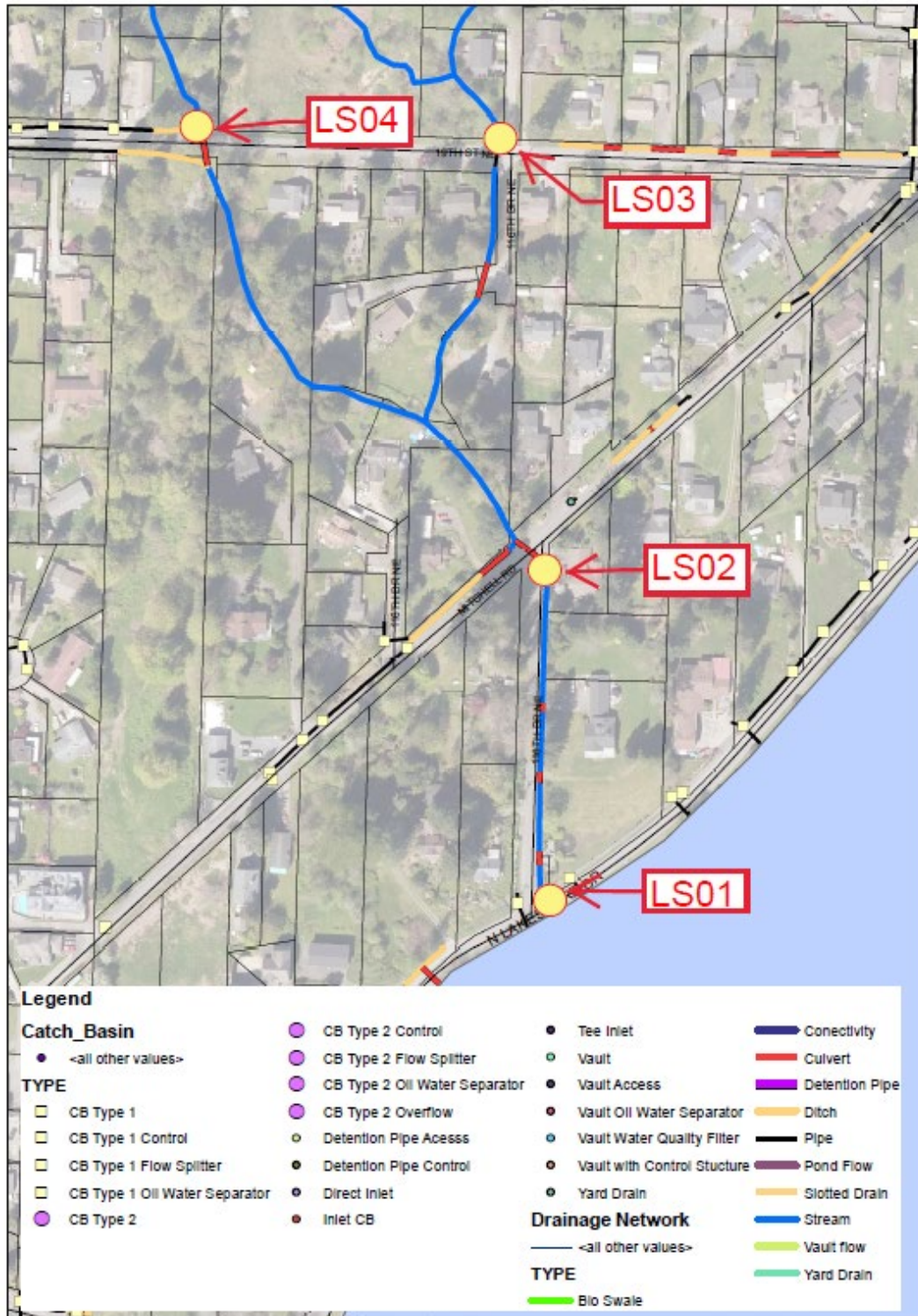


Figure 2. Mitchell (Kokanee) Creek Monitoring Locations (LS01 - LS04)

# Sampling Locations - Kokanee Creek (Upstream)

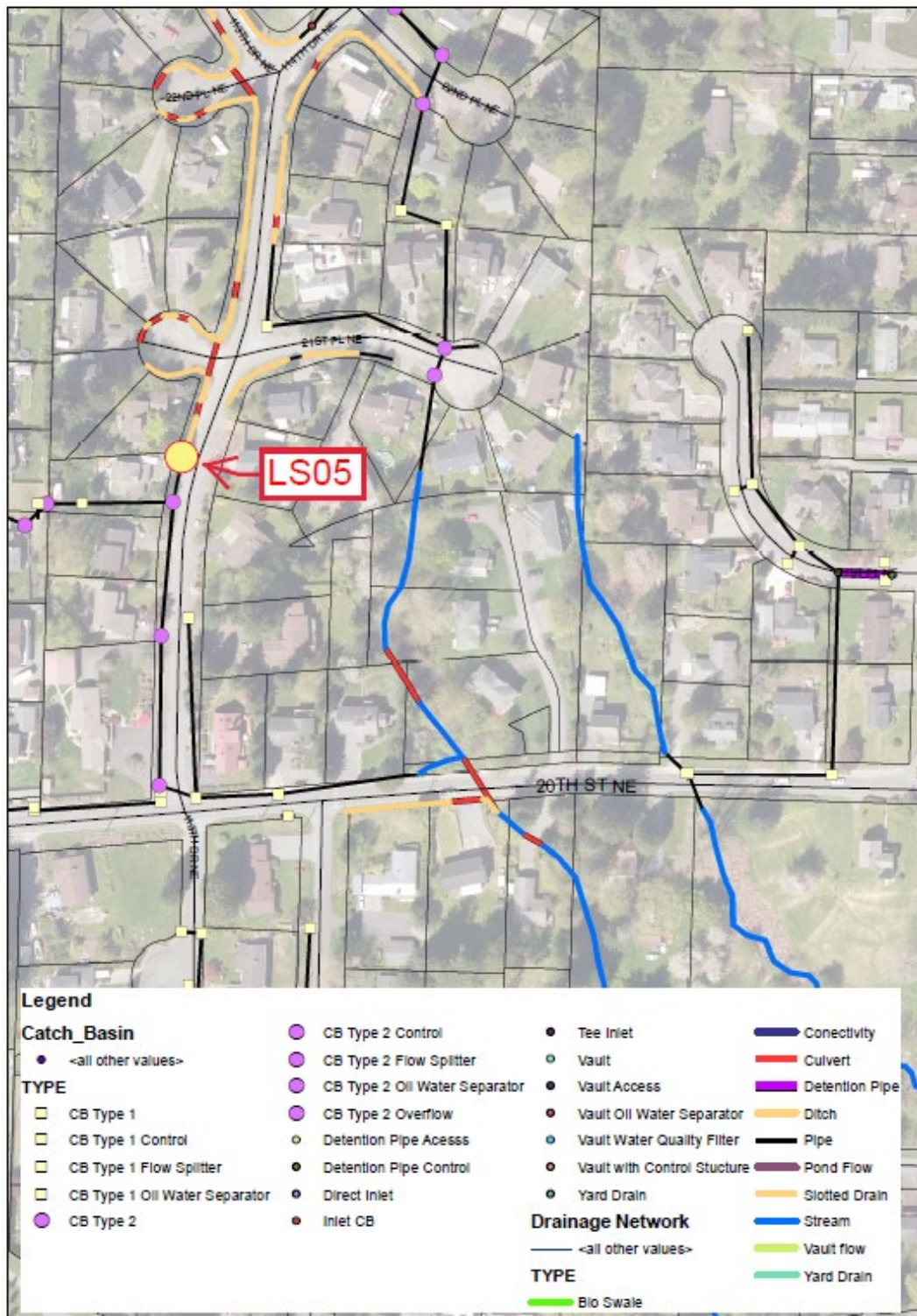


Figure 3. Mitchell (Kokanee) Creek Monitoring Locations (LS05)



**Surface Water Monitoring:** Stormwater staff will continue monitoring under an approved QAPP and record the data via the Environmental Information Management (EIM) database in 2020.

## S8. Monitoring and Assessment

**S8.A.1.** The City has chosen S8.B Status and Trends Monitoring Option #1 in the *Phase II Western Washington Municipal Stormwater Permit*, from August 1, 2013 – July 31, 2019. The payment for this has already been paid as of December 1, 2019 according to Section S8.D.

**S8.A.2** The City has chosen Option S8.A.2.a as the means for meeting regional status and trends monitoring.

**S8.B.1** The City has chosen Option #1 from S8.C as the means for meeting regional status and trends monitoring.

**S8.B.2** The City has chosen Option #1 from S8.C as the means for meeting regional status and trends monitoring.

**S8.B.3** The City will supply information as requested for effectiveness and source identification studies that are under contract with the Department of Ecology as active Stormwater Action Monitoring (SAM) projects as requested by the SAM Coordinator.

### **S8.C. (Not Applicable)**

**S8.D** Payments for the City's regional monitoring and assessment per S8.A. and S8.B will be paid according to this section.