This document is prepared by City of Ferndale Public Works Stormwater staff and is formatted as a response to specific conditions within the "Western Washington Phase II Municipal Stormwater Permit" (Permit) that authorizes the City of Ferndale to discharge stormwater to the waters of the State of Washington. The titles of the sections and sub-sections match those of the Permit. Per the Permit, this program summary will be updated each year and will be available to the public. Participation and comments are welcome and may be directed to City of Ferndale Stormwater staff.

S5.C.1 Stormwater Planning

The City shall implement a Stormwater Planning program to inform and assist in the development of policies and strategies as water quality management tools to protect receiving waters. This program shall include:

- Convene an interdisciplinary team to inform and assist in the development, progress, and influence of this program
- Coordination with long-range plan updates to determine how stormwater management needs and protection/improvement of receiving water health are informing the planning update process and influencing policies and implementation strategies
- Low Impact Development (LID) principles and Best Management Practices (BMPs) will continue to be required when updating, revising, and developing new local development-related codes, rules, standards, or other enforceable documents. The intent shall be to make LID the preferred and commonly-used approach to site development. Development-related codes, rules, standards, or other enforceable documents shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations, where feasible
- Conduct a similar process and consider the range of issues outlined in the *Stormwater Management Action Planning Guidance* (Ecology, 2019; Publication 19-10-010) to develop a Stormwater Management Action Plan by March 31, 2023.

Plans for 2021:

During 2021, the City of Ferndale inter-disciplinary team shall assist in the development, progress, and influence of the Stormwater Planning program. City staff shall continue to assess and document any newly identified administrative barriers to implementation of LID Principles or BMPs since local codes were updated in accordance with the previous permit cycle, and measures adopted to address the barriers.

S5.C.2 Public Education and Outreach

The education and outreach program is designed to:

- 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 activities that encourage community engagement in addressing impacts from stormwater runoff

The City implements an education and outreach program for the area served by the municipal separate stormwater system. Staff will explore ways to advance regional outreach opportunities, and develop and share resources and information in support of reducing stormwater impacts.

GENERAL AWARENESS:

Target Audiences: General Public (including overburdened communities, or school age children), and businesses (including home-based, or mobile businesses).

Subject Areas:

- General impacts of stormwater on surface waters, including impacts from impervious surfaces
- Low impact development (LID) principles and LID Best Management Practices (BMPs)

Plans for 2021:

Staff maintains resources on the City's website about the impacts of stormwater on surface waters. Staff will work to raise awareness among local businesses of measures to reduce illicit discharges and pollutant runoff to the storm system by engaging with Whatcom County Health Department Source Control staff to provide voluntary Pollution Prevention Assistance visits to manufacturing businesses. The Charity Carwash Kit Loan Program is promoted on the City's website.

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Target Audience: Engineers, contractors, developers, or land use planners.

Subject Areas:

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

Plans for 2021:

Staff will work with engineers, contractors, developers, and land use planners during the development permit and construction processes to enforce the stormwater ordinances and continue education and assistance regarding erosion control, and Low Impact Development Best Management Practices.

BEHAVIOR CHANGE:

Target Audiences: Residents, landscapers, property managers/owners, developers, school age children, or businesses (including home-based and mobile businesses).

Subject Areas:

- Use and storage of: pesticides, fertilizers, and/or other household chemicals.
- Use and storage of: automotive chemicals, hazardous cleaning supplies, carwash soaps, and/or other hazardous materials.
- Yard care techniques protective of water quality.
- Prevention of illicit discharges.
- Yard care techniques protective of water quality.
- Carpet cleaning.
- Repair and maintenance Best Management Practices (BMPs) for: vehicles, equipment, and/or home/buildings.
- Pet waste management and disposal.
- Low impact development (LID) principles and LID Best Management Practices (BMPs)
- Stormwater facility maintenance, including LID facilities.

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- Dumpster and trach compactor maintenance.
- Litter and debris prevention.
- Sediment and erosion control
- (Audience specific) Source control BMPs
- (Audience specific) Locally-important, municipal stormwater-related subject area.

Plans for 2021:

No later than February 1, 2021, the recommendations of the evaluation of the ongoing behavior change campaign focused on pet waste management and disposal will be used to develop a campaign that utilizes social marketing practices and methods, is tailored to the community, and includes a program evaluation plan. No later than April 1, 2021, the City shall begin to implement the campaign.

S5.C.3 Public Involvement and Participation

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 Stormwater Management Program (SWMP) and Stormwater Management Action Plan (SMAP). The Stormwater Management Program (SWMP) and annual report shall be posted to the City of Ferndale website no later than May 31 each year.

Public hearings are held for all ordinances adopted by City Council. Public comments regarding the SWMP are encouraged and may be directed to City of Ferndale Stormwater staff.

S5.C.4 MS4 Mapping and Documentation

The City of Ferndale Stormwater Management Program includes an ongoing program for mapping and documenting the Municipal Separate Storm Sewer System (MS4). This shall include:

Ongoing Mapping: Maintain data for the following features:

- Known MS4 outfalls and known MS4 discharge points

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- Receiving waters, other than ground water
- Stormwater treatment and flow control BMPS/facilities owned or operated by the Permittee
- Geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters
- Tributary conveyances to all known outfalls and discharge points with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. The following attributes are mapped:
    - Tributary conveyance type, material and size where known
    - Associated drainage areas
    - Land use
- Connections between the MS4 owned or operated by the Permittee and other municipalities or public entities
- All connections to the MS4 authorized or allowed by the Permittee after February 16, 2007

New Mapping*:*

- No later than January 1, 2020, begin to collect size and material for all known MS4 outfalls during normal course of business
- No later than August 1, 2023, complete mapping of all known connections from the MS4 to a privately-owned stormwater system.

Mapping will be performed in the City's Geographic Information System. To the extent consistent with national security laws and directives, the City shall provide to the Washington State Department of Ecology, maps depicting the information required above. The City shall also, upon request, and to the extent appropriate, provide mapping information to federally recognized Indian Tribes, municipalities, and other Permittees.

Plans for 2021:

Staff will continue to fill in existing data gaps in the stormwater inventory and update the stormwater layers of the City's GIS as development/redevelopment occur.

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S5.C.5 Illicit Discharge Detection and Elimination

The City's Stormwater Management Program includes an ongoing program designed to prevent, detect, characterize, trace, and eliminate illicit connections and illicit discharges into the Municipal Separate Storm System (MS4). The program includes:

- Procedures for reporting and correcting or removing illicit connections, spills and other illicit discharges when they are suspected or identified
- Informing public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste
- A prohibited discharge ordinance developed to effectively prohibit non-stormwater, illicit discharges to the City's municipal separate storm sewer system (MS4) to the maximum extent allowable under state and federal law. The ordinance specifies allowable and conditionally allowable discharges and includes enforcement provisions
- A publicly listed and publicized illicit discharge hotline for public reporting of spills and other illicit discharges: 360-685-2357. The City keeps records of calls received and follow-up actions taken
- An Illicit Discharge Detection and Elimination Program Manual (available upon request) developed in 2011 to assist City staff in implementing the IDDE program. The purpose of the procedures outlined in the manual is to detect and address non-stormwater discharges, including spills, and illicit connections into the City's storm sewer system
- Training for all municipal field staff responsible for identification, investigation, termination, cleanup, and reporting illicit discharges, including spills, improper disposal, and illicit connections. Follow-up training shall be provided as needed to address changes in procedures, techniques or requirements. The City documents and maintains records of the training provided and the staff trained
- Recordkeeping to document activities conducted by the City to meet the requirements of the Permit
- Submitting data for the illicit discharges, spills, and illicit connections including those that were found by, reported to, or investigated by the City during the previous calendar year in the Annual Report as required by the Permit

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Plans for 2021:

Staff will continue to evaluate and update the Illicit Discharge Detection and Elimination Program manual as necessary, and provide training to, and solicit feedback from, operations and maintenance staff during field work and investigation. In order to provide consistent data, the City will implement the reporting responses to illicit discharge reports via the Department of Ecology WQWebIDDE Water Quality Portal application.

S5.C.6 Controlling Runoff from New Development, Redevelopment and Construction Sites

The goal of this program is to reduce pollutants in stormwater runoff to the City's municipal separate storm system (MS4) from new development, redevelopment, and construction site activities. The program applies to private and public development, including transportation projects. The program includes:

- The Stormwater Control Ordinance addresses runoff from new development, redevelopment, and construction site projects. The City has adopted the Department of Ecology Stormwater Management Manual for Western Washington, as amended by Sections 1-6 of Appendix 1 of the Western Washington Phase II Municipal Stormwater Permit, as the City's technical stormwater reference manual
- A permitting process with plan review, inspection, and enforcement capability to meet the standards, which is detailed in the ordinance
- Keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities are maintained
- Copies of the "Notice of Intent for Construction Activity" and "Notice of Intent for Industrial Activity" available through the City's website to representatives of proposed new development and redevelopment
- The City continues to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology

The City ensures that all staff responsible for implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. Follow-up training will be provided as needed to address changes in procedures, techniques, or staffing.

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Plans for 2021:

City staff will continue to review all development and redevelopment, and inspect all construction sites to ensure compliance. Ongoing training will be provided to staff regarding permitting, plan review, construction site inspections, enforcement, best management practices, and Low Impact Development.

S5.C.7 Operations and Maintenance

The goal of this program is to regulate maintenance activities and to conduct maintenance activities to prevent or reduce stormwater impacts.

The program includes:

- Maintenance standards for stormwater facilities that are as protective, or more protective, of facility function than those specified in the Stormwater Management Manual for Western Washington
- Annual inspection of all stormwater treatment and flow control BMPs/facilities that discharge to the City's municipal separate storm system (MS4) and were permitted by the City in accordance with City's Municipal Stormwater Permit. The annual inspection requirement may be reduced based on inspection records
- Annual inspection of all City-owned or operated permanent stormwater treatment and flow control facilities. Appropriate maintenance actions are performed in accordance with the adopted maintenance standards. Responsible parties shall be identified, and records of inspections, maintenance activities, and enforcement actions shall be maintained. The annual inspection requirement may be reduced based on inspection records
- Spot checks of potentially damaged permanent treatment and flow control facilities (other than catch basins) after major (greater than 24-hour-10-year recurrence interval rainfall) storm events. If spot checks indicate widespread damage/maintenance needs, inspect all stormwater treatment and flow control facilities that may be affected. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards as required
- Cleaning of all catch basins and inlets owned or operated by the City once before the end of the NPDES Permit term. Visual inspection during cleaning will determine if maintenance action is necessary
- Practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the City, and road maintenance activities under the functional control of the City. Lands owned or maintained by the City, include but are not limited to: streets, parking lots, roads, highways, buildings, parks, open space, road right-of-way, maintenance yards, and stormwater treatment and flow control BMPs/facilities. The following activities are addressed:

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- Pipe cleaning
- Cleaning of culverts that convey stormwater in ditch systems
- Ditch maintenance
- Street cleaning
- Road repair and resurfacing, including pavement grinding
- Snow and ice control
- Utility installation
- Pavement striping maintenance
- Maintaining roadside areas, including vegetation management
- Dust control
- Application of fertilizer, pesticides, and herbicides, including the development of nutrient management and integrated pest management plans
- Sediment and erosion control
- Landscape Management and Vegetation Disposal
- Trash and pet waste management
- Building exterior cleaning and maintenance

- On-going training program for employees of the City whose construction, operations, or maintenance job functions may impact stormwater quality. Follow-up training will be provided as needed to address changes in procedures, techniques, or requirements
- A Stormwater Pollution Prevention Plan (SWPPP) for the Public Works Operations Shop, Parks Yard, and Stormwater Decant Area. A schedule for implementation of structural BMPs is included in the SWPPP. The SWPPP includes periodic visual observation of discharges from the facility to evaluate the effectiveness of the BMPs

Plans for 2021:

City Public Works staff will continue to clean the stormwater system in zone area 3 by vactoring catch basins, jetting conveyance, and maintaining ditches. All City stormwater facilities receive routine annual inspections, and maintenance is performed as required. Staff will continue work to update the SWPPP no later than December 31, 2022 to meet the requirements of the municipal permit section S5.C.7.f.

S5.C.8 Source Control Program for Existing Development

The City shall implement a Source Control Program for existing development to prevent and reduce pollutants in runoff from areas that discharge to the City's municipal separate storm system (MS4). This shall include:

- Application of source control Best Management Practices (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
- Inspection of pollutant generating sources at publicly and privately owned institutional, commercial, and industrial sites to enforce implementation of required BMPs to control pollution discharging into the municipal separate storm system (MS4)
- Application and enforcement of a City ordinance requiring the application of source control BMPs for pollutant generating sources associated with existing land uses and activities, including sites with discharges authorized by a separate NPDES permit
- Practices to reduce polluted runoff from the application of pesticides, herbicides, and fertilizers from applicable sites

Elements of the Source Control Program shall be implemented during the 2019-2024 Western Washington Phase II Municipal Stormwater Permit cycle.

Plans for 2021:

City staff will continue developing the Source Control Program inventory that identifies publicly and privately owned institutional, commercial, and industrial sites which have the potential to generate pollutants to the municipal separate stormwater system (MS4). The inventory shall include:

- Businesses and/or sites identified based on the presence of pollutant generating activities (per Appendix 8 of the municipal permit).
- Other pollutant generating sources, based upon complaint response, such as home-based businesses, and multi-family sites.

S7. Compliance with Total Maximum Daily Load Requirements (TMDL)

Name of TMDL: Nooksack River Watershed Bacteria

Area where TMDL Requirements Apply: TMDL coverage includes areas served by an MS4 draining to the Nooksack River or its tributaries, Fishtrap Creek, Bertrand Creek, Double Ditch drain, Duffner Ditch, Bender Road ditch, between Nugents Corner and Marine Drive.

Parameter: Fecal coliform

Action Required:

Continue bacteria sampling under Ecology-approved Stormwater Quality Monitoring for Fecal Coliform Bacteria QAPP dated 6/19/2009

- Once the City of Ferndale reduces fecal coliform bacteria below state water quality standards in the current outfall sampling area, the City of Ferndale should designate a new representative area for continued fecal coliform sampling at MS4 outfalls.
- City of Ferndale shall submit an updated fecal coliform Quality Assurance Project Plan (QAPP) to Ecology for review and approval by December 1, 2019. Monitoring shall be ongoing for the permit term.
- With each annual report, the City of Ferndale shall submit monitoring results from representative stormwater outfalls.
- With each annual report, the City of Ferndale shall submit an up-to-date Stormwater Capital Improvement plan to address existing deficiencies in the stormwater treatment and conveyance system.

Plans for 2021:

Staff will continue monitoring, investigation, reporting, and corrective actions including enforcement as necessary to reduce fecal coliform levels below State water quality standards. Each year staff works to develop and implement the stormwater capital improvements plan.

S8. Monitoring and Assessment

The City conducts water quality monitoring required for compliance with the Nooksack River Watershed Bacteria TMDL, pursuant to section S7 Compliance with Total Maximum Daily Load Requirements. Additionally, the City makes annual payments into a collective fund to implement regional monitoring and studies.

Plans for 2021:

The City will continue to pay into a collective fund to implement Regional Status and Trends Monitoring (S8.A.2.a), and into the collective fund to implement Stormwater Management Program (SWMP) Effectiveness studies and Source Identification Studies (S8.B.1).

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City of Ferndale SWMP Internal Coordination Documentation (S5.A.5.b.)

City of Ferndale Public Works Stormwater staff are responsible for implementing permit requirement coordination among departments. Stormwater staff conducts meetings with employees from other department to inform them of the requirements of the permits, and to assist with implementation by collaboratively identifying and eliminating barriers to permit compliance. The following table illustrates department responsibilities for permit requirements:

Stormwater Management Program (SWMP) Coordination Western Washington Phase II Municipal Stormwater Permit Requirement S5.C.		
SWMP Component	**Departments**	**Responsibilities**
1. Stormwater Planning	• Public Works • Community Development • Administrative Services	• Coordinate long-range planning with stormwater management and water quality • Continue to require LID Principles and BMPS and assess barriers to implementation • Stormwater Management Action Planning
2. Public Education and Outreach	• Public Works • Community Development • Administrative Services • Parks and Recreation	• Develop and/or share education and outreach materials • Develop and/or participate in a regional behavior change campaign • Create and/or share stewardship opportunities
3. Public Involvement and Participation	• Public Works	• Provide opportunities for public involvement and participation in the development, implementation, and update of the SWMP and SMAP
4. MS4 Mapping and Documentation	• Public Works • Community Development	• Ongoing mapping and documentation of the City's stormwater system
5. Illicit Discharge Detection and Elimination (IDDE)	• Public Works • Community Development • Parks and Recreation • Ferndale Police Department	• Respond to reports of suspected illicit connections, spills, or illicit discharges • Conduct IDDE assessments of stormwater system • Provide education and outreach to staff and the public on IDDE
6. Controlling Runoff from New Development, Redevelopment, and Construction Sites	• Public Works • Community Development	• Review plans for stormwater compliance • Inspection program to verify construction site erosion and sediment controls, and verify and inspect permanent stormwater facilities

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7. Operations and Maintenance	• Public Works • Community Development	• Inspection and maintenance of City stormwater facilities • Inspection of private stormwater facilities • Reduce stormwater impacts from City lands and maintenance activities
8. Source Control Program for Existing Development	• Public Works • Community Development	• Develop and implement Source Control inspection program
S7. Compliance with Total Maximum Daily Load Requirements		
Nooksack River Watershed Bacteria TMDL	• Public Works	• Implement sampling program per the approved QAPP • Update Stormwater Capital Improvement Plan

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