



2020

Stormwater Management Program Plan



City of Monroe

Stormwater Management Program Plan

Cover Photo: Woods Creek

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CITY OF MONROE

2020 STORMWATER MANAGEMENT PROGRAM PLAN

1. Introduction

Overview and Background

A. The National Pollutant Discharge Elimination System permit is a requirement of the federal Clean Water Act. The intention of this act is to protect water quality and restore waters for “fishable, swimmable, etc.” uses. The Environmental Protection Agency has delegated permit authority to state environmental agencies. In Washington State, the National Pollutant Discharge Elimination System is over seen by the Washington State Department of Ecology. Through the implementation of relevant provisions the National Pollutant Discharge Elimination System operates in conjunction with Washington State’s Water Pollution Control Law. As a municipality with a population less than 100,000, The City of Monroe, is considered a Phase II community. As such, The City of Monroe operates in full compliance with the Phase II National Pollutant Discharge Elimination System Municipal Stormwater Permit as a small/medium municipal separate storm sewer system. More than 80 small/medium cities within western Washington operate within the Phase II Permit.

The permit authorizes the discharge of stormwater runoff from municipal drainage systems into the state’s surface waters (streams, rivers, lakes, wetland, etc.) and groundwaters as long as municipalities implement permit specified best management practices. In the effort to protect water quality and reduce the discharge of non-point source pollutants to the maximum extent practicable the use of best management practices is vital. In addition, best management practices are intended to meet all state known, available, and reasonable methods of prevention, control, and treatment waste discharge requirements.

The best management practices specified in the permit require that all regulated municipalities create and implement a Stormwater Management Program. This program is collectively grouped in the following program components:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Controlling Runoff from New Development, Redevelopment, and Construction Sites
- Municipal Operations and Maintenance
- Total Maximum Daily Load Requirements
- Monitoring and Assessments

With a focus on the protection of water quality in our streams, lakes, rivers, wetlands, and groundwaters the strategic approach to the components of this permit are essential. The Permit plans and conditions are phased in over a five year permit term. Annually, The City of Monroe, submits a report of compliance by March 31st to the Department of Ecology. Additionally, the permit requires the supplemental submission of the purposed and continuing Stormwater Management Program activities for the upcoming year.

Permit History

B. The Department of Ecology issued Washington States first Phase II Municipal Stormwater Permit to Western Washington municipalities in 2007. The term of this permit was January 17, 2007 to February 15, 2012. The Department of Ecology issues a blanket permit specifying general conditions applicable to phase II municipalities. The City of Monroe was included in this permit. In response to appeals and the Pollution Control Hearing Board the permit was modified on January 17, 2009.

In August 2012, the Department of Ecology issued the Stormwater Management Manual for Western Washington. This manual contains guidance based upon the requirement for new development, redevelopment, and construction sites. Along with this manual the initial permit was extended until July 31, 2013. In July of 2013, the 2013-2019 permit was issued. This permit retains the implementation approach set forth in the initial permit, with the distinct addition of increased Performance Measures as well as the inclusion of new ones.

Through further debate and appeal, the Department of Ecology issued a revised Stormwater Management Manual for Western Washington in late December 2014. The modifications that accompanied this permit went into effect January 16, 2015. In 2017, the Department of Ecology extended the existing permit cycle an additional year. A revised Stormwater Management Manual for Western Washington along with the current permit went into effect August 1, 2019 as stated by the Department of Ecology. This permit is issued through 2024.

All Western Washington Phase II Municipal Stormwater Permits and the accompanying manuals are available on the Department of Ecology's website.

National Pollutant Discharge Elimination System Annual Report Documentation

C. The submittal of the annual report is required by March 31st of each year. The National Pollutant Discharge Elimination System Annual Report consists of the following documents:

- Stormwater Management Program Plan: Developed by the City to summarize the continuing and planned National Pollutant Discharge Elimination System Permit implementation activities to assure continued compliance for the coming year.
- Compliance Report: Specific check mark sheet provided by the Department of Ecology which verifies compliance for the previous calendar year. The Compliance Report is a prescriptive report that is filled out by stormwater management staff.

City of Monroe Overview and Background

D. The City of Monroe is located in Snohomish County approximately 22 miles northeast of Seattle, Washington. Monroe lies at the base of the Cascade foothills in the Skykomish River Valley. The Skykomish River creates a natural flowing borders to the south. Woods Creek forms a pseudo eastern border with a small section of the City limits lying to south and east of the creek. The western portion of the City, including the commercial corridor along State Route 2, the Fryelands neighborhood, and the developing areas north of State Route 2 lie within the

French Creek drainage basin. Stormwater from this area drains to French Creek. French Creek flows into the Snohomish River several miles to the west of The City of Monroe. State Route 522 as well as the Burlington Northern Railroad also intersect within the City.

The majority of the City is built on shallow slopes, typically less than 0.5 percent grade. The soils within these flat areas are composed of loamy/silty sands which are well suited to farming activities. Beneath these soils lie deep recessional outwash gravels which drain exceedingly well. Due to the natural stormwater infiltration capabilities, The City of Monroe, experiences very few areas of localized flooding. With growth, development, and the increase of impervious surfaces, urbanization has created the vital need for proper stormwater management to ensure that flooding does not become a concern.

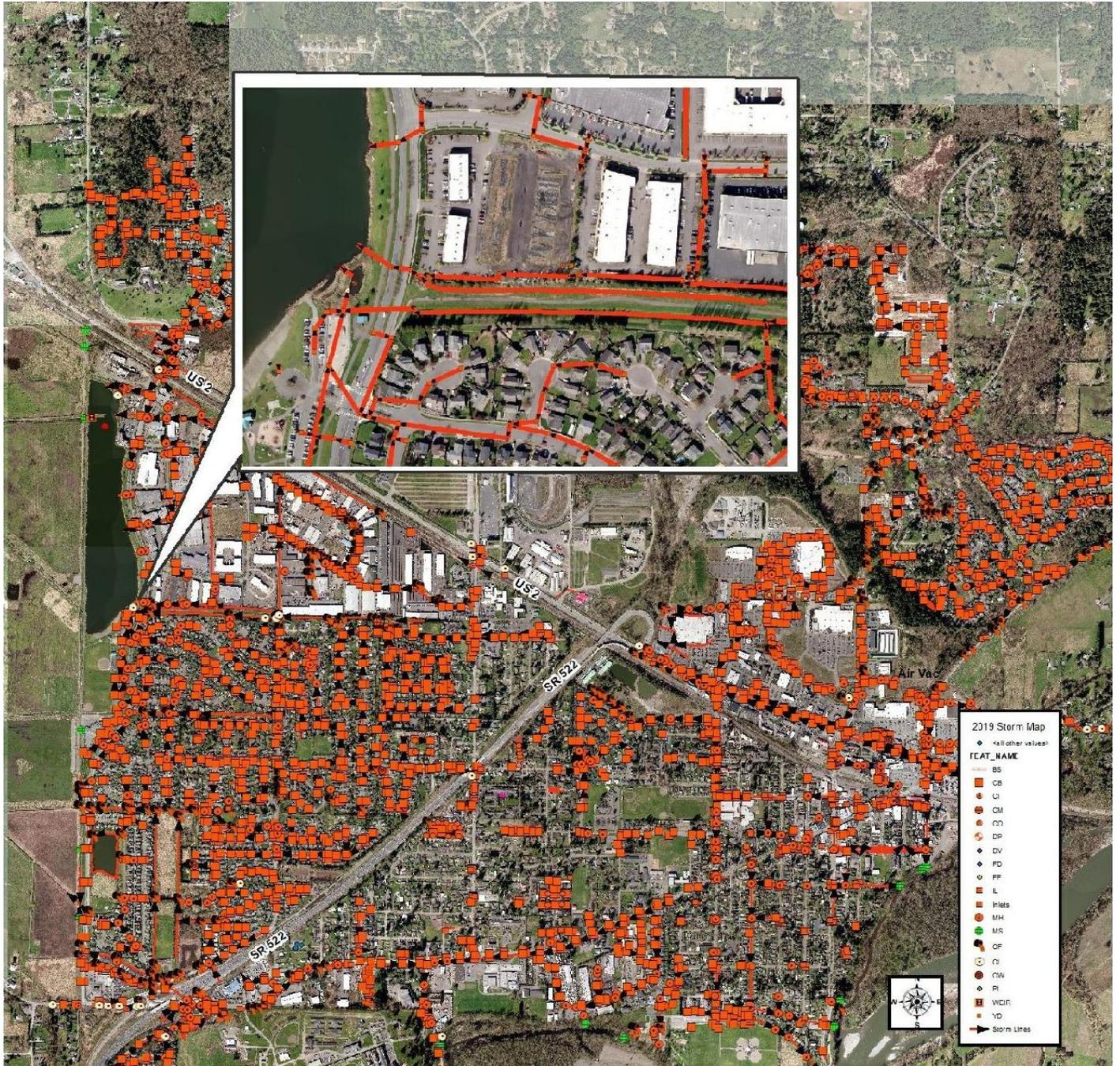
Water quality degradation due to stormwater runoff can occur from many different sources. Stormwater runoff can carry sediment and pollutants from a variety of sources into local water bodies. These sources include but are not limited to residential, commercial, industrial, agriculture, and livestock locations. Pollutants in stormwater runoff include metals, (lead, cadmium, zinc, copper) oil/grease, pesticides/fertilizers, and bacteria. Increased impervious surfaces from urbanization within the Puget Sound basin has directly increased runoff. Man-made structures such as rooftops, streets, and parking lots directly correlate to greater levels of stormwater runoff and peak flow rates. The increased pollutant loads linked to the increased volumes of stormwater runoff result in impacts to downstream properties, localized water bodies, and the Puget Sound. This runoff can be detrimental to many species including native salmon. In accordance with the Federal Endangered Species Act and the regulations placed by the National Pollutant Discharge Elimination System, stormwater management is of the utmost importance to the City of Monroe.

This document has been prepared to meet the City of Monroe's Western Washington Phase II Municipal Stormwater Permit requirement for written documentation. The City of Monroe's Stormwater Management Program is intended to reduce the discharge of pollutants from the City of Monroe's municipal storm system to the maximum extent practicable, to meet all state known, available, and reasonable methods of prevention, control, and treatment waste discharge requirements, and protect water quality. This goal will be accomplished via the inclusion of all Western Washington Phase II Municipal Stormwater Permit components.

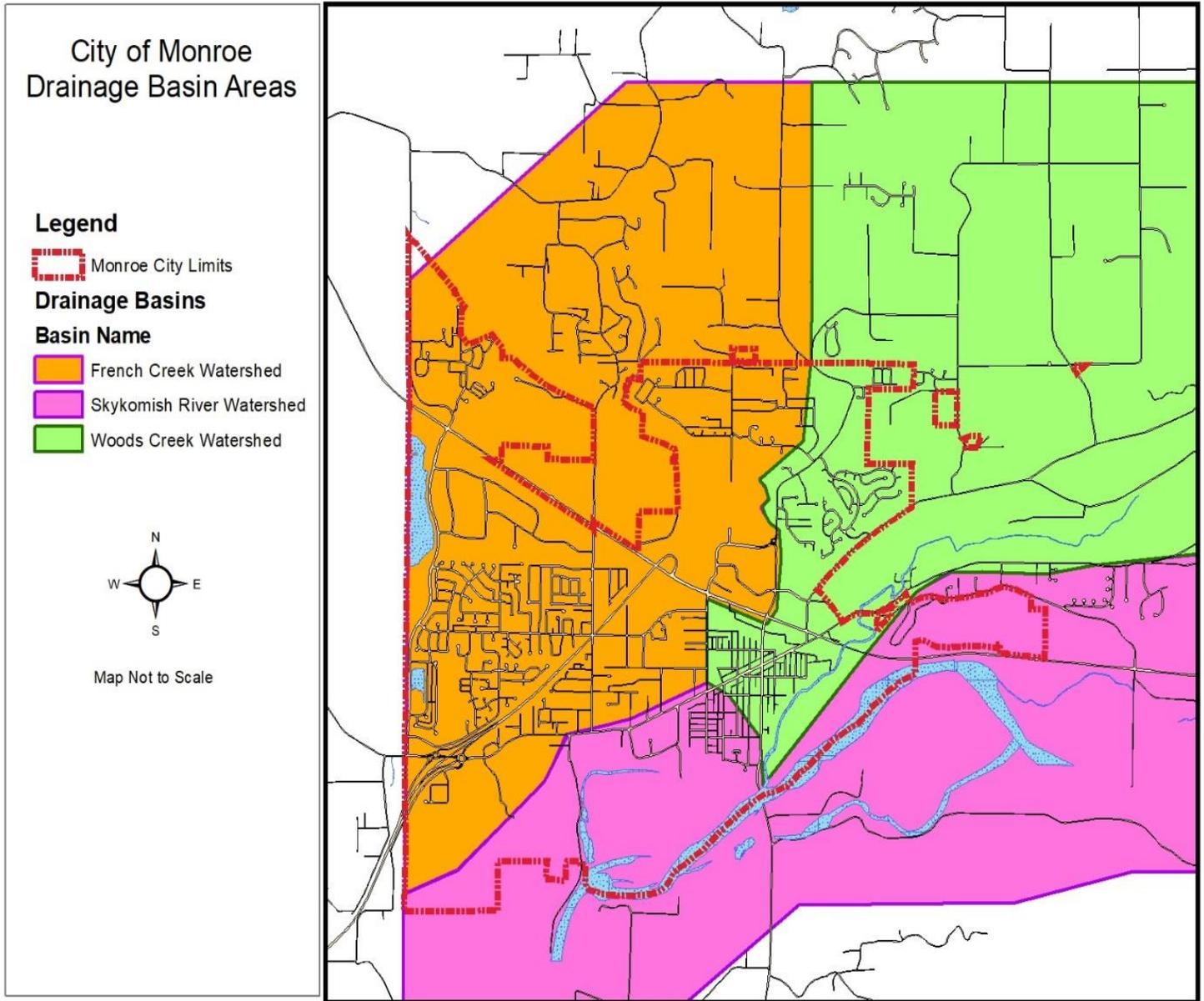
In compliance with Western Washington Phase II Municipal Stormwater Performance Measures, the City of Monroe is currently implementing actions and activities called for in this document. The City of Monroe will continue to meet and exceed these actions and activities. As part of the implementation of the Stormwater Management Program, the City of Monroe will gather, track, maintain, and use informational data on an on-going basis. This information will be used to evaluate the Stormwater Management Program development, implementation, compliance, and to set timeline priorities for future needs. The City of Monroe will continue to track the cost of development and implementation of each component of the Stormwater Management Program.

This document is updated annually for submittal with the City of Monroe's Annual Report to the Washington State Department of Ecology.

E. City of Monroe Storm Drainage Map 2020



F. Basin Drainage Map 2020



1. Stormwater Planning

This Section describes National Pollutant Discharge Elimination System Performance Measures related to Stormwater Planning. This is a new section to the permit with the first minimum performance measure coming into effect in 2020.

Performance Measures

A. The Permit requires the City to:

- By August 1, 2020, each Permittee shall convene an inter-disciplinary team to inform and assist in the development, progress, and influence of this program
- Coordinate with long-range plan updates
 - Each Permittee shall describe how stormwater management needs and protection/improvement receiving water health are (or are not) informing the planning update processes and influencing policies and implementation strategies in their jurisdiction. The report shall describe the water quality and watershed protection policies, strategies, codes, and other measures intended to protect and improve local receiving water health through planning, or taking into account stormwater needs or limitations.

Continuing and Planned Activities

B. The City of Monroe's Stormwater Planning inter-disciplinary committee team began assembly as of January 1, 2020. The objective of this committee will be to advise on policy that satisfies long range planning to ensure in accordance with the Permit to optimize health of all receiving waters.

2. Public Education and Outreach

This Section describes National Pollutant Discharge Elimination System Performance Measures related to Public Education and Outreach, lists the continuing and/or current programs and activities that meet Performance Measures, and identifies the planned activities recommended for continued compliance with the 2019-2024 Permit.

Performance Measures

A. The Permit requires the City to:

- Each Permittee shall implement an education and outreach program for the area served by the MS4. The program design shall be based on local water quality information and target audience characteristics to identify high priority target audiences, subject areas, and/or BMPs. Based on the target audience's demographic, the Permittee shall consider delivering its selected messages in language(s) other than English, as appropriate to the target audience.
 - **General awareness:** To build general awareness, Permittees shall annually select at a minimum one target audience

- **Behavior change:** To affect behavior change, Permittees shall select, at a minimum, one target audience and one BMP
- No later than July 1, 2020, each Permittee shall conduct a new evaluation of the effectiveness of an ongoing behavior change campaign. Permittees shall document lessons learned and recommendations

Continuing and Planned Activities

B. The City of Monroe’s Stormwater Management Program includes a variety of implemented activities and programs that meet the Performance Measures. The Public Education and Outreach program is currently aimed at residents, businesses, elected officials, policy makers, and all employees of the City of Monroe. The goal of the education program is to reduce and/or eliminate behaviors that cause or contribute to adverse stormwater impacts. The City of Monroe’s education program has been developed locally, regionally, and through cooperation with local jurisdictions. The City of Monroe has worked closely to develop and implement programs with The Snohomish County Conservation District and Snohomish County Surface Water Management. The City of Monroe will continue to work under a renewed inter-local agreement with The Snohomish Conservation District targeted toward school level education programs. In addition, Monroe will continue to work with Snohomish County Surface Water Management on hand-picked public education campaigns. It will be the intention of the City of Monroe to track and monitor behavioral changes within a deemed subset of the population over the duration of the new permit. The City of Monroe continues to maintain a stormwater specific webpage to help increase public awareness of stormwater related issues and upcoming events.

1. School Outreach

The City coordinates with the Snohomish Conservation District to teach classes within the Monroe School District at all levels of education. Classes to be taught in 2020 include:

Elementary Lessons

- 4 Raindrops: A Two-Part Watershed Lesson
- Salmon of Puget Sound
- It’s Not Fido’s Fault
- MacroMayhem!
- Chemical Water Quality Testing

Middle and High School Lessons

- Water Quality Testing Part 1 – Live Benthic Macroinvertebrates
- Water Quality Testing Part 2 – Chemical Test Kits

Included classes focus on defining of a watershed, the roles of macroinvertebrates within the stormwater ecosystem, and how actions of an individuals can positively or negatively affect stormwater. Programs will be offered in classroom as well as hands on settings. The City of Monroe will contribute \$4000 to this education program through an inter-local agreement with the Snohomish Conservation District.



2. Natural Yard Care

Yard care seminars, open to the public, will be conducted over a three class workshop held in the greater Snohomish County area. In 2020, the information to be provided is based on the foreseeable needs of the average homeowner. The planning and execution of this project is arranged in conjunction with Snohomish County and local municipalities. The educational outcomes are to instruct the public on the importance of yard care with respect to stormwater. It is the intention of the City to hold these workshops, with industry qualified professionals. These seminars will be used to measure behavior change in the medium term. This information will be used to enhance future education.

3. Community Events

The City of Monroe, through collective and continued teamwork of neighboring cities and agencies attends numerous yearly events. These events include the Al Borlin Planting and Restoration (Various), Easter Egg Hunt (April), Earth Day (April), Department of Corrections Health Fair (May), Watershed Day (May), National Night Out (August), and The Monster Bash (October). All listed events are tentatively scheduled for 2020. City personnel will set up various booths and stations at these events to highlight stormwater and the potential affects the public might have upon it. At these events, knowledgeable staff work to educate, connect, and answer questions with the goal of strengthening relationships and the understanding of stormwater.

In addition to the mentioned events, the City conducts site specific visits to various residents and businesses with the same intentions. Continuously, the City strives to utilize volunteer staff along with regional groups to spread knowledge about stormwater. Through word of mouth, mailing flyers, social media, and public form there are numerous efforts put forth towards providing residents the information and tools needed to be stewards of stormwater. It is the goal of the City of Monroe to continuously work within the National Pollutant Discharge Elimination System Permit to evaluate any and all programs that can educate, find areas in need of restoration, and to be a resource in the efforts of preserving natural water bodies.

4. Volunteer and Stewardship

In 2020, The City of Monroe will continue to partner with the Rotary Club to help maintain Lake Tye. Lake Tye is a 38 Acre recreational lake that is situated on the western edge of the City. As an area used for recreation, through play grounds and sports fields, it can be seen as an area where stormwater quality and education are of necessity. The goal of this collaboration to label storm catch basins, educate the general public about stormwater, and help provide general assistance and cleaning to the park. Going forward it will be the objective of the City to maintain strong relations with the Rotary Club to continue this partnership.

5. Volunteer Groups

The City of Monroe is open and welcome to all groups wishing to partake in stormwater management. Currently the City will maintain working coordination with the Snohomish Conservation District, Sound Salmon Solutions, Washington Conservation Corps, and the Boy Scouts of America. Projects with these organizations vary from mutt mitt stations, native tree plantings, homeowner yard care education, and the removal of noxious vegetation. In addition, Monroe will continue its yearly April planting with the local neighborhood of Lord's Lake.



In 2020, the cooperation with the Rotary Group to Adopt Lake Tye will continue. This is a volunteer participation program centering on the need for special attention to be paid to this recreational area. The tentative plan is to host a clean-up day, educational sessions, and conduct general maintenance through volunteering in this park.

6. Washington State University (Everett Campus)

The City of Monroe, is working is with an American Public Works Association Student Chapter to design a flow control device for the Lake Tye Outfall. This project will assist in the discharge of water to the French Creek Flood Control District. It includes prototyping to regulate flow throughout the year for improved lake level regulation.

7. Additional Programs and Summary

The City of Monroe, with the assistance from local partnerships, continues to measure the understanding and behaviors among targeted audiences. The resulting measures will be used to direct education and outreach resources as effectively as possible. In 2020, the City of Monroe

has implemented stormwater education programs to comply with all educational aspects of the Phase II permit. Continued efforts to adopt programs, implementing social marketing components for communication, and the attempt to measure behavior change are at the core of this element.

The City of Monroe will track and maintain records of public education and outreach activities in 2020. The primary goal of the City of Monroe's Public Education and Outreach Program remains steadfast. Behavior modification and practices that cause or contribute to stormwater pollution must be identified and acted upon.

3. Public Involvement and Participation

This section describes Performance Measures for Public Involvement and Participation, lists the continuing and/or current programs and activities that meet the Performance Measures, and identifies the planned activities recommended for continued compliance with the 2019-2024 Permit.

Permit Requirement

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

Continuing and Planned Activities

B. The City of Monroe's Stormwater Management Program currently includes and implements activities and programs that meet Performance Measures. The City will continue to implement these activities and programs as new and/or increases requirements in the Permit are implemented. The current compliance activities associated with the above section of the Permit are included in this section.

1. General Public Participation and Documentation

The City continues to examine ways to expand existing public involvement opportunities or to create new ones as needed. The City utilizes a public comment process at all city council meetings to provide an opportunity for the public to make comments on the City's Stormwater

Management Program. The Stormwater Management Program is posted on the City website, found at www.monroewa.gov/stormwater, allowing for the public to be involved in the ongoing development of the Stormwater Management Program. The city encourages input and discussion at all community events. The City of Monroe provides the Stormwater Management Program Plan, the annual report, and all other submittals required by the Western Washington Phase II Municipal Stormwater Permit available to the public. For further information please visit the City of Monroe's website or contact the Stormwater Management Team through the Public Works Department.

2. Social Media

The City will use social media outlets as an informative scheduling tool (e.g. meeting updates/committee participation/local events) for the public to participate in the decision making process involving the development, implementation, and update of the Permit.

3. Monroe Listens

A City website link can be used to comment, report concerns, or provide feedback about all aspects associated with stormwater and compliance. Residents are encouraged to use [Monroe Listens](#) for general inquiries and correspondence, or in the case of an emergency call Public Works at 360.794.7400.

4. MS4 Mapping and Documentation

This Section describes National Pollutant Discharge Elimination System Performance Measures related to Municipal Separate Storm Sewer System Mapping and Documentation. This is a new section to the permit with the first minimum performance measure coming into effect in 2020.

Permit Requirement

- A. The Permit requires the City to:
- **Ongoing Mapping:** Each Permittee shall maintain mapping data
 - Implement an ongoing program to include mapping and Documentation of the MS4.
 - **New Mapping:** Each Permittee shall
 - By January 1, 2020, begin to collect size and material for all known Municipal Separate Storm Sewer System outfalls during normal course of business and update records.

Continuing and Planned Activities

- B. The City of Monroe currently maps and documents the Municipal Separate Storm Sewer System in its entirety. In 2019, the City implemented a new asset tracking software. Asset

Essentials has allowed for comprehensive mapping and work order processing to be assimilated into our MS4 mapping and documentation procedures. As new development is approved Municipal Separate Storm Sewer System information will be reviewed and a plan will be made for all necessary updates. This is an ongoing practice. The City will continue to satisfy all performance measures. All mapping information is available upon request.

5. Illicit Discharge Detection and Elimination

This section describes the Performance Measures related to Illicit Discharge Detection and Elimination, lists the continuing and/or current programs and activities that meet Performance Measures, and identify the planned activities recommended for continued compliance with the 2019-2024 Permit.

Permit Requirement

A. The Permit requires the City to:

- The program shall include procedures for reporting and correcting or removing illicit connections, spills and other illicit discharges when they are suspected or identified. The program shall also include procedures for addressing pollutants entering the Municipal Separate Storm Sewer System from an interconnected, adjoining Municipal Separate Storm Sewer System.
- Permittees shall inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste.
- Each Permittee shall implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the Permittee's Municipal Separate Storm Sewer System to the maximum extent allowable under state and federal law.
- Each Permittee shall implement an ongoing program designed to detect and identify non-stormwater discharges and illicit connections into the Permittee's Municipal Separate Storm Sewer System.
- Each Permittee shall implement an ongoing program designed to address illicit discharges, including spills and illicit connections, into the Permittee's Municipal Separate Storm Sewer System.
- Permittees shall train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections, to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements or staffing. Permittees shall document and maintain records of the training provided and the staff trained
- **Recordkeeping:** Each Permittee shall track and maintain records of the activities conducted to meet the requirements of this Section. In the Annual Report, each Permittee shall submit data for the illicit discharges, spills and illicit connections including those



that were found by, reported to, or investigated by the Permittee during the previous calendar year.

Continuing and Planned Activities

B. The City currently implements activities and programs that meet the Performance Measures. The City will continue to implement these programs and activities as new and/or increased requirements in the Permit are implemented. The current compliance activities associated with the above Performance Measures are included in this section.

The City of Monroe's Stormwater Management Program includes an ongoing program to detect and remove illicit connections and discharges as defined in 40 CFR 122.26(b)(2). Included in this program is improper disposal, including any spills not under the purview of another responding authority, into the municipal separate storm sewers owned by the City of Monroe.

1. Mapping

The City of Monroe fully implemented, and continues to implement, an ongoing illicit discharge detection and elimination program prior to August 16, 2011. The City of Monroe has ongoing Geographical Information System data collection procedures in place. The known stormwater system, including private areas that drain to the municipal system, are mapped at the present time. The City will continue mapping and updating the system as data is collected from the current residential development. Currently, City staff promptly responds to all known clogged storm drains, accidental spills, and illegal discharges into Monroe's stormwater system. In addition, City crews actively search out illicit connections. All incidents are logged and mapped for record keeping purposes.

2. Staff Training

The City of Monroe will host an Environmental Coalition of South Seattle Municipal Stormwater Training every other year with the next training being held in 2020. The 3.5 hour course will cover information including detection, municipal separate storm sewer system requirements, commonly seen issues, and basic spill response. This is a combined course covering Class 201 – Illicit Discharge Detection & Elimination Inspections and Class 205 – Spill Control & Response. The goal of this course will be to encourage and train employees to take an active role in Illicit Discharge Detection and Elimination. By reinforcing the importance of stormwater, and the development of higher awareness, staff will be able to identify and report on an as needed basis. The City is dedicated to offering this training to a variety of staff including but not limited to public works, parks, fire, police, and community development.



In 2020, a presentation for staff directly involved in water quality will be given by the Cities Stormwater Compliance Coordinator. Information and training provided include standard operating procedures as they relate to an illicit discharge. Additional training on Illicit Discharge Detection and Elimination is provided in the form of on-the-job and scenario based application of potential conditions. Safety for staff and the general public is the utmost concern for the City. When new materials and procedures become available, they are provided to the appropriate personnel.

3. Spill Response/Illicit Discharge Detection and Elimination

For staff that may be present in the field, but are not directly involved in water quality activities (Police and Fire Personnel) there is a 24-hour standby phone number so that incidents can be reported, investigated, and recorded. Spill response kits along with standard operating procedures are available to all staff and training is provided on a yearly basis.

4. City Dispatch/Service Requests

The City maintains a webpage dedicated to water pollution and stormwater. General information is provided to answer questions regarding common occurrences. The 24-hour standby hotline is posted for immediate contact. City response during business hours is reported through city hall and then dispatched to the appropriate personnel. Response includes verification of spills, spill or discharge clean-up, scheduling of needed maintenance, and any other activity deemed necessary by the department. All spills are reported as required by the Department of Ecology and other agencies as applicable. All complaints and concerns are based on severity and most are investigated within 24 hours. If an illicit discharge is found, Public Works and Code Enforcement will work with the discharging party to resolution.

5. Screening

City personnel charged with the Illicit Discharge Detection and Elimination screening are trained based off of the most current guidance manuals provided by the Department of Ecology. The current program consists of observation during inspection of stormwater facilities and commercial buildings. In addition, the inspection of a portion of the publically owned structures such as catch basins, ditches, and ponds are done on an annual basis. The City continues to have

qualified staff screen for Illicit Discharge Detection and Elimination during inspections of all systems related to stormwater.

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

This section describes the Performance Measures related to Controlling Runoff from New Development, Redevelopment, and Construction Sites, lists the continuing and/or current programs and activities that meet Performance Measures, and identifies the planned activities recommended for continued compliance with the 2019-2024 Permit.

Performance Measures

A. The Permit requires the City to:

- Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects.
- The program shall include a permitting process with site plan review, inspection and enforcement capability to meet all standards.
- The program shall make available, as applicable, the link to the electronic Construction Stormwater General Permit Notice of Intent form for construction activity and, as applicable, a link to the electronic Industrial Stormwater General Permit Notice of Intent form for industrial activity to representatives of proposed new development and redevelopment. Permittees shall continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology.
- Each Permittee shall ensure that all staff whose primary job duties are implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. Follow-up training must be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.



Continuing and Planned Activities

B. The City currently implements activities and programs that meet the Performance Measures. The City will continue to implement these programs and activities as new and/or increased

requirements in the 2013-2019 Permit are implemented. The current compliance activities associated with the above Performance Measures include:

1. City Codes and Standards

The City continues to implement their program to reduce pollutant in stormwater runoff to the municipal separate storm sewer system from new development, redevelopment, and construction site activities. This program is enforced through City code. The City will continue to revise and update the City code to stay current to the requirements listed in all previous and current permits.

The City continues to identify changes in development service processes to implement new stormwater development requirements. This may include tools for permit reviewers and applicants to implement criteria for low impact development as well as best management practices including best management practice selection, design, infeasibility, competing needs criteria, and limitations.

2. Inspection and Permitting

The Stormwater Management Program inspection process is included but is not limited to permitting, plan review, inspection, and enforcement. All new and redeveloped projects in the city are subject to some or all of the minimum requirements in the current *Stormwater Management Manual for Western Washington*. The current program is applied to all sites that meet the threshold in Volume I, Minimum Technical Requirements and Site Planning. The thresholds are found in Chapter 2.4, applicability of the Minimum Requirements, within Sections 2.4.1 and 2.4.2.

The City of Monroe is dedicated to the inspection of all known building sites purposed for development activities. Prior to clearing and construction, all known development sites with the potential for sediment transport as determined through plan review will continue to be inspected based on the definitions and requirements of the Permit. (Phase II *Identifying Construction Site Sediment Transport Potential*) In addition, all current and future construction will be inspected by qualified city staff during the construction period to verify proper installation and maintenance of required erosion and sediment controls. A final inspection upon completion and/or occupancy will be conducted before the City take ownership of the system. A reviewed and verified maintenance plan and responsible party is to be deemed at this time. Enforcement will be used on an as needed basis.

The City of Monroe enforcement strategies are developed and implemented to respond to issues of non-compliance. Records will be maintained to establish responsible parties. At the present time the City of Monroe does not allow construction sites to apply the “Erosivity Waiver” in Appendix I of the City of Monroe’s Western Washington Phase II Municipal Stormwater Permit.

3. Record Keeping

Record maintenance is a cornerstone of the program ensuring quality throughout the system. Records include inspections and enforcement by staff. Specific categories detailed include

inspection reports, warning letters, notices of violations, and enforcement pertaining to violation. Since inception of the program, the City has maintained records of projects that are part of a common plan of development. The City will continue to maintain this level of record keeping through the life of the Permit.

4. Notice of Intent

The City of Monroe currently makes copies available of the "Notice of Intent for Construction Activity." In addition, copies of the "Notice of Intent for Industrial Activity" are available to representatives of proposed new development and redevelopment. The Department of Ecology requests that municipal stormwater permittees discard any copies of the construction notice of intent, and instead direct representatives to the appropriate construction stormwater web page: <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Construction-stormwater-permit>.

5. Training

The City of Monroe continues to train all staff responsible for the implementation of the program as it pertains to the control of stormwater runoff from new development, redevelopment, and construction sites. The training will continue to cover aspects of permitting, plan review, construction site inspection, and enforcement. Follow up training will be provided as needed to address changes in procedures, techniques, or staffing. The City has documented and will retain records of the training provided to staff.

7. Operations and Maintenance

This section describes the new Performance Measures related to Municipal Operations and Maintenance, lists the continuing and/or current programs and activities that meet Performance Measures and identifies the planned activities recommended for continued compliance with the Permit. Included in this section are expected updates to the program plan in accordance with the 2019-2024 draft Permit.

Performance Measures

A. The Permit requires the City to:

- Each Permittee shall implement maintenance standards that are as protective, or more protective, of facility function than those specified in the Stormwater Management Manual for Western Washington or a Phase I program approved by Ecology. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard. No later than June 30, 2022, Permittees shall update their maintenance standards as necessary to meet the requirements of this Section.
- Maintenance of stormwater facilities regulated by the Permittee
- Maintenance of stormwater facilities owned or operated by the Permittee.
- Implement practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance

activities under the functional control of the Permittee. No later than December 31, 2022, document the practices, policies, and procedures. Lands owned or maintained by the Permittee include, but are not limited to: streets, parking lots, roads, highways, buildings, parks, open space, road right-of-ways, maintenance yards, and stormwater treatment and flow control BMPs/facilities.

- Implement an ongoing training program for employees of the Permittee whose primary construction, operations, or maintenance job functions may impact stormwater quality. The training program shall address the importance of protecting water quality, operation and maintenance standards, inspection procedures, 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.
- Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under the Industrial Stormwater General Permit or another NPDES permit that authorizes stormwater discharges associated with the activity. As necessary, update SWPPPs no later than December 31, 2022.

Continuing and Planned Activities

B. The City currently implements activities and programs that meet the Performance Measures. The City will continue to implement these programs and activities as new and/or increases requirements in the Permit are implemented. The current compliance activities associated with the above Performance Measures include:

1. General Operations and Maintenance

To verify the adequacy of the Stormwater Management Program the long-term operation and maintenance of the City maintains best management practices for post-construction stormwater facilities. These management practices are reviewed yearly to ensure the relevancy of the program. This includes standard operating procedures for practices that are permitted within the system. Through the adoption of City ordinances that clearly identify the responsible party, as well as the requirements necessary for maintenance, the City remains in compliance with the Permit.

The purpose of the operation and maintenance procedures is to ensure the proper working order of all system aspects pertaining to stormwater. If maintenance is required the City



or responsible party is expected to do so in a timely manner. Maintenance is expected to be performed on the following timelines:

- A. Within 1 year for wet pool facilities and retention/detention ponds.
- B. Within 6 months for typical maintenance.
- C. Within 9 months for maintenance requiring re-vegetation.
- D. Within 2 years for maintenance that requires capital construction of less than \$25,000.

* Maintenance may be delayed based upon circumstances beyond the City of Monroe’s control. These include but are not limited to denial or delay of access by property owners, denial or delay of necessary permit approvals and unexpected reallocations of maintenance staff to preform emergency work. For each exceedance of the required timeframe, the City of Monroe must document the circumstances and how they were beyond reasonable control.

2. Inspections

In 2020, annual inspections of all stormwater treatment and flow control facilities (other than catch basins) permitted by the City will be inspected for functionality, unless maintenance records dictate otherwise. Reduction of the inspection frequency will be based on maintenance records of double the length of time of the purposed inspection frequency. In the absence of maintenance records, the City of Monroe may substitute written statements to document a specific less frequent inspection schedule. Written statements will be based on actual inspection and maintenance experience and will be certified in accordance with G19 of the Permit.

A. Identification

To identify maintenance needs of new construction for flow control and water quality treatment facilities, including catch basins, inspections will take place every 6 months during the construction period. (i.e. 1 to 2 years following the subdivision approval) This is data will be used as a baseline to determine system maintenance requirements for proper operation. The City of Monroe currently has ordinances in place requiring maintenance on private facilities. This information will be reviewed and revised as needed in 2020.

B. Post-Storm Inspections

The City conducts 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. The City also checks streets and catch basins for possible flooding after a significant rain event. If spot checks indicate widespread damage/maintenance needs, the City will



inspect the stormwater treatment and flow control facilities that may be affected. The City should conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections. Maintenance standards for spot checks have been developed. We have selected the sites that will be assessed after major storm events.

C. Catch Basin and Inlet Inspection

Inspection and cleaning of all catch basins were conducted between August 1, 2013 and July 31, 2017. As required by the Permit the city has increased the inspection and cleaning timeline of all catch basins. It is the intent of the City to inspect and clean as necessary all catch basins on a two year reoccurring cycle as required by the Permit. Currently the City has 2,683 catch basin.

Inspecting and cleaning catch basins will be done in a manner consistent with the maintenance standard in the 2014 *Stormwater Management Manual for Western Washington*. Additional equipment and/or staffing needed to accomplish this program will be determined as the program is developed and implemented each year.

D. Business Survey/Inspections

As of January 1, 2020 The City of Monroe will begin to officially implement a commercial business survey/inspection plan to work towards source control regulations and education as outlined in the 2019-2024 Permit. This is a proactive plan that will be used in accordance with best management practices. It is the goal of the City to survey 20 percent of businesses annually with higher risk businesses taking precedent. This is an ongoing program that is subject to change.

3. Reduction of Stormwater Impacts

Establishment and implementation of practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the City of Monroe, and road maintenance activities conducted by the City of Monroe. The following activities will be addressed:

- A. Pipe cleaning
- B. Cleaning of culverts that convey stormwater in ditch systems
- C. Ditch maintenance
- D. Street cleaning
- E. Road repair and resurfacing, including pavement grinding
- F. Snow and ice control
- G. Utility installation
- H. Pavement striping maintenance
- I. Maintaining roadside areas, including vegetation management
- J. Dust control

The City's current Operations and Maintenance program for Streets, Water, Sewers and Storm Drainage incorporates the applicable portions of Element 10 of the Regional Road Maintenance Program, which was developed for Endangered Species Act compliance, and approved by

National Oceanic and Atmospheric Administration Fisheries. Element 10 of the program includes a selection and implementation process for best management practices, and a training program for use of the best management practices. The City's operation and maintenance program includes an Illicit Discharge Detection and Elimination component. Other work groups within the City have included the appropriate practices in their procedures to comply with the permit.

8. Source Control Program for Existing Development

This Section describes National Pollutant Discharge Elimination System Performance Measures related to Source Control Program for Existing Development. This is a new section to the permit with the first minimum performance measure coming into effect in 2022.

Permit Requirement

A. The Permit requires the City to:

- Implement an ongoing program to include source control best management practices, and if necessary, structural source control best management practices or treatment best management practices/facilities, or both, to pollution generating sources associated with existing land use activities.
- Inspection of pollution generating sources at publically and privately owned institutional, commercial, and industrial sites to enforce implementation of required best management practices to control pollution discharge into the Municipal Separate Storm Sewer System.
- Enforceable local ordinances at sites in non-compliance.
- Practices to reduce polluted runoff from the application of pesticides, herbicides, and fertilizers from the sites identified in the inventory.

Continuing and Planned Activities

B. The City of Monroe will utilize the inter-disciplinary team created for stormwater planning to develop an inventory, policy, and procedures to meet future requirements. It is the goal of the City to implement a source control program by the compliance date in 2022. This program and inventory will be updated yearly as required by the permit.

2020 Projected Budget

Public Education and Outreach:

➤ Re-supply of Stormwater Education Materials	\$5,000
○ Rain garden handbooks	
○ Mutt Mitts	
○ T-shirts	
○ Misc. Supplies	
➤ School Outreach (Snohomish Conservation District)	\$4,000
➤ Business/Population Education (Natural Yard Care)	\$10,000
➤ Stormwater Mailing	\$500
➤ Conservation, Restoration, & Student Outreach	\$5,000

Illicit Discharge Detection and Elimination

➤ Environmental Coalition of South Seattle (Staff Training)	\$4,000
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Permittee Costs \$8,600

Stormwater Action Monitoring \$12,000

Total **\$48,000**

ADDITIONAL PERFORMANCE MEASURES

Appendix 2. Requirements Total Maximum Daily Load Requirements

This section describes the Performance Measures related to Total Maximum Daily Load requirements, lists the continuing and/or current program and activities that meet Permit and Total Maximum Daily Load requirements, and identifies the planned activities recommended for continued compliance with the 2019-2024 Permit.

Performance Measures

A. The Permit requires the City to:

- French Creek, Cripple Creek, Lake Tye Outfall, Lake Tye Inlet, Lords Lake Outfall, Southwest Ditch, Al Borlin Bridge, and Eagles Park the City shall comply with the Total Maximum Daily Load requirements specified in Appendix 2 and associate with the Total Maximum Daily Load plans. Records shall be kept of all actions required by the Permit that are relevant to applicable Total Maximum Daily Loads within Monroe. The status of the implementation shall be included as part of the annual report submitted to the Department of Ecology. Each annual report shall include a summary of relevant Stormwater Management Program and required Total Maximum Daily Load activities conducted in the Total Maximum Daily Load area to address the applicable Total Maximum Daily Load parameter(s).
- *Total Maximum Daily Loads* that are approved by Environmental Protection Agency after the permit is issued, Ecology may establish Total Maximum Daily Load related Performance Measures through future permit modification if Ecology determines implementation of actions, monitoring or reporting necessary to demonstrate reasonable further progress toward achieving Total Maximum Daily Load Waste Load allocations, and other targets, are not occurring and shall be implemented during the term of this Permit or when this Permit is reissued. The City is encouraged to participate in development of Total Maximum Daily Loads and to begin implementation.
- *Business Inspections*: Inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control best management practices for bacteria. Commercial animal handling areas are associated with Standard Industrial Code 074 and 075 and include veterinary and pet care/boarding services, animal slaughtering, and support activities for animal production. Facilities where the degradation and transformation of organic solid waste takes place under controlled conditions designed to promote aerobic decomposition and considered composting facilities (defined in accordance with chapter 173-350 Washington Administrative Code). All qualifying facilities shall be inspected by August 1, 2016. An ongoing inspection program to re-inspect facilities with bacteria source control problems a minimum of every three years shall be implemented.
- *Public Education and Outreach*: Conduct public education and outreach activities to increase awareness of bacterial pollution problems and promote proper pet waste management behavior.
- *Operations and Maintenance*: Install and maintain animal waste collection and/or education stations at municipal parks and other permittee owned and operated lands reasonably expected to have substantial domestic animal (dog and horse) use and the potential for pollution of stormwater.
- *Illicit Discharge Detection and Elimination*: When conducting Illicit Discharge Detection and Elimination-related field screening (as required in S5.C.3), screen for bacteria sources in any screened municipal separate storm sewer system sub-basins with discharge to surface waters in the Total Maximum Daily Load area.
- *Surface Water Monitoring*: Review the fecal coliform data collected per approved quality assurance project plans under the 2007 Permit and selected surface water monitoring location(s) as appropriate for continued characterization and long-term trends evaluation

of fecal coliform. Submit a draft revised quality assurance project plan to the Department of Ecology for review and approval, no later than February 2, 2015. If Ecology does not request changes within 60 days, the draft quality assurance project plan is considered approved. At a minimum, the monitoring shall:

- Begin by August 1, 2015
 - Collect 12 samples in at least one location per calendar year
 - Submit available data to the Environmental Information Management database by May 31st of each year.
 - Provide data summaries and narrative evaluation of the data in each annual report's Total Maximum Daily Load summary.
 - Be documented in a quality assurance project plan which follows Guidelines for preparing Quality Assurance Project Plans for Environmental Studies, July 2004, Ecology Publication No. 04-03-030.
- Following Ecology-approved quality assurance project plans unless changes are approved by ecology. Since Monroe is subject to multiple Total Maximum Daily Load monitoring requirements Monroe may conduct an integrated monitoring program in accordance with an Ecology-approved quality assurance project plan.

Continuing and Planned Activities

B. The City currently implements activities and programs that meet the Performance Measures. The City will continue to implement these programs and activities as new and/or increases requirements in the Permit are implemented. The current compliance activities associated with the above Performance Measures include:

1. Monitoring and Implementing

The City of Monroe has chosen a Targeted Implementation Approach to fulfill the Performance Measures. The quality assurance project plan for sampling discharges from stormwater conveyance was submitted in accordance with the Permit to the Washington State Department of Ecology. The quality assurance project plan includes an adequate number of sampling points and adequate sampling frequency to reasonably characterize the receiving water. The City of Monroe sampling sites are as follows:



City of Monroe 2020 Stormwater Management Program Plan

Site Name/ID	Watershed	Latitude	Longitude	Site Name - Description
French Creek	French Creek	48.87324	-122.01171	Lower Cripple Creek at city boundary south of Hwy 2, down from Total Maximum Daily Load site CCH2
Cripple Creek	French Creek	47.87297	-121.99069	Middle Cripple Creek on upstream side of 179th Ave SE, at Total Maximum Daily Load site CCLS
Lake Tye Outfall	French Creek	47.87050	-122.01238	North outlet of Lake Tye on west shore
Lake Tye Inlet ^a	French Creek	47.86331	-122.00873	North inlet (open ditch line) of Lake Tye on east shore.
Lords Lake Outfall ^a	French Creek	47.85495	-122.01166	Lake outlet at northwest corner of Lords Lake, in between the weir and vault
Southwest Ditch ^a	French Creek	47.85235	-122.01227	East side of Fryelands Blvd at city boundary
Al Borlin Bridge	Woods Creek	47.85747	-121.96111	Lower Woods Creek at footbridge, at Total Maximum Daily Load site WCDN
Eagles Park	Woods Creek	47.85747	-121.96111	Storm drain located behind Albertsons, drains to Lower Woods Creek

* Sites are sampled monthly and will be for the duration of the Permit

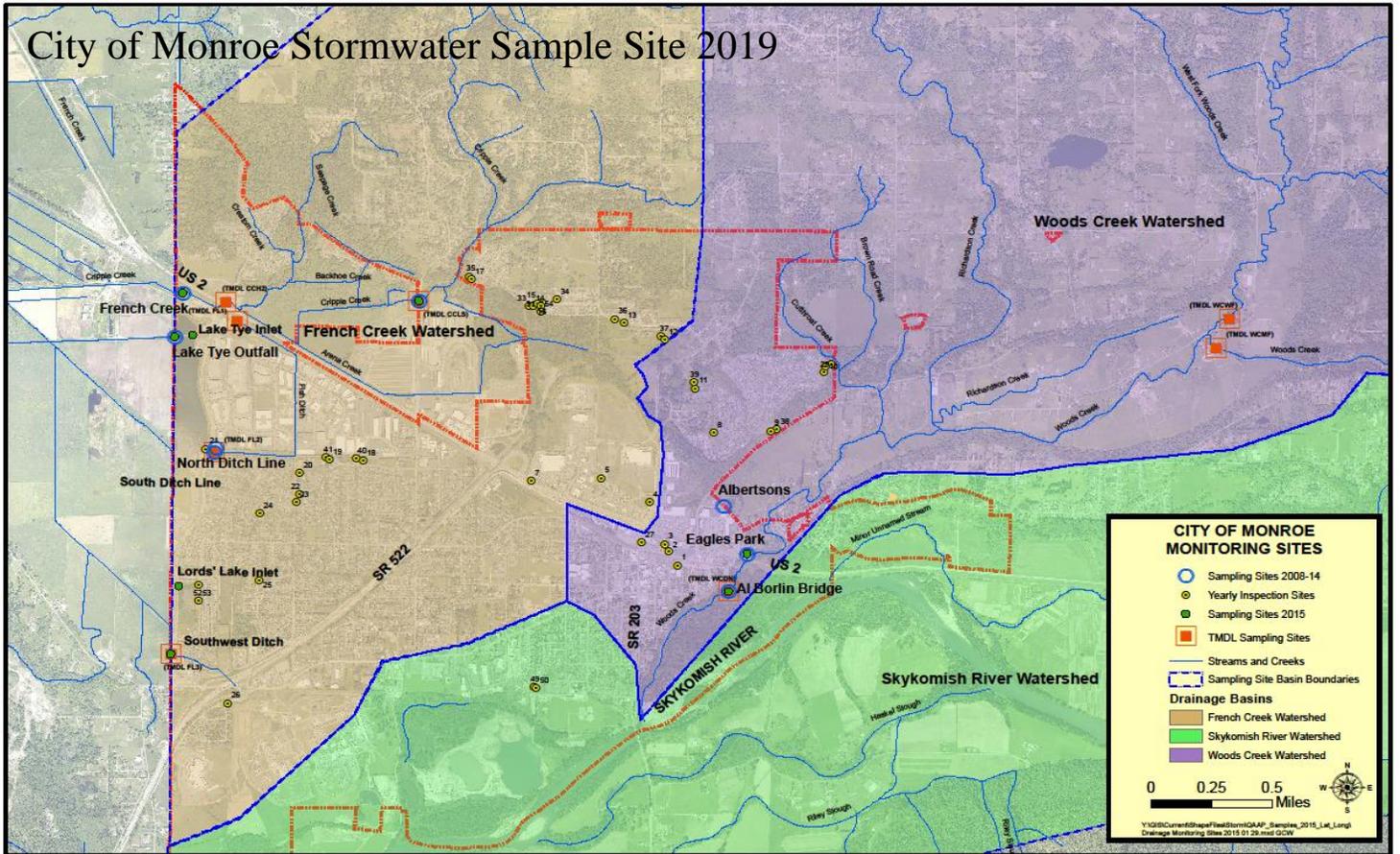
2. Monitoring Example

Monitoring of all eight sites is conducted on a monthly basis. Information collected at time of the sampling and the subsequent lab testing includes date, time, temperature, dissolved oxygen, fecal coliform, and weather. Included is an example of the information for the Lake Tye Outfall for 2018. Through 2020 and the subsequent life of the permit the City will continue to monitor in this fashion.

Lake Tye Outfall 2019 Total Maximum Daily Load Table

LT Out Fall	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Date	8-Jan	7-Feb	7-Mar	16-Apr	5-May	11-Jun	9-Jul	6-Aug	11-Sep	9-Oct	13-Nov	6-Dec
Time	11:55	11:30	11:50	12:10	1:15	12:35	11:55	11:15	12:15	12:00	11:45	11:45
Temperature °C	6.9	8.8	6.9	10.0	18.7	18.1	22.7	23.6	19.8	15.1	10.6	7.4
Dissolved Oxygen mg/l	11.19	12.20	14.29	11.77	12.21	10.45	10.61	9.33	8.10	5.34	7.44	8.65
Fecal Coliform CFU/100ml	12	18	9	23	1	13	4	25	1	18	115	128
Weather	Recent Rain	Recent Rain	No Rain	Rain	No Rain	No Rain	No Rain	No Rain	Recent Rain	Recent Rain	No Rain	No Rain

Monitoring and Assessment



This section describes the new Performance Measures related to water quality Monitoring and Assessment, lists the continuing and/or current programs and activities that meet Performance Measures, and identifies the planned activities recommended for continued compliance with the 2019-2024 Permit.

Performance Measures

A. The Permit requires the City to:

- Where applicable, conduct water quality monitoring required in water quality cleanup plans issued by the Department of Ecology.
- Conduct sampling or testing required for characterization illicit discharge pursuant to the Program’s Illicit Discharge Detection and Elimination conditions.
- Pay into a collective fund to implement the regional stormwater management plan Source Identification Information Repository due to the Department of Ecology annually.
- Provide a description of stormwater monitoring or studies conducted by the City during the reporting period. If stormwater monitoring was conducted on behalf of the City, or if studies or investigations conducted by other entities were reported to the City, a brief

description of the type of information gathered or received shall be included in the Compliance Report.

Continuing and Planned Activities

B. The City currently implements activities and programs that meet the Performance Measures. The City will continue to implement these programs and activities as new and/or increased requirements occur.

- To meet the requirement of the Permit the City of Monroe has participated in a variety of regional and state monitoring forums to develop feasible and effective monitoring requirements.
- The Stormwater Action Monitoring Program is the active regional stormwater program that the City of Monroe participates in. The City has been an active member of Stormwater Action Monitoring program since 2015 and will continue through the life of the current Permit.
- The City and its staff report all water quality violations to the Department of Ecology within 30 days of becoming aware of the potential violations per the Permit’s Compliance.
- Illicit discharge is tracked and sampled for in accordance with the Illicit Discharge Detection and Elimination program requirements set forth by the Permit.
- City staff enters sampling data into the Department of Ecology’s Environmental Information Management system by May 31st of each year.

APPENDIX 1-2020

YOUTH EDUCATION

The following tables outline the classes, eligible schools, and costs of providing Snohomish Conservation District’s Sound Education Program within the City of Monroe. As shown in Table A, the City’s budget for youth education will not exceed \$2000. Snohomish Conservation District will contribute an additional \$667, for a combined deliverable to teach 15 classes, and reach over 400 youth and teachers.

Table A- Budget

Task	City of Monroe Cost	SCD Match	Task Total
15 Classroom Lessons @ \$160/unit <i>(includes admin, coordination, prep,</i>	\$2000	\$400	\$2400

City of Monroe 2020 Stormwater Management Program Plan

<i>teaching, and drive time)</i>			
Educational Supplies <i>(Water quality testing, science journals, materials)</i>	\$0	\$200	\$200
Mileage <i>(Approx. 120 miles @ \$.565)</i>	\$0	\$67	\$67
Total	\$2000	\$667	\$2667

Table B - Lesson Names

Name of Lesson		Grade Band	
School	Priority	Grade Band	
Wetland Warriors Frank Wagner	1 st Elementary	Elementary	Elementary
Fryelands Four Rain Drops-Part 1	1 st Elementary	Elementary	Elementary
Four Rain Drops-Part 2	Elementary		
It's Not Fido's Fault!	Elementary		
MacroMayhem	Elementary		
Salmon of Puget Sound	Elementary		
Water Quality Monitoring with Test Kits	Elementary & Middle		
Water Quality Monitoring with Live Benthic Macros	Middle		

City of Monroe 2020 Stormwater Management Program Plan

Park Place Middle School	1 st	Middle
Monroe Middle School	1 st	Middle
Monroe High School	2 nd	High
Leaders in Learning	3 rd	High
Sky Valley Adventist School	3 rd	K-8
Sky Valley Education Center	3 rd	K-12
Monroe Christian School	3 rd	K-8
Monroe Montessori School	3 rd	Elementary

Table C- Eligible Schools within this Agreement

*SCD will continue to work with City and Curriculum staff to determine priorities

