



STORMWATER MANAGEMENT PROGRAM (SWMP) PLAN

**The City of Fircrest
115 Ramsdell St
Fircrest, WA 98466**

2022

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Acronyms and Abbreviations

AKART	All Known and Reasonable Technologies
BMP	Best Management Practice
CESCL	Certified Erosion and Sediment Control Lead
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
FC	Flow Control
FMP	Fircrest Municipal Code
IDDE	Illicit Discharge Detection and Elimination
LID	Low Impact Development
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
ROW	Right-of-way
RSMP	Regional Stormwater Monitoring Program
SIDIR	Source Identification Information Repository
SMAP	Stormwater Management Action Plan
SWMMWW	Stormwater Management Manual for Western Washington
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
Unk	Unknown
USGS	United States Geological Survey
WS	Watershed
WQ	Water Quality

CHAPTER 1 – BACKGROUND

1.1 THE STORMWATER MANAGEMENT PROGRAM PLAN DOCUMENT

This Stormwater Management Program (SWMP) Plan has been prepared to satisfy Special Condition S5 of the current Western Washington Phase II Municipal Stormwater Permit (Permit), of which the City of Fircrest is a Permittee.

Section S5.A.2 of the Permit states:

Each Permittee shall prepare written documentation of the SWMP, called the SWMP Plan. The SWMP Plan shall be organized according to the program components in S5.C or a format approved by Ecology and shall be updated at least annually for submittal with the Permittee's annual reports to Ecology. The SWMP Plan shall be written to inform the public of the planned SWMP activities for the upcoming calendar year.

The current Permit became effective on August 1, 2019 and expires on July 31, 2024.

This SWMP Plan has been organized as follows:

- **Chapter 1** provides an introduction to underlying permit requirements, required program components, City stormwater codes, stormwater utility, and a description of how the program is managed in Fircrest.
- **Chapters 2 - 9** address each of the SWMP Components required by the Permit, including a summary of the specific permit requirement and current City activities to comply.
- **Chapters 10** provides a summary of additional SWMP requirements that will be included in the 2019-2024 Permit, and the City's planned initial efforts towards compliance for this year.

1.2 NPDES PHASE II MUNICIPAL STORMWATER PERMIT

1.2.1 PERMIT BACKGROUND

In 1987 the US Congress revised the Clean Water Act to include stormwater discharges in the National Pollutant Discharge Elimination System (NPDES) Permit program. The US Environmental Protection Agency (EPA) developed rules for the implementation of the new stormwater requirements and separated them into two phases. The State of Washington, through Ecology, implements these stormwater rules through the Municipal Stormwater Permit program. As an owner and operator of a small municipal separate storm sewer system (MS4), Fircrest is required to be covered by, and comply with, the current Western Washington Phase II Municipal Stormwater Permit (Permit). The Permit allows Fircrest to discharge stormwater from its MS4 into waters of the State of Washington.

1.2.2 REQUIRED SWMP COMPONENTS

The Permit requires the development and implementation of a SWMP to control discharge into and from the City's system. The SWMP includes five specific components that are designed to reduce the discharge of pollutants from Fircrest's MS4 to the maximum extent practicable:

This SWMP Plan has been organized as follows:

- Develop/implement a stormwater planning program
- Develop/implement a public education and outreach program
- Create opportunities for public involvement in stormwater plans and initiatives
- Develop a program to improve mapping and documentation of MS4
- Continue implementation and tracking of illicit discharge detection and elimination (IDDE) program
- Adopt or amend ordinances for improved control of runoff from new development, redevelopment, and construction activities
- Develop/implement an operations and maintenance (O&M) program regulating impacts of City sites and activities on the MS4
- Establish a source control program for existing development

1.3 FIRCREST'S STORMWATER PROGRAM

1.3.1 STORMWATER CODES

Legal authority for several components of the stormwater program has been established by ordinances approved by City Council and incorporated into the City of Fircrest Municipal Code (FMC).

FMC 20.24 – Stormwater Management

This chapter defines the required stormwater drainage requirements in the City, low impact development, and long-term operation and maintenance of stormwater facilities. This chapter also defines the City's rights to inspect permitted stormwater facilities on private property and procedures for enforcement of maintenance standards.

FMC 20.25 – Illicit Discharge Detection and Elimination

This chapter specifies substances that are prohibited to be discharged into the storm drainage system, allowable discharges, and conditional discharges. This chapter also prohibits illicit (non-permitted) connection to the City's storm drainage system and describes enforcement procedures.

1.3.2 COORDINATION AND RESPONSIBILITY

Managing the stormwater program and achieving compliance with Permit mandates in Fircrest is coordinated by the Public Works Department, with program administration the responsibility of the Public Works Director. This responsibility includes:

- Implementing the SWMP (Permit Section S5.A.1)
- Preparing the SWMP Plan (S5.A.2)

- Tracking SWMP costs (S5.A.3.a)
- Tracking the number of inspections, official enforcement actions and types of public education activities required by program components (S5.A.3.b)
- Continue implementation of existing stormwater management programs until they begin implementation of the updated stormwater management program (S5.A.4)
- Coordinating between other Permittees, e.g. adjacent municipalities (S5.A.5.a)
- Maintaining coordination between City departments related to the SWMP (S5.A.5.b)

The City of Fircrest Public Works has implemented an Asset Management/Work Order program. All assets within the City's system have been GIS mapped including Storm, Water and Sewer. Yearly inspections, historic maintenance records and emergency response efforts are tracked within this system.

1.3.3 MONITORING AND ASSESSMENT

Section S8 of the Permit requires the City to:

- Provide a description of any stormwater monitoring or stormwater-related studies conducted during the reporting period
- Pay into a collective fund to implement a Regional Stormwater Monitoring Program (RSMP) that includes the following components:
 - Status and trends monitoring (small stream and marine nearshore)
 - Stormwater management program effectiveness studies
 - Source identification and diagnostic monitoring to implement the Source Identification Information Repository (SIDIR)

The City of Fircrest contributes to the SAM Program \$1,410 annually towards regional status and trends monitoring, effectiveness studies and source identification and the SIDIR. The City does not plan any additional stormwater monitoring or stormwater-related studies that would require reporting to Ecology.

The City of Fircrest is not required to conduct water quality monitoring for compliance with total maximum daily loads (TMDLs) pursuant to Section S7 and Appendix 2 of the Permit. Applicable TMDLs are those that have been approved by EPA on or before February 15, 2007. Currently the City of Fircrest is not subject to any TMDLs. However, the City of Fircrest was awarded a Storm Water Treatment Outfall Grant in 2020 that will require quarterly reporting to Ecology. As of 2021, the City selected Parametrix Inc. to complete the design of the project, which is currently awaiting to advertise for bid.

1.3.4 SWMP REPORTING

Section S9 of the Permit requires the City to submit the following on March 31 of each year:

- A copy of the current SWMP Plan
- Annual Report form (Appendix 3 of the Permit) describing the status of implementation of the requirements of the Permit during the reporting period.
- Notifications of any annexations or jurisdictional boundary changes.

The City will submit its Annual Report and SWMP Plan to Ecology by March 31 of each year.

CHAPTER 2 – STORMWATER PLANNING

Per Section S5.C.1 of the 2019-2024 Phase II Permit, 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. Components of this program can be summarized as follows:

- Convene an inter-disciplinary team to inform and assist in the development, progress, and influence of this program no later than August 1, 2021
- Coordination with long-range plan updates
- Low impact development (LID) code-related requirements
- Comply with Stormwater Management Action Planning (SMAP) requirements in a similar process and range of issues as outlined in the Stormwater Management Action Planning Guidance (Ecology, 2019; Publication 19-10-010). The City may rely on another jurisdiction to meet all or part of SMAP requirements at a watershed-scale, provided a SMAP is completed for at least one priority catchment located within the City's jurisdiction.

2.1 2019-2024 Phase II PERMIT REQUIREMENTS

The following are requirements for the 2019-2014 Phase II Permit:

- Coordination with long-range plan updates: The City shall describe how stormwater management needs and protection/improvement of receiving water health are (or are not) informing the planning update processes and influencing policies and implementation strategies. 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 considering stormwater management needs or limitations.
 - On or before March 31, 2021, the City shall respond to the series of Stormwater Planning Annual Report questions to describe how anticipated stormwater impacts on water quality were addressed during the 2013-2019 permit term in updates to the Comprehensive Plan (or equivalent).
 - On or before January 1, 2023, the City shall submit a report responding to the same questions from above, to describe how water quality is being addressed during this permit term in updates to the Comprehensive Plan (or equivalent)
- Low impact development code-related requirements: the City shall continue to require LID Principles and LID BMPs when updating, revising, and developing new local development-related codes with the intent to make LID the preferred and commonly used approach to site development. Code revisions shall also be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations, where feasible.
 - Annually, the City shall assess and document any newly identified administrative or regulatory barriers to implementation of LID Principles or LID BMPs since local codes were updated in accordance with the 2013 Permit, and the measures developed to address the barriers.

- Stormwater Management Action Planning (SMAP). The City shall conduct a similar process and consider the range of issues outlined in the Stormwater Management Action Planning Guidance (Ecology, 2019; Publication 19-10-010). The City may rely on another jurisdiction to meet all or part of SMAP requirements at a watershed scale, provided a SMAP is completed for at least one priority catchment located within the City's jurisdiction.
 - Receiving Water Assessment. The City shall document and assess existing information related to local receiving waters and contributing area conditions to identify which receiving waters are most likely to benefit from stormwater management planning.
 - By March 31, 2022, the City shall submit a watershed inventory and include a brief description of the relative conditions of the receiving waters and the contributing areas.
- Receiving Water Prioritization: Informed by the assessment of receiving water conditions defined 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.

No later than June 30, 2022, the City shall document the prioritized and ranked list of receiving waters, including the identification of high priority catchment area(s) for focus of the SMAP.

- Stormwater Management Action Plan (SMAP): no later than March 31, 2023, the City shall develop a SMAP for at least one high priority catchment area, identifying factors as described in the permit.

2.2 City Coordination

The City's stormwater management program is maintained by an interdisciplinary team consisting of City of Fircrest staff and the Police Department. The City's inter-disciplinary stormwater team consists of:

- Tyler Bemis – Public Works Director
- Vicky Walston – Utility Billing Clerk
- Jeff Davis – Utility Foreman
- Bryce Wakefield – Maintenance Lead
- Jayne Westman – Planning
- Suzanne Cappiello – Planning
- John Cheesman – Chief of Police

Implementation, documentation, and emergency response activities are performed through internal coordination within the City. Feedback and reporting are shared among the groups for future Stormwater planning and implementation. The following NPDES permit responsibilities are primarily maintained through the following City Departments:

NPDES Permit Responsibilities	City Department
Primary planning, administration, and development of the NPDES program and coordination within other divisions and departments	Tyler Bemis, Public Works Director
Inspections and Maintenance of City owned or operated stormwater facilities, as well as pollution prevention practices	Public Works Staff
Stormwater site plan review	Planning & Building Department / Public Works
Maintains and updates mapping of MS4	Planning & Building Department / Public Works
Stormwater incident response and code enforcement for violations	Planning & Building Department / Public Works
Emergency Response	Public Works Department

2.3 2022 PROGRAM ACTIVITY

The City's interdisciplinary team has undergone staff changes and inclusion of different groups to enhance coordination.

The City has completed the current permitted tasks for SMAP including a Receiving Water Assessment to identify which receiving waters are most likely to benefit from stormwater management planning. In addition, the City has completed a watershed inventory with additional information on the relative conditions of the receiving waters and the contributing areas. The completed Receiving Waters Assessment is included in Appendix A.

CHAPTER 3 – PUBLIC EDUCATION AND OUTREACH

3.1 PERMIT REQUIREMENTS

Section S5.C.2 of the 2019-2024 Phase II Permit requires the City to develop and implement a public education and outreach program with the goal of

- i) building general awareness about methods to address and reduce impacts from stormwater runoff,
- ii) effect behavior change to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts, and
- iii) create stewardship opportunities that encourage community engagement in addressing the impacts from stormwater runoff.

These three elements are further detailed below, followed by a table containing the City's education and outreach activities planned for 2021.

The City's education and outreach program is specifically required to:

- i. Build general awareness, selecting from the following target audiences and subject areas:
 - a. General public and businesses:
 - General impacts of stormwater on surface waters
 - Impacts from impervious surfaces
 - Impacts of illicit discharges and how to report them
 - Low impact development (LID) principles and LID BMPs
 - Opportunities to become involve in stewardship activities
 - b. Engineers, contractors, developers and land use planners:
 - Technical standards for stormwater site and erosion control plans
 - LID principals and LID BMPs
 - Stormwater treatment and flow control BMPs/facilities
- ii. Effect behavior change, selecting from the following target audiences and BMPs:
 - a. General public and businesses:
 - Use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials
 - Equipment maintenance
 - Prevention of illicit discharges
 - b. Residents, landscapers, and property managers/owners:
 - Yard care techniques protective of water quality
 - Use and storage of pesticides and fertilizers and other household chemicals
 - Carpet cleaning and auto repair and maintenance
 - Vehicle, equipment, and home/building maintenance
 - Pet waste management and disposal
 - LID principles an LID BMPs

- Stormwater facility maintenance
 - Dumpster and trash compactor maintenance
- iii. The City must also create stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings, and education activities.

The City is required to measure the understanding and adoption of the targeted behavior for at least one target audience in at least one subject area. The resulting measurements are to be used to direct education and outreach resources most effectively, as well as to evaluate adoption of the targeted behaviors.

No later than July 1, 2021, the City shall conduct a new evaluation of the effectiveness of an ongoing behavior change campaign including documentation of lessons learned and recommendations for which option to select from permit section S5.C.2.a.ii.(c) (summarized by section C2.2.c of this plan, below). The City may forgo the above evaluation requirement if staff opt for strategy S5.C.2.a.ii.(c)3 (summarized by C2.2.c.iii of this plan, below), and it is deemed an evaluation will not add value to the overall behavior change program.

3.2 2022 PROGRAM ACTIVITY

3.2.1 Public education and outreach

The following are activities the City has planned for public education and outreach:

a) Low Impact Development Education

The City will continue its annual program to develop and distribute an activities calendar that includes artwork with stormwater pollution prevention themes for each month. This effort targets the public, including not only the school age children who develop the artwork, but also the residential population and city employees that the calendar is distributed to.

The program runs as follows:

An entry form will be supplied to each child that attends the one elementary school that lies within the City. The children will be able to pick from multiple categories focusing on pollution prevention.

All entries will be evaluated, with the top-rated entries published in the City of Fircrest Calendar (grand prize winner on the cover, 12 top rated entries will be featured during each month, and approximately 12 selected for “honorable mention” at the end of the calendar). The grand prize winner will receive a pizza feed for their entire class, and all other artists will attend an ice cream social at the school. Once the calendars are produced, each child at the school will be provided with a calendar, and a calendar will be delivered to every residence within the City of Fircrest.

Target Audience: School-age children

Date: Annually

Goals:

- Increase awareness of general impacts of stormwater on surface waters
- Educate students on pollution prevention strategies

b) Low Impact Development Education

The City provides educational outreach on low impact and pollution prevention gardening to homeowners at two public events: Fircrest Fun Days and National Night out Against Crime. The City also provides information and guidance on utilizing rain gardens and rain barrels for homeowners.

Target Audience: Homeowners

Date: Annually

Goals:

- Increase awareness of general impacts of stormwater on surface waters
- Educate homeowners on select LID practices

c) Low Impact Development Education

The City provides educational outreach on yard care techniques that are protective of water quality including use and storage of pesticides and fertilizers as well as pet waste management and disposal. These are provided in the spring and fall utility billing flyers. In addition, the City publishes an educational article in one Town Topics, a local newsletter, annually.

Target Audience: Homeowners

Date: Biannually

Goals:

- Increase awareness of general impacts of stormwater on surface waters
- Educate homeowners on select LID practices

3.2.2 EFFECTING BEHAVIOR CHANGE

a) Fish-friendly Car Wash Kit

The City of Fircrest received a local grant from Pierce County Surface Water Program to provide a “Fish Friendly Car Wash” kit that is available for any organization that wishes to check out the kit for fund-raising car wash events. The car wash kit is advertised on the City’s website and kits are also available at two public events: Fircrest Fun Days and National Night out Against Crime

Target Audience: General public

Date: Ongoing

Goals:

- Pollution prevention strategies

b) Dog waste behavior change program

In 2021, the City has adopted a dog waste behavior change program. Dog waste bag stations have been installed in various City Parks. Public Works staff are having ongoing meetings to discuss how performance of this behavior change will be monitored.

Target Audience: General public

Date: Ongoing

Goals:

- Pollution prevention strategies

3.2.3 CREATING STEWARDSHIP OPPORTUNITIES

The following stewardship opportunities will be provided in Fircrest during 2022:

Thelma Gilmur Park Habitat Stewardship Work Parties (held monthly) provide opportunities for residents and volunteers to help remove invasive plants near the trail system. In cooperation with Pierce Conservation District. These work parties are advertised on the City's activities calendar.

Other regional stewardship opportunities exist through the following organizations:

Pierce Conservation District:

www.piercecountycd.org

Pierce Conservation District's programs focusing on water quality improvement include:

- Storm Drain Curb Marking
- Rain Garden Assistance
- Urban Tree Planting
- Habitat Stewardship Program

Chambers-Clover Watershed Council:

<https://www.co.pierce.wa.us/1860/Chambers---Clover-Watershed-Council>

Chambers-Clover Creek Watershed Council (Pierce County) promotes the protection and enhancement of the Chambers-Clover Creek Watershed, in which Fircrest is located. The Council provides an opportunity for local agencies and citizen groups to coordinate their efforts to benefit the watershed.

3.2.4 MEASURING UNDERSTANDING AND ADOPTION OF TARGETED BEHAVIORS

The City has begun a new effecting behavior change program in 2021, targeting pet waste, and the City is exploring methods to monitor the affect this behavior change has going forward. The fish-friendly car kit behavior change program is ongoing but is not monitored for performance.

CHAPTER 4 – PUBLIC INVOLVEMENT AND PARTICIPATION

4.1 PERMIT REQUIREMENTS

Section S5.C.3 of the Permit requires the City to provide ongoing opportunities for public involvement participation through advisory councils, public hearings, watershed committees, participation in developing rate-structures or other similar activities. The City must comply with applicable state and local public notice requirements when developing elements of the SWMP.

Minimum performance measures are:

- a. Create opportunities for the public to participate in the decision-making processes involving the development, implementation, and update of the City's SWMP.
- b. Post on City website the SWMP Plan and the annual report required under S9.A of the Permit no later than May 31st each year.

4.2 2022 PROGRAM ACTIVITY

4.2.1 Decision-Making Process Opportunities

The SWMP Plan will be presented to the City Council at a general city meeting on May 9, 2022. During the meeting, any member of the public who wishes to comment on the SWMP will be given the opportunity to provide comments. The City of Fircrest will notify the public of stormwater related discussions outside of the annual SWMP via the City website and mailers.

4.2.2 SWMP and Annual Report Posting

This SWMP Plan document and Permit annual report is posted on the City's website in the current year prior to May 31. The SWMP will be available to the public, upon request, in the Public Works building.

CHAPTER 5 – MS4 MAPPING AND DOCUMENTATION

5.1 PERMIT REQUIREMENTS

The City shall implement a program for maintaining mapping and documentation of the MS4. Minimum performance measures are:

- Ongoing Mapping: The City shall maintain mapping data for the features listed:
 - Known MS4 outfalls and known MS4 discharge points.
 - Receiving waters, other than groundwater
 - Stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee.
 - Geographic areas served by the City'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 features or attributes (or both) shall be 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: The City shall:
 - No later than January 1, 2020, begin 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, complete mapping of all known connections from the MS4 to a privately-owned stormwater system.
 - No later than August 1, 2021, the required format for mapping is electronic (e.g., Geographic Information System, CAD drawings, or other software that can map and store points, lines, polygons, and associated attributes), with fully described mapping standards.
 - To the extent consistent with national security laws and directives, the City shall make available to Ecology, upon request, available maps depicting the information required in S5.C.4.a through c, above.
 - Upon request, and to the extent appropriate, the City shall provide mapping information to federally recognized Indian Tribes, municipalities, and other Permittees. This Permit does not preclude Permittees from recovering reasonable costs associated with fulfilling mapping information requests by federally recognized Indian Tribes, municipalities, and other Permittees.

5.2 2022 PROGRAM ACTIVITY

The City of Fircrest's MS4 has been previously mapped including the elements required by the current Permit. The data is available within ArcGIS Online, with fully described mapping standards, and layered in the City's Asset Management software, which is utilized while performing annual inspections. Any new catch basins and pipe diameter and materials of unknown private connections to the MS4 will also be discovered/updated, if discovered while conducting CB inspections.

CHAPTER 6 – ILLICIT DISCHARGE DETECTION AND ELIMINATION

6.1 PERMIT REQUIREMENTS

Section S5.C.5 of the Permit requires the SWMP to include an ongoing program designed to prevent, detect, characterize, trace, and eliminate illicit connections and illicit discharges into the MS4. The required program has minimum performance measures as summarized below (see Permit for complete text):

- 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 MS4

Illicit connections and illicit discharges must be identified through, but not limited to: field screening, inspections, complaints/reports, construction inspections, maintenance inspections, source control inspections, and/or monitoring information, as appropriate.

- 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 MS4 to the maximum extent allowable under state and federal law.
- Implement an ongoing program designed to detect and identify non-stormwater discharges and illicit connections into the City's MS4, including the following components:
 - Procedures for conducting investigations of the City's MS4, including field screening and methods for identifying potential sources, implementation of a field screening methodology, and completing field screening for at least 12% of the MS4 each year. Permittees shall annually track total percentage of the MS4 beginning August 1, 2019.
 - A publicly listed and publicized hotline or other telephone number for public reporting of spills and other illicit discharges.
 - An ongoing training program for a municipal field staff.
- Implement an ongoing program designed to address illicit discharges, including spills and illicit connections, into the City's MS4, including:
 - Procedures for characterizing the nature and potential public environmental threat of an illicit discharge
 - Procedures for tracing the source of an illicit discharge
 - Procedures for eliminating the illicit discharge
 - Meet the following timelines in addressing illicit discharges:
 - Immediate response to illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment

- Investigate within 7 days, on average, any complaint, report or monitoring information that indicates a potential illicit discharge
- Initiate an investigation within 21 days of any report or discovery of a suspected illicit connection
- Upon confirmation of an illicit connection, use the compliance strategy in a documented effort to eliminate the illicit connection within 6 months
- Train staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections, to conduct these activities. Provide follow-up training as needed. Document and maintain records of training.
- Recordkeeping: Track and maintain records of the activities conducted to meet the requirements for illicit discharge detection and elimination (IDDE).

6.2 2022 PROGRAM ACTIVITY

6.2.1 IDDE Ordinance

Fircrest has previously adopted an ordinance that prevents illicit non-stormwater discharges into the MS4, as found in FMC 20.25. The ordinance outlines prohibited discharges, allowed discharges, conditional discharges, prohibits illicit connections, monitoring, as well as enforcement.

6.2.2 Program to Detect and Identify Illicit Discharge

The City of Fircrest will continue its existing Illicit Discharge Detection and Elimination (IDDE) program, which relies on complaints from the public or identification by City staff during system maintenance. Additionally, the City will continue to complete field screening for an average of 12% of the MS4 each year. To comply with the current Permit, the following program enhancements will be maintained for 2022:

Field Screening Methodology

Fircrest's IDDE program utilizes the Outfall Reconnaissance Inventory field screening methodology, as described in Chapter 11 of the Center for Urban Watershed Protection's *Illicit Discharge Detection and Elimination* guidance manual (IDDE Manual) dated October 2004. Screening methods utilize the newly implemented Asset Management software will assist in tracking historic data related to IDDE's and Spills.

IDDE Training Program

Fircrest staff involved in IDDE underwent training in 2021. Additional training will be provided in 2022 as needed due to staff changes.

Hotline for Public Reporting of Spills and other Illicit Discharges

The City Hall telephone number is listed on the City's website for reporting be identified on the City's website specifically for reporting spills and other illicit discharges. Afterhours calls are communicated to

and responded to by PW staff via contact from an on-call service then also emailed to PW Staff to be input into the database.

Illicit Discharge Public Education

Illicit discharge public education to inform public employees, businesses, and the public of hazards associated with illicit discharges and improper storage of waste have been integrated into the public education efforts at various community events in addition to local schools providing ecology awareness-based artwork for a Citywide calendar.

6.2.3 Program to Address Illicit Discharges

The City utilizes the following procedures to address illicit discharges reported by the public or detected through field screening:

- When a spill or illicit discharge is reported or detected that has an obvious nature based on distinct odors, colors, or visual indicators, the Public Works Director or designee will take appropriate action to minimize the threat to human health, welfare, and/or the environment, and will comply with the reporting requirements of General Condition G3 of the Permit. If the nature of the spill or illicit discharge constitutes a threat to human health, welfare, or the environment, action will be taken immediately. Other potential illicit discharges will be investigated within 7 days.
- When an illicit discharge is detected that is not obvious in nature or threat level, indicator sampling will be carried out in accordance with Chapter 4 of *Illicit Connection and Illicit Discharge field Screening and Source Tracing Guidance Manual*, May 2013, prepared by Herrera Environmental Consultants for the Washington State Department of Ecology (IC/ID Guidance Manual). A private contractor will be utilized to perform indicator sampling, when required.
- The source of reported or detected illicit discharges will be traced in accordance with the methodologies described in Chapter 5 of the ID/IC Guidance Manual, utilizing City maintenance staff and/or private contractors, as required.
- Illicit connections, when reported or discovered, will be investigated within 21 days to determine the source of the connection, nature, and volume of the discharge through the connection, and the party responsible for the connection.
- Illicit connections will be remedied within a period as specified by the City in accordance with FMC 20.25.090.

6.2.4 Illicit Discharge Training

Fircrest Utility staff responsible for the IDDE program attended a training seminar in 2021. No changes were made to the program based on this training. Additional training will be provided in 2022 as needed due to staff changes.

6.2.5 Illicit Discharge Recordkeeping

All recordkeeping associated with the City's IDDE program is maintained within an internal Asset Management/Work Order program. IDDE's and spills are reported and documented in this program, whether the request originates from a citizen or City staff. Records are kept by the Public Works department and include the following:

- Field Screening Data
- Records of all detected illicit discharges and actions taken
- Reports of all reported spills and illicit discharges and actions taken
- Records of illicit connections and actions taken

All IDDE incidences are reported to the WQ WebIDDE app for reporting to Ecology.

CHAPTER 7 – CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT AND CONSTRUCTION SITES

7.1 PERMIT REQUIREMENTS

Section S5.C.6 of the Permit requires that the City implement and enforce a program to reduce pollutants in stormwater runoff to its MS4 from new development, redevelopment, and construction site activities. The program must apply to both private and public development, including roads. The program is required to have several components as summarized below (see Permit for complete text):

- a. Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects, no later than 06/30/22. The ordinance shall apply to all new applications on or after 07/01/22 or previous applications prior to 01/01/2017 that have not started construction by 01/01/22 or all applications between 01/02/17 to 07/01/22 that have not started construction by 07/01/2027.
- b. The ordinance or other enforceable mechanism shall include, at a minimum:
 - i. The Minimum Requirements, thresholds, and definitions in Appendix 1 or a program approved by Ecology under the 2013 NPDES Phase I Municipal Stormwater Permit amended to include the changes identified in Appendix 10, or Phase I program approved by Ecology and amended to include Appendix 10, for new development, redevelopment, and construction sites. Adjustment and variance criteria equivalent to those in Appendix 1 shall be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of Ecology-approved basin plans or other similar water quality and quantity planning efforts. Such local requirements and thresholds shall provide equal protection of receiving waters and equal levels of pollutant control to those provided in Appendix 1.
 - ii. The local requirements shall include the following requirements, limitations, and criteria that, when used to implement the minimum requirements in Appendix 1 (or program approved by Ecology under the 2019 Phase I Permit), will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy the State requirement under chapter 90.48 RCW to apply AKART prior to discharge:
 - Site planning requirements
 - BMP selection criteria
 - BMP design criteria

- BMP infeasibility criteria
- LID competing needs criteria
- BMP limitations

Permittees shall document how the criteria and requirements will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy State AKART requirements.

Permittees who choose to use the requirements, limitations, and criteria above in the *Stormwater Management Manual for Western Washington*, or a Phase I program approved by Ecology, may cite this choice as their sole documentation to meet this requirement.

- iii. The legal authority, though the approval process for new development and redevelopment, to inspect and enforce maintenance standards for private stormwater facilities approved under the provisions of this section that discharge to the City's MS4.
- c. The program shall include a permitting process with site plan review, inspection and enforcement capability to meet the following standards:
 - i. Review of all stormwater site plans for proposed development activities
 - ii. Inspect, prior to clearing and construction, all permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 of the Permit, or all construction sites that meet the minimum thresholds in Appendix 1 of the Permit.
 - iii. Inspect all permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls.
 - iv. Each Permittee shall manage maintenance activities to inspect all stormwater treatment and flow control BMPs/facilities, and catch basins, in new residential developments every six months, until 90% of the lots are constructed to identify maintenance needs and enforce compliance with maintenance standards as needed.
 - v. Inspect all permitted developments upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities.
 - vi. Compliance with the inspection requirements in (ii) through (v), above, shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving at least 80% of required inspections. The inspections may be combined with other inspections provided they are performed using qualified personnel.
 - vii. The program shall include a procedure for 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 shall be maintained.
 - viii. An enforcement strategy shall be implemented to respond to issues of noncompliance.
- d. The program shall make available, as applicable, the link to the electronic *Construction Stormwater General Permit* Notice of Intent (NOI) form for construction activity and, as applicable, a link to the electronic *Industrial Stormwater General Permit* NOI 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.

- e. 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.

7.2 2022 PROGRAM ACTIVITY

The City of Fircrest has an ongoing program for controlling runoff from new development, redevelopment and construction sites that will be expanded in 2022. The following sections describe existing program elements to comply with Permit requirements, as well as specific program enhancements planned for 2022.

7.2.1 Stormwater Ordinance

Fircrest Municipal Code (FMC) 20.24.030 adopts the most recent version Ecology's Stormwater Management Manual for Western Washington (SWMMWW). Currently the City enforces the requirements in the SWMMWW for all new development, redevelopment, and construction sites, both public and private, including roads. By adopting the SWMMWW, the City is complying with the requirement of S5.C.4.a.ii of the Permit to include requirements, limitations, and criteria for site planning and BMPs for protection of water quality and reduction of pollutant discharge.

The legal authority to inspect and enforce maintenance standards for private stormwater facilities through the approval process for new development and redevelopment is currently established by FMC 20.24.

7.2.2 Stormwater Permitting Process

The City will continue its current stormwater permitting process with plan review, inspection, and enforcement capability to ensure compliance with code requirements for both private and public projects, using qualified personnel. This includes:

- Meet with the City Planning Department to discuss impacts from new development, redevelopment, and construction sites
- Review of all stormwater site plans
- Inspection of all submitted development sites that have a high potential for sediment transport prior to clearing and construction
- Inspection of all permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls with enforcement as necessary, based on the inspections
- Inspection of all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater controls, such as stormwater facilities and structural BMPs

- Verification that a maintenance plan has been completed and responsibility for maintenance has been assigned with enforcement as necessary, based on the inspections
- Ensuring compliance with inspection requirements by the presence and records of an established inspection program that is designed to inspect all sites and achieve at least 80% of scheduled inspections

The City will document all site inspections performed as part of the permitting process. A shared documentation process between the Public Works department the Planning Department has been established. This program, Jot Form, streamlines the permitting process and ensures the appropriate department signs off on each phase of a project.

7.2.3 Enforcement of Stormwater Ordinance for Sites with Ecology Permits

The City will enforce local ordinances controlling runoff from sites that are also covered by stormwater permits by Ecology.

7.2.4 Training

There are no staff members that currently hold an active CESCL Card. Public Works staff members are currently attending CESCL Training and will complete the training in 2022.

Records of staff that received training are maintained by the Public Works Director.

7.2.5 Low Impact Development

The City will continue to require LID Principles and LID BMPS when updating, revising, and developing new local development-related codes, rules, standard, or other enforceable documents, as needed.

CHAPTER 8 – MUNICIPAL OPERATIONS AND MAINTENANCE

8.1 PERMIT REQUIREMENTS

Section S5.C.7 of the Permit requires that the City document and implement a program to regulate maintenance activities and training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program is required to have several components as summarized below (see Permit for complete text):

- a. Implement maintenance standards that are as protective, or more protective, of facility function than those specified in *Stormwater Management Manual for Western Washington* or Phase I program approved by Ecology. For facilities which do not have maintenance standards, the City is required to develop a maintenance standard. Maintenance standards were required to be implemented no later than June 30, 2022.
 - i. The purpose of the maintenance standard is to determine if maintenance is required.
 - ii. When an inspection identifies an exceedance of the maintenance standard, maintenance is required to 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

Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, the Permittee shall document the circumstances and how they were beyond their control.

- b. Maintenance of stormwater facilities regulated by the Permittee
 - 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) Perform annual inspection of all City-owned or operated permanent stormwater and flow control BMPs/facilities that discharge to the MS4 and were permitted by the Permittee according to S5.C.6c, 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*.

- ii. Compliance with the inspection requirements in (b), above, shall be determined by the presence and records of an established inspection program designed to inspect all facilities, and achieving at least 80% of required inspections.
 - iii. The program shall include a procedure for 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 shall be maintained.
- c. Maintenance of stormwater facilities owned or operated by the Permittee.
- i. Each Permittee shall implement a program to annually inspect all municipally owned or operated stormwater treatment and flow control BMPs/facilities, and taking appropriate maintenance actions in accordance with the adopted maintenance standards.

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*.

- ii. Perform spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities after major storm events (24 hour storm event with a 10 year or greater recurrence interval).
- iii. Each Permittee shall inspect all catch basins and inlets owned or operated by the Permittee every two years. Clean catch basins if the inspection indicates cleaning is needed to comply with maintenance standards established in the *Stormwater Management Manual for Western Washington*.

The following alternatives to the standard approach of inspecting all catch basins every two years may be applied to all or portions of the system:

- (a) The catch basin inspection schedule of every two years may be changed as appropriate to meet the maintenance standards based on maintenance records of double the length of time of the proposed inspection frequency.
- (b) Inspections every two years may be conducted on a “circuit basis” whereby

25% of catch basins and inlets within each circuit are inspected to identify maintenance needs. Include an inspection of the catch basin immediately upstream of any MS4 outfall, discharge point, or connections to public or private storm systems, if applicable.

- (c) The Permittee may clean all pipes, ditches, and catch basins and inlets within a circuit once during the permit term. Circuits selected for this alternative must drain to a single point.
- iv. Compliance with inspection requirements in S5.C.7.c i-iii, above, is determined by the presence of an established inspection program designed to inspect all sites and achieving at least 95% of inspections.
- d. Implement 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 control of the City. 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 rights-of-way, maintenance yards, and stormwater treatment and flow control BMPs/facilities. The following activities shall be addressed:
 - Pipe cleaning
 - Cleaning of culverts
 - 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 fertilizers, pesticides, and herbicides according to the instructions for their use, including reducing nutrients and pesticides using alternatives that minimize environmental impacts
 - Sediment and erosion control
 - Landscape maintenance and vegetation disposal
 - Trash and pet waste management
 - Building exterior cleaning and maintenance
- e. Implement an ongoing training program for City employees 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, 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 and the staff trained.

- f. 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, to include the following information. At a minimum, the SWPPP shall include:
 - 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.
- g. Maintain records of inspections and maintenance or repair activities conducted by the City.

8.1.1 Operations and Maintenance of Permitted Stormwater Facilities Program

The City requires property owners to maintain, inspect and clean their privately maintained facilities. City staff is not responsible for inspecting private systems. New construction as-built records are available in the Public Works building.

8.2 2022 PROGRAM ACTIVITY

The City of Fircrest has an established program for municipal operation and maintenance, which will continue in 2022. The following sections describe current program elements to comply with Permit requirements.

8.2.1 Maintenance Standards

The City utilizes the maintenance standards specified in Appendix V-A of Volume V of the 2019 *Stormwater Management Manual for Western Washington* for operation and maintenance of the City's stormwater systems. Any updates to maintenance standards provided in the future *Stormwater Management Manual for Western Washington* will be adopted by the City.

8.2.2 Inspection of Municipal Stormwater Facilities

Annual Inspections: There are currently two publicly maintained stormwater treatment and flow control facilities in the City of Fircrest that require annual inspection. One LID BMP also exists, permeable pavement sidewalks along Emerson Street, which will continue to be inspected annually.

Spot Checks: Spot checks will be performed at culvert crossings along Leach Creek after each major storm event (10-year, 24-hour storm event). The two City-maintained treatment and flow control facilities will also be checked if the potential for damage is suspected.

Catch Basin Inspections and Cleaning: City staff will continue to inspect and clean all catch basins at least once every two years, with half of the City completed in each year of the two-year cycle. Decant water from the catch basin cleaning effort will be disposed of in accordance with the requirements set forth in Permit Appendix 6, Street Waste Disposal.

8.2.3 Stormwater Impact Reduction Procedures

The City has implemented the following practices, policies, and procedures to reduce stormwater impacts:

City Parks: City of Fircrest Parks and Recreation Department operates six park sites. Practices, policies, and procedures to reduce stormwater impacts at these sites consist of the following, which will be continued in 2022

- Use fertilizers, pesticides, and herbicides according to the manufacture's specifications. All applications follow state and local and guidelines and are used only after consultation with the Management Team and Public Works Department.
- Regularly consult with the Management Team and Public Works Department and receive specific guidelines from Pierce Conservation District regarding landscape maintenance and vegetation removal.
- Use environmentally friendly cleaning solutions for all exterior cleaning and maintenance.

Road and Street Maintenance: The City of Fircrest performs street sweeping of major streets monthly, weather permitting. Roadside area and vegetation are maintained while minimizing the use of herbicides or pesticides. Road repair and resurfacing is performed by contractors in accordance with requirements for construction stormwater pollution prevention as documented in the 2019 SWMMWW. Fircrest performs snow and ice control as required, using manufacturer's application rate for minimally environmentally toxic deicing chemicals.

8.2.4 Training

Field staff receive monthly training in Operations & Maintenance that is relevant to each department. Pollution prevention training will be continued by sending appropriate staff to training courses when needed due to staff change or to increase knowledge.

8.2.5 Stormwater Pollution Prevention Plan (SWPPP)

A SWPPP has been prepared for the City's main maintenance/storage facility located on Ramsdell Street. A copy is kept on-site.

8.2.6 Municipal O&M Recordkeeping

The Public Works Director or designee will continue to maintain records of all inspections and maintenance activities.



Figure 1 – City of Fircrest Public Works Department Staff

CHAPTER 9 – SOURCE CONTROL PROGRAMS FOR EXISTING DEVELOPMENT

9.1 PERMIT REQUIREMENTS

The City shall maintain a program dedicated to the prevention and reduction of pollutant runoff from areas which discharge to the MS4. The success of this program relies on a comprehensive and up-to-date catalog of all publicly and privately owned institutional, commercial, and industrial sites with the potential to generate pollutants within discharge range of the MS4.

Development, application, and enforcement of a source control program will require the implementation of several key components over the next three years.

- Application 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.
- Inspections 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 MS4.
- Application and enforcement of local ordinances at sites, identified pursuant to S5.C.8.b.ii, including sites with discharges authorized by a separate NPDES permit. Permittees that are in compliance with the terms of this Permit will not be held liable by Ecology for water quality standard violations or receiving water impacts caused by industries and other Permittees covered, or which should be covered under an NPDES permit issued by Ecology.
- Practices to reduce polluted runoff from the application of pesticides, herbicides, and fertilizers from the sites identified in the inventory.

9.2 2019-2024 PERMIT REQUIREMENTS

- No later than August 1, 2022, Permittees 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).
- No later than August 1, 2022, the Permittees 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.
 - Businesses and/or sites identified based on the presence of activities that are pollutant generating (refer to Appendix 8).
 - Other pollutant generating sources, based on complaint response, such as: home-based businesses and multi-family sites.

- No later than January 1, 2023, Permittees shall implement an inspection program for sites identified pursuant to S5.C.8.b.ii, above.
 - 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.
 - The Permittee 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. The Permittee may count follow-up compliance inspections at the same site toward the 20% inspection rate. The Permittee may select which sites to inspect each year and is not required to inspect 100% of sites over a 5-year period. Sites may be prioritized for inspection based on their land use category, potential for pollution generation, proximity to receiving waters, or to address an identified pollution problem within a specific geographic area or sub-basin.
 - Each Permittee shall inspect 100% of sites identified through credible complaints.
 - Permittees may count inspections conducted based on complaints, or when the property owner denies entry, to the 20% inspection rate.
- No later than January 1, 2023, each Permittee shall implement a progressive enforcement policy that requires sites to comply with stormwater requirements within a reasonable time period as specified below:
 - If the Permittee determines, through inspections or otherwise, that a site has failed to adequately implement required BMPs, the Permittee shall take appropriate follow-up action(s), which may include phone calls, reminder letters, emails, or follow-up inspections.
 - When a Permittee determines that a site has failed to adequately implement BMPs after a follow-up inspection(s), the Permittee shall take enforcement action as established through authority in its municipal codes or ordinances, or through the judicial system.
 - Each Permittee shall maintain records, including documentation of each site visit, inspection reports, warning letters, notices of violations, and other enforcement records, demonstrating an effort to bring sites into compliance. Each Permittee shall also maintain records of sites that are not inspected because the property owner denies entry.
 - A Permittee may refer non-emergency violations of local ordinances to Ecology, provided, the Permittee also makes a documented effort of progressive enforcement. At a minimum, a Permittee's enforcement effort shall include documentation of inspections and warning letters or notices of violation.

- Permittees shall train staff who are responsible for implementing the source control program to conduct these activities. The ongoing training program shall cover the legal authority for source control, source control BMPs and their proper application, inspection protocols, lessons learned, typical cases, and enforcement procedures. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staff. Permittees shall document and maintain records of the training provided and the staff trained.

9.3 2022 PROGRAM ACTIVITY

Existing ordinances related to enforcing source control for existing development are under FMC 20.24 and FMC 20.25. In 2022, the City is reviewing the municipal Code to identify any revisions or additions to ordinances that will be required to meet the August 1, 2022 deadline for enforcing of source control BMPs to existing developed sites.

The City has implemented a program to identify commercial and industrial sites which have the potential to generate pollutants to the MS4 to meet the August 1, 2022 deadline. Currently, the City is aware of all commercial sites within the City Limit and has began an updated private stormwater inspection program. There are no identified commercial sites that would produce pollutants to the MS4. The City is currently reviewing all business licenses to identify potential home businesses that may impact the MS4.

Once the assessment is complete, the City will develop a source control inventory of all businesses and properties identified as conducting activities that are pollutant generating and may impact the MS4. Identified sites may include governmental sites, mobile or home-based businesses, and sites that received complaints indicating it may be pollution generating.

APPENDIX A

CITY OF FIRCREST STORMWATER MANAGEMENT ACTION PLAN

A-1 Overview

A receiving water assessment was performed for the City of Fircrest to assess and document the existing information and conditions related to local receiving waters and contributing areas. The purpose of the assessment is to aid in identifying the receiving waters that would most likely benefit from stormwater management planning.

The NPDES permit requires a watershed inventory, provided as a table, to be submitted no later than March 31, 2022, and a brief description of the receiving waters that are in Fircrest. A single waterbody, Leach Creek, with three contributing area assessment units, was identified as a receiving water for the City of Fircrest. Assessment was performed using 303(d) listing information, Environmental Justice Screening and Mapping Tool, Puget Sound Watershed Characterization Project, and the Coastal Atlas Map.

A-2 Receiving Water and Assessment Unit Areas

The City has a single receiving water, Leach Creek, a sub-watershed of the Clover-Chambers Creek watershed. Leach Creek is over 2 miles long and the contributing watershed area consists of 1,867 acres, of which 40% is residential, 37% is commercial, 20% is open space, and 3% is Industrial. The existing stormwater pipe network of Fircrest, University Place, and Tacoma discharges to Leach Creek holding basin. Discharges from Leach Creek holding basin, as well as stormwater runoff from Fircrest, University Place, and Lakewood, supply flows to Leach Creek downstream of the holding basin prior to confluence with Chamber Creek. The lower reaches of Leach Creek contain salmonid spawning habitat.

A 303(d) listing, per Section 303(d) of the federal Clean Water Act, exists for Leach Creek for mercury and bacteria.

Three assessment unit areas, as defined by Puget Sound Watershed Characterization Project, exist within Fircrest. The southwestern corner of Fircrest lies within basin 12003 and contributes runoff to Lower Leach Creek prior to confluence with Chambers Creek. The total area of basin 12003 is 1,189 acres. The City of Fircrest comprises 24 acres, or 2% of this basin. Lower Leach Creek has the designated use of anadromous fishery. The Water flow assessment revealed moderate surface storage for this area and the basin has a “moderate” ranking for water flow importance for Leach Creek. Water quality assessment review showed moderate-to-high levels of sediment, phosphorous, metals, nitrogen, and pathogens for this basin.

Basin 12004 represents the area that contributes runoff to Upper Leach Creek, downstream of the Leach Creek Holding Basin. The total area of Basin 12004 is 1,959 acres. Fircrest makes up 35%, or 690 acres of this basin. Upper Leach Creek has the designated use of anadromous fishery. The Water flow assessment revealed moderate surface storage for this area, with high degradation of water flow. Additionally, this basin is rank “high” for water flow importance to Leach Creek. Water quality assessment review showed moderate-to-high levels of sediment, phosphorous, metals, nitrogen, and pathogens for this basin.

The northernmost watershed of Fircrest, Basin 12005, contains the contributing area that drains to Leach Creek Holding basin in Tacoma. This basin is the most upstream basin of the three basins in Fircrest. The total area of this watershed is 1,774 acres, of which 290 acres, or 16%, are within Fircrest City Limits. The Leach Creek Holding basin is used as a regional stormwater management facility. The Water flow assessment revealed low surface storage for this area; however, this basin also has a designation of

“low water flow importance.” Water quality assessment review revealed moderate-to-high levels of sediment, phosphorous, metals, nitrogen, and pathogens for this basin.

A-3 Stormwater Management Action Plan Assessment Table

The following table summarizes the results of the watershed inventory assessment for the City of Fircrest.

	Analysis Unit ID	12003	12004	8118
	Water Body Name	Lower Leach Creek	Upper Leach Creek	Leach Creek Holding Basin
	Stream ID	USGS 12091200	USGS 12091200	n/a
Step 1	Total area of WS (acre_	1189	1959	1774
Step 1	Area of WS in Fircrest (acre)	24	690	290
Step 1	Percent of the total watershed area that is in the Permittee's jurisdiction	2%	35%	16%
Step 2	Designated Use	anadromous fishery	anadromous fishery	stormwater management facility
Step 2	Moderate Density Residential	63%	48%	32%
Step 2	High Density Residential	14%	9%	8%
Step 2	Office	0%	0%	0%
Step 2	Commercial	0%	1%	18%
Step 2	Park	0%	2%	3%
Step 2	Golf Course	0%	18%	16%
Step 2	ROW	23%	23%	22%
Step 2	Population	161	4640	1950
Step 2	Existing FC BMPs	0	12	3
Step 2	Existing WQ BMPs	unk	unk	unk
Step 2	Fish and Wildlife Components	high	moderately high	low
Step 2	How much growth is directed toward this area	Changes in zoning to mixed use are anticipated.	Changes in zoning to mixed use are anticipated.	Changes in zoning to mixed use are anticipated.
Step 2	How is transportation planning likely to affect the basin	No plans to alter transportation network	No plans to alter transportation network	No plans to alter transportation network
Step 2	Are headwaters, riparian areas, and other sensitive portions of the basin likely to be protected under current zoning and plans?	Current zoning codes include environmental protections for sensitive areas to prevent degradation in accordance with DOE standards.	Current zoning codes include environmental protections for sensitive areas to prevent degradation in accordance with DOE standards.	Current zoning codes include environmental protections for sensitive areas to prevent degradation in accordance with DOE standards.
Step 2	Is the receiving water impaired?	Yes	Yes	No
Step 2	303(d) listing reason	Mercury, Bacteria	Mercury, Bacteria	n/a
Step 2	If yes, What sources/activities are the main contributors to the pollutant load targeted for reduction (e.g., polluting activities associated with particular land use or land cover types)?	Primary contributor of mercury is untreated roadway surface runoff. Primary contributor of bacteria is wildlife in natural areas.	Primary contributor of mercury is untreated roadway surface runoff. Primary contributor of bacteria is wildlife in natural areas.	n/a
Step 2	When does the impairment occur? Is it seasonal, or flow-dependent?	Year-round	Year-round	n/a
Step 2	Can these sources be addressed (or are they already being addressed) through BMPs found in the SWMMWW and applied through your SWMP?	Yes. Additional mitigation can be provided by enhanced water quality treatment facilities (vaults, surface BMPs) to treat roadway runoff.	Yes. Additional mitigation can be provided by enhanced water quality treatment facilities (vaults, surface BMPs) to treat roadway runoff.	n/a
Step 2	Will enhanced municipal stormwater management actions result in meeting loading targets?	Yes	Yes	n/a
Step 2	Are substantial non-stormwater management actions needed to address the impairment?	None identified.	None identified.	n/a
Step 2	What combination of additional stormwater management actions will most effectively reduce current and future loadings?	Provide additional water quality treatment for surface runoff from contributing sources.	Provide additional water quality treatment for surface runoff from contributing sources.	n/a
Step 2	Evaluate information related to overburdened communities within the contributing areas to help determine where overlap may exist with improving receiving water conditions for water quality and human health.	Basin is small and relatively uniform	East of Orchard St W	East of Orchard St W
Step 2	Likely best receiving water Fircrest MS4 Contributes	1	2	3
Step 2	Likely worst receiving water Fircrest MS4 Contributes	3	2	1
Step 3	Sources Used	Puget Sound Watershed Characterization Project, 303(d) listing	Puget Sound Watershed Characterization Project, 303(d) listing	Puget Sound Watershed Characterization Project, 303(d) listing
Step 3	What are the major pollutants and/or flow impacts associated with individual point sources versus non-point sources?	Metals, Phosphorous, Hydrocarbons, Increased Runoff from Development	Metals, Phosphorous, Hydrocarbons, Increased Runoff from Development	Metals, Phosphorous, Hydrocarbons, Increased Runoff from Development
Step 3	Will the loadings and/or runoff volumes increase under expected future land use conditions?	No	No	No
Step 3	Can these sources be addressed through other land management strategies, including policies, code, or development standards?	Modifications to the WQ requirements for redevelopment affecting pollution generating surfaces or modifications to detention requirements for development, continue public education and outreach, pursue retrofit projects for water quality and detention facilities for public right-of-way	Modifications to the WQ requirements for redevelopment affecting pollution generating surfaces or modifications to detention requirements for development, continue public education and outreach, pursue retrofit projects for water quality and detention facilities for public right-of-way	Modifications to the WQ requirements for redevelopment affecting pollution generating surfaces or modifications to detention requirements for development, continue public education and outreach, pursue retrofit projects for water quality and detention facilities for public right-of-way

Step 3	Can future growth be managed to minimize adverse stormwater impacts?	Yes by modifying building requirements or through installing stormwater retrofits	Yes by modifying building requirements or through installing stormwater retrofits	Yes by modifying building requirements or through installing stormwater retrofits
Step 3	Expected Hydrologic Impact	moderately high	high	high
Step 4	Expected Pollutant Loading	high	high	high
Step 4	Planned Land Use in Basin (20 years)	No Change	No Change	No Change
Step 4	Water Flow Importance	moderate	high	low
Step 4	Water Flow Degradation	moderate high	high	high
Step 4	Water Flow Overall Protection & Restoration	restoration/development	highest restoration	development/restoration
Step 4	Water Quality Degradation (Moderate High or above)	Sediment, Phosphorous, Metals, Nitrogen, Pathogens	Sediment, Phosphorous, Metals, Nitrogen, Pathogens	Sediment, Phosphorous, Metals, Nitrogen, Pathogens
Step 4	WQ issues	sediment, phosphorous, metals, nitrogen	sediment, phosphorous, metals, nitrogen	sediment, phosphorous, metals, nitrogen
Step 4	Water Flow Assessment	moderate surface storage	moderate surface storage	low surface storage
Step 4	Protection or Restoration Goals	decrease surface runoff, improve WQ	decrease surface runoff, improve WQ	decrease surface runoff, improve WQ
Step 4	Rationale as to where targeted stormwater investments and actions are most likely to protect/improve receiving water conditions	303(d) listing, Water Flow Degradation Ranking	303(d) listing, Water Flow Degradation Ranking	303(d) listing, Water Flow Degradation Ranking
Step 4	Prioritized Catchments	Basin-wide	East of Orchard St W	East of Orchard St W