



# City of Newcastle

## NPDES Phase II

# Stormwater Management Program Plan



**2021**

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# 1. INTRODUCTION

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This report represents the Stormwater Management Program (SWMP) Plan prepared by the City of Newcastle (City) in accordance with the National Pollutant Discharge Elimination System (NPDES) Phase II Western Washington Municipal Stormwater Permit (Phase II permit). The Phase II permit is a requirement of the federal Clean Water Act (CWA). In some states, the federal Environmental Protection Agency (EPA) delegates permit authority to state environmental agencies. In Washington, the NPDES permit authority is the Washington State Department of Ecology (Ecology).



On July 1, 2019, Ecology issued a new NPDES permit that is effective from August 1, 2019 – July 31, 2024. Beginning on August 1, 2019 the City was regulated by the new permit. The permit requires the City to develop a SWMP Plan that includes numerous actions and activities with the overall goals of protecting water quality and of reducing the discharge of pollutants from its municipal separate storm sewer system (MS4), to the maximum extent practicable (MEP). The actions and activities are described in a number of program components under Section S5 of the Phase II permit. The Phase II permit directs the City to prepare a SWMP document that includes a description for each of the program components. This section provides: background information on the Phase II permit; a mission statement from the City regarding its stormwater management activities; and finally, this section outlines the structure for the remainder of the SWMP Plan.

## 1.1 NPDES Phase II Permit Background

The following provides a brief background to, and overview of, the Phase II permit processes that have occurred to date:

- In 1987, the federal CWA was modified to include stormwater in the NPDES permit program. This modification requires, municipalities such as the City, to have an NPDES permit to discharge stormwater from municipal storm sewer systems, or MS4s, to waters of the state.
- In the state of Washington, the EPA has given Ecology the authority to issue such permits.
- In 1999, EPA issued final Phase II rules to include all municipalities in census-defined urban areas with the current population greater than 1,000.
- The City is determined to be an operator of a regulated small MS4, in an Ecology-designated urbanized area, and is therefore required to submit for approval and receive coverage under a Phase II permit.

Ecology developed the Phase II permit, which allows the City to discharge stormwater from its MS4 into surface waters of Washington State, provided the City implements a SWMP to:

- Reduce the discharge of pollutants from its MS4 to the maximum extent practicable (MEP)
- Meet state AKART (All Known, Available, and Reasonable Technologies) standards
- Protect water quality

This Phase II permit authorizes discharges of non-stormwater flows to surface waters and to groundwaters of the state from the City's MS4 only under the following conditions:

- The discharge is authorized by a separate NPDES or State Waste Discharge permit.
- The discharge is from emergency fire-fighting activities.
- The discharge is from another illicit or non-stormwater discharge that is managed by the City as provided in Special Condition Sections S5.C.5.c of the permit.

The Phase II permit requires the City to develop a SWMP that includes the following components from Section S5.C of the permit:

- Stormwater Planning
- Public Education and Outreach
- Public Involvement and Participation
- MS4 Mapping and Documentation
- Illicit Discharge Detection and Elimination
- Controlling Runoff from New Development, Redevelopment, and Construction Sites
- Operation and Maintenance Program
- Source Control Program for Existing Development
- Monitoring and Assessment

The SWMP document is also intended to include any additional information on meeting applicable Total Maximum Discharge Limits (TMDLs) pursuant to Section S7 of the Phase II permit. Since no TMDLs apply to the City’s receiving waters at this time, this report does not address TMDL issues.

The City is required to report annually on progress in permit implementation for the prior year, and submit a SWMP Plan that describes the program activities for the coming year. The implementation of various permit conditions is phased throughout the five-year permit term, August 1, 2019 through July 31, 2024.

## 1.2 City of Newcastle Mission Statement

The City is dedicated to developing, implementing, and enhancing an adaptive stormwater management program that is committed to protecting water quality and the environment, and reducing pollutants in our stormwater systems. The SWMP Plan provides an outline of actions and activities that the City utilizes to accomplish these goals. The City is committed to continuing to build successful stormwater programs, reviewing programs and making adaptations as necessary, and continuing to coordinate and collaborate with other jurisdictions, agencies, organizations, business, property owners, residents, and other stakeholders to achieve our goals of protecting water quality, the environment, and reducing pollutants.

The SWMP Plan is updated annually, and is considered a working document that will be modified as necessary to reflect adaptations that contribute to a successful program. The City will make every effort to be transparent with such modifications through its public education and involvement programs as well as through the annual SWMP Plan submittal process.

## 1.3 Document Organization

This document is organized by program components according to the following sections:

### **Section 1** Introduction

- Section 2** Program Management and Administration (S5.A, S5.B & S9)
- Section 3** Stormwater Planning (S5.C.1)
- Section 4** Public Education and Outreach (S5.C.2)
- Section 5** Public Involvement and Participation (S5.C.3)
- Section 6** MS4 Mapping and Documentation (S5.C.4)
- Section 7** Illicit Discharge Detection and Elimination (S5.C.5)
- Section 8** Controlling Runoff from New Development, Redevelopment, and Construction Sites (S5.C.6)
- Section 9** Operation and Maintenance (S5.C.7)
- Section 10** Source Control Program for Existing Development (S5.C.8)
- Section 11** Monitoring Activities

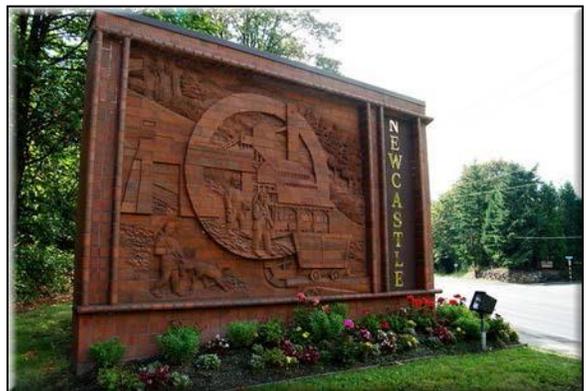
## 2. PROGRAM MANAGEMENT AND ADMINISTRATION

This section outlines the oversight and administrative activities necessary to support the development and implementation of the City’s SWMP.

### 2.1 Coordination

The City currently coordinates with King County and other Phase I and II jurisdictions on issues related to maintenance, development, transportation, drainage, and spill response as needed. The City participates in the following coordination opportunities:

- Regional Operations and Maintenance Program (ROADMAP)
- Phase II Permit Coordinators Forum
- Eastside Permit Coordinators
- Stormwater Outreach for Regional Municipalities (STORM)
- WRIA 8 Salmon Recovery Council
- Stormwater Action Monitoring (SAM)
- Stormwater Outreach Group - King County (SOG)
- Business Inspection Group (BIG)
- American Public Works Association (APWA) Stormwater Managers Committee.



### 2.2 Tracking Programs

#### 2.2.1 Drainage Complaints, Concerns, and Inquiries

In 2020, the City added a new method for citizens to report drainage, water quality, and flooding concerns, SeeClickFix, which can be accessed through a smart phone app, the SeeClickFix webpage, on the City’s website:

[http://www.newcastlewa.gov/i\\_want\\_to\\_/report](http://www.newcastlewa.gov/i_want_to_/report). SeeClickFix integrates with the City's asset management system Cartegraph. Additionally, the City will continue to accept requests and concerns via email, phone call, and in person. Each request is assigned a request number, and City staff try to initially respond to inquiries or concerns within one business day.

## Citizen Action Requests Online or On the Go!

*Use SeeClickFix to report non-emergency issues in the City of Newcastle.*

SeeClickFix should only be used for reporting non-emergency issues such as potholes, vandalism, graffiti, tree concerns, street and sidewalk issues and abandoned vehicles. *If you have an emergency, please call 911 immediately.*

**Download the SeeClickFix app for Apple or Android devices:**



### 2.2.2 Illicit Discharge Reporting

The City has a Spill Reporting hotline, for both business hours as well as evenings and weekends. When an illicit discharge call is received, City staff respond immediately to contain and either initiate or enforce cleanup efforts. Illicit discharges are tracked in an IDDE spreadsheet and NPDES Pro that includes spill response, containment, and cleanup efforts deployed. If necessary, and depending on the location of the spill or illicit discharge, the spill or illicit discharge is added to Cartegraph (the City's asset management system), TRAKiT (the City's permitting dataset), or NPDES Pro (the City's database for privately maintained stormwater systems). Water quality violations are issued through a Notice and Order, and are tracked in our accounting database.

### 2.2.3 O&M and Inspection Programs

Public and private stormwater facilities and drainage infrastructure, receiving waters, and wetlands are mapped in GIS. The City's GIS Open Data Portal can be found here:

<https://data-newcastlewa.opendata.arcgis.com/>

Publicly maintained stormwater systems are inspected per NPDES requirements and inspections are tracked in Work Orders (with subsequent tasks) in Cartegraph.

Privately maintained systems are inspected, depending on Phase II permit requirements, either annually or every other year. Inspections, maintenance, correspondence, and enforcement actions are tracked in the cloud-based program, NPDES Pro.

Construction stormwater/TESC inspections tracked in TRAKiT, the City's permit management database. Stormwater assets are added to GIS when a project is built, and assets are either added to Cartegraph or NPDES Pro databases for inspections.

#### 2.2.4 Education Outreach & Public Participation Programs

The City tracks its education and outreach programs, training, and participation opportunities through NPDES Pro. Partnering programs track their outreach and education efforts and provide the City with a report at the end of the year.

#### 2.2.5 Cost of Program Development and Implementation

The City tracks cost of program development and implementation using Cartegraph, budget codes, excel, and the City's accounting software.

### 2.3 Training Programs

The City is committed to participating in the Regional Road Maintenance Endangered Species Act (ESA) Training Program and the Certified Erosion and Sediment Control Lead Training Program (CESCL).

The City currently provides additional training annually and on an as-needed basis on topics like IDDE, SWPPP training, aquatic invasive species, permitting, plan review, operation and maintenance, and inspections. The City tracks its training programs and updates in spreadsheets.

## 3. Comprehensive Stormwater Planning

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This section summarizes the Phase II Permit requirements for comprehensive stormwater planning, and describes current activities the City has planned to meet Permit requirements.

Section S5.C.1 of the Phase II Permit requires the City to implement a Stormwater Planning program to:

- Convene an inter-disciplinary team to inform and assist in the development, progress, and influence of this program by **August 1, 2020**.
- Report on how stormwater management needs and receiving water protection/improvement inform the long-range planning update process and influence policies and implementation strategies.
  - By **March 31, 2021** respond to a series of questions in the annual report.
  - By **January 1, 2023** submit a report describing how water quality is addressed in long-range land use plans.
- Annually assess and report newly identified administrative or regulatory barriers to the implementation of low impact development (LID) principles or best management practices (BMPs) since local codes were adopted in 2016. Describe mechanisms to encourage or require LID implementation.
- Implement stormwater management action planning (SMAP):
  - Document and assess existing information related to local receiving water bodies and contributing area conditions. Submit a watershed inventory and assessment by **March 31, 2022**.
  - Develop a prioritization method and process to identify which receiving waters will most benefit from stormwater facility retrofits, tailored implementation of SWMP action and other land/development management actions. Document the prioritized and ranked list of receiving waters by **June 30, 2022**.
  - Develop a Stormwater Management Action Plan (SMAP) for at least one high priority area by **March 31, 2023**.

### 3.1 Stormwater Planning Program Activities

The City plans to meeting the comprehensive stormwater planning permit requirements according to the table below:

Permit Requirement	Description	Participants	Schedule
Interdisciplinary team	Convene an interdisciplinary team to develop and influence the program.	SWM staff Public Works (PW) Engineering/Traffic Community Development (CD) Planners	August 1, 2020
Long-range plan update, 2013-2019 permit cycle	Respond to a series of stormwater planning questions for the annual report on how stormwater impacts on water quality were addressed in the Comprehensive Plan during the 2013-2019 permit term.	SWM staff PW Engineering/Traffic CD Planners	March 31, 2021
Long-range plan update, 2019-2014 permit	Respond to questions and submit a report that addresses how water quality is being addressed in the Comprehensive Plan during the 2019-2024 permit term.	SWM staff PW Engineering/Traffic CD Planners	January 1, 2023
LID Implementation	Require LID principles and BMPs. Assess and document barriers annually and encourage or require LID implementation.	SWM staff PW Engineering/Traffic CD Planners CD Development Review Geotechnical Consultants	December 31, 2020; then annually
Receiving water basin assessment	Document local receiving waters and contributing area conditions data. Submit a watershed inventory.	SWM staff PW Engineering PW maintenance	March 31, 2022
Receiving water basin prioritization	Develop a prioritization method and document a prioritized list of receiving waters.	SWM staff PW Engineering PW Maintenance	June 30, 2022
SMAP	Develop a SMAP.	SWM staff	March 31, 2023

In 2020, the City convened an inter-disciplinary team "to inform and assist in the development, progress, and influence" (Ecology, 2019) of the City's stormwater planning program. This team will continue to meet in 2021 to address the long-range update for the 2019-2024 permit term.

In 2021, the City continued to meet to assess and document new and developing administrative or regulatory barriers to implementation of LID principles and or LID BMPs, specifically barriers that have emerged since City codes were updated to include LID in 2016.

City SWM staff conducted a receiving water basin assessment in 2021, the initial step in the SMAP process.

## 4. PUBLIC EDUCATION AND OUTREACH

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This section summarizes the Phase II permit requirements for public education and outreach, and describes current activities the City has underway for public education and outreach.

Section S5.C.2 of the Phase II permit requires the City to administer an education and outreach program designed to:

- “Build general awareness about methods to address and reduce impacts from stormwater runoff.” (Ecology, 2019)
- “Effect behavior change to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.” (Ecology, 2019)
- “Create stewardship opportunities that encourage community engagement in addressing the impacts from stormwater runoff.” (Ecology, 2019)

### 4.1 Education & Outreach Activities

The City currently has an active public Education and Outreach (E&O) Program that uses a variety of approaches to inform the community about stormwater-related pollution prevention activities.

#### 4.1.1 General Awareness

The City has a general awareness program targeting the general public which covers general impacts of stormwater on surface water and impacts from impervious surfaces. The general awareness campaign provides information designed to raise the general awareness of the general public. The information is presented through the City’s website ([www.newcastlewa.gov/departments/public\\_works/surface\\_water\\_management](http://www.newcastlewa.gov/departments/public_works/surface_water_management)), “Newcastle Knows Clean Water Blog” ([www.newcastlewa.gov/cleanwater](http://www.newcastlewa.gov/cleanwater)), mailers, public presentations, the City’s social media accounts, and in other ways as needed. Most information is provided on an ongoing basis. Seasonally relevant information, such as impacts from fertilizers and pesticides or BMPs for de-icing impervious surfaces is provided on a strategic schedule.

#### 4.1.2 Pet Waste

The City, in partnership with Regional Animal Services of King County (RASKC), will continue to provide on-leash pet waste bag dispensers when dogs are registered at City Hall to encourage dog owners to always pick up poop when walking their dogs. The City will also continue to supply stationary pet waste bag dispensers in City Parks.

#### 4.1.3 LID Outreach

The City amended codes and adopted ordinances in December 2016 as part of the LID integration process. The City also adopted the 2016 King County Surface Water Design Manual (2016 KCSWDM) as part of the LID code integration process. In addition to adopting the 2016 KCSWDM, the City created a 2016 Addendum, which describes City-specific requirements and added LID details to its Public Works Standards. The City will continue to develop new outreach materials for developers, contractors, and property owners. These materials will explain the importance and usage of LID principles and BMPs.

#### 4.1.4 IDDE Outreach

The City will work with business and property owners/managers this year to provide outreach as part of the Privately Maintained Stormwater System Inspection Program. This year, the City developed IDDE educational brochures and updated its spill hotline business card.

#### 4.1.5 Stewardship Opportunities

The City provides multiple stewardship opportunities for volunteers each year including things like weed pulling and tree planting. The City also trains volunteers to take on individual volunteer projects such as removing noxious weeds around creeks. Stewardship opportunities and events are advertised on the City website, social media accounts, and on bulletin boards throughout Newcastle.

In 2021, the City joined the Adopt-a-Drain program, which encourages residents to adopt a storm drain to keep it clear of leaves, sediment, and trash. More information about the program can be found here: <https://wa.adopt-a-drain.org/>.

#### 4.1.6 Behavior Change Campaign

In 2020 and 2021, the City began to developing a new behavior change campaign for a new target audience and BMP, including a program evaluation plan. The program is based on local audience research, primarily from a 2019 Stormwater Awareness, Attitudes & Behavior Survey as well as a 2019 Dumpster Audit.

In 2021, the City participated in the regional Dumpster Lid Social Marketing campaign. The program was developed by February 1, 2021 and implemented April 1, 2021. Participation in a pilot program in early 2021 determined the effectiveness, successes, and challenges prior to fully launching the campaign city-wide. More information about the program can be found here: <https://www.wastormwatercenter.org/permit-assistance/municipal/dumpster-outreach-group/>

## 5. PUBLIC INVOLVEMENT AND PARTICIPATION

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This section summarizes the Phase II permit requirements for public involvement and participation, and describes current activities the City has underway for public involvement and participation.

Section S5.C.3 of the Phase II permit requires the City to include ongoing opportunities for public involvement through advisory councils, watershed committees, participation in developing rate structures, stewardship programs, environmental activities, or other similar activities.

The City is also required to make its SWMP document, annual report, and all other submittals required under the Phase II permit available to the public.

The latest SWMP document and annual report are posted on the City's website. The City encourages public comment in the development and implementation of the City's SWMP Plan. Comments can be addressed to:

SWM Division, Public Works Department  
12835 Newcastle Way, Suite 200  
Newcastle, WA 98056-1316  
(425) 649-4444  
SWM@newcastlewa.gov

## 5.1 Community Involvement

### 5.1.1 Community Feedback

The City encourages public comment in the development and implementation of the City's SWMP. The process to obtain feedback continues at public meetings concerning Phase II permit requirements and through email, in writing, or by phone. The latest program document and annual report are posted on the City's website.

### 5.1.2 Community Resources

The City uses the City Clerk's office for public notification of public meetings pertaining to Phase II permit requirements involving further development of the City's SWMP. The City uses the City website, calendar, social media, and occasionally flyers for notification of local stewardship and environmental activities/events/programs. The City re-designed its website in 2017, and the website is much more interactive. The webmaster adds posts and updates from the SWM Division that describe updates to current water quality monitoring, stormwater projects, and upcoming public participation opportunities.

The City has retained the following venues in an effort to keep its residents informed on development and implementation of the City's SWMP components:

- SWM Division webpage: The City's new, user-friendly website and social media allows us to post videos and other media to increase awareness.
- Public meetings for public input: City Council meetings and public open houses
- Newcastle community events: Newcastle Days, Concerts in the Park, and others

## 5.2 Community Stewardship Participation

The City is planning to provide a restoration project in 2020, as well as other outreach and participation opportunities. The City plans to continue the storm drain marker program.

In 2021, the City joined the Adopt-a-Drain program, which encourages residents to adopt a storm drain to keep it clear of leaves, sediment, and trash. More information about the program can be found here: <https://wa.adopt-a-drain.org/>.

## 6. MS4 Mapping and Documentation

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This section summarizes the Phase II Permit requirements for MS4 Mapping and Documentation, and describes current activities the City has planned to meet Permit requirements.

Section S5.C.4 of the Phase II Permit requires the City to include an ongoing program for electronically mapping and documenting the MS4. Specifically the City must maintain mapping data and features for the following items:

- All 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 permittee's MS4 that do not discharge stormwater to surface waters
- Tributary conveyances to all known outfalls and discharge points with a 24 inch nominal diameter or larger, or equivalent cross-sectional area for non-pipe systems

- 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.

Additionally, the City must begin collecting "size and material for all known MS4 outfalls during normal course of business and update records" and "complete mapping of all known connections from the MS4 to privately owned stormwater systems." (Ecology, 2019)

## 6.1 MS4 Mapping and Documentation Program Activities

The City's MS4 is mapped electronically in Geographic Information System (GIS). In 2020, the City will maintain existing maps and continue to add stormwater asset information in GIS, including verifying the "size and material for all known MS4 outfalls" while conducting outfall inspections. The MS4 GIS maps will be available for the public on the City's GIS Map Portal at <http://data-newcastlewa.opendata.arcgis.com/>.

## 7. ILLICIT DISCHARGE DETECTION AND ELIMINATION

This section summarizes the Phase II permit requirements for Illicit Discharge Detection and Elimination (IDDE), and describes current activities the City has underway. The City is required by Section S5.C.5 of the permit to implement an ongoing program to detect and remove illicit connections, discharges, and improper disposal, including any spills not under the purview of another responding authority, into the MS4 owned or operated by the City.



### 7.1 IDDE Program Activities

The City maintains ongoing IDDE programs and update municipal stormwater system mapping, as well as investigations and removal of illicit discharges and connections to the City stormwater system. The goals and requirements of the City's IDDE program are as follows:

- Maintain the 24 hour Spills Hotline.
- Train staff on the identification and reporting of illicit connections and discharges.
- Enforce water quality municipal code and impose penalties when violations occur. Newcastle Municipal Code 13.05.025 lists allowed and conditionally allowed discharges and gives the City the ability to impose penalties.
- Maintain and keep current the City's GIS database. The GIS database contains information on the City's MS4, wetlands, and receiving waters. The City adds new facilities to the GIS database and updates existing data as necessary.
- Include IDDE messaging in existing education and outreach activities and programs. The City's education and outreach outlets include its website, blog, social media accounts, and storm drain markers. Direct outreach is also used to address potential and existing illicit discharges. When necessary, direct outreach includes information about additional operational BMPs to end existing discharges and prevent future discharges.
- Track illicit discharges in spreadsheets, and when necessary in Cartegraph, TRAKit, or NPDES Pro. If an illicit discharge occurs, City staff provide education to the responsible party along with requiring containment and cleanup. Notice and Order of Water Quality Violations are assigned when

applicable, and include recommendations to prevent future spills or illicit discharges. Beginning January 1, 2021, the City will begin using Ecology’s new WQWebIDDE form to report illicit discharges.

- Address any illicit discharges that the City is found responsible for using the City’s Public Works Department IDDE internal protocols. These protocols include, when appropriate, notification, identification, investigation, cleanup, and reporting.
- Continue participating in the Regional Road Maintenance Endangered Species Act (ESA) Training Program and the Certified Erosion and Sediment Control Lead Training Program (CESCL). Participate in other training opportunities for illicit discharges and illicit connections on an as-needed basis.
- Continue implementing and utilizing Catch Basin/Manhole/Facility inspections and Outfall inspections as the IDDE Field Screening Methodology. The City uses the Herrera Environmental Consultants’ 2013 Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual (IDDE Manual) as a procedural guide and completes field screening for at least 12% of the MS4 each year.
- Continue the successful partnership with Coal Creek Utility District (CCUD) to ensure there are no illicit connections to the City’s MS4.

## 8. CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT, AND CONSTRUCTION SITES

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This section summarizes the Phase II permit requirements for runoff from new development, redevelopment, and construction sites; describes current activities the City has underway; and planned activities.

### 8.1 Permit Requirements

Section S5.C.6. of the Phase II permit requires that the City “implement and enforce a program to reduce pollutants in stormwater runoff to a regulated small MS4 from new development, redevelopment, and construction site activities,” (Ecology, 2019). Most of the new Phase II permit requirements for this section have implementation dates in 2022. As a continuing permittee, the City will continue to implement its existing programs as required by previous permits until the scheduled updates to programs are implemented.

Here is the language from the previous permit:

- a. Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects.

Each permittee shall include a permitting process with site plan review, inspection and enforcement capability to meet the standards listed in (i) through (iv) below, for both private and public projects, using qualified personnel (as defined in Definitions and Acronyms).

- 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.
- iii. Inspect all permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.

- iv. Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. Verify that a maintenance plan is completed and responsibility for maintenance is assigned for stormwater treatment and flow control BMPs/facilities. Enforce as necessary based on the inspection.
  - v. Compliance with the inspection requirements in (ii), (iii) and (iv) 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 scheduled inspections.
  - vi. An enforcement strategy shall be implemented to respond to issues of non-compliance.
- b. The program shall include provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities that are permitted and constructed.
  - c. The program shall make available as applicable copies of the "Notice of Intent for Construction Activity" and copies of the "Notice of Intent 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.
  - d. 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 shall 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.
  - e. Low impact development code-related requirements.
  - f. Watershed-scale stormwater planning.

## 8.2 Existing Programs

As described in the above section, the City continued to maintain existing development review and inspection programs as well as stormwater standards for controlling runoff from new development, redevelopment, and other construction sites in 2021. The City currently has an active program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities. The existing program currently applies to both public and private projects, including roads. The current compliance activities associated with the above permit requirements include:

- Existing municipal codes and engineering design standards that are enforced through the current permit, plan review, and inspection processes to reduce pollutants from stormwater runoff. The City has adopted the 2016 KCSWDM that gained equivalency from Ecology, as well as the 2016 City Addendum for surface and stormwater design review for development and redevelopment projects.
- Inspections and enforcement actions by staff, and associated records maintenance. There is a system of escalating enforcement procedures necessary to sustain the existing codes and standards throughout the construction/development process in Chapters 13.10 and 4.05 of the NMC.
- Inspections of all construction sites by the City prior to the start of construction, during construction, and post construction.

## 8.3 Program Updates

The City will update its program and implement new program requirements to meet additional requirements of the re-issued Phase II Permit before the deadline of June 30<sup>th</sup>, 2022.

# 9. OPERATIONS & MAINTENANCE PROGRAM

This section summarizes the Phase II permit requirements for Operations & Maintenance (O&M) and pollution prevention, and describes current activities the City has implemented to meet the Phase II permit section S5.C.7 requirements.



## 9.1 Inspection Program

The City conducts annual inspections of all municipally owned or operated permanent stormwater treatment and flow control facilities. Catch basins are inspected and maintained, if necessary, once every two years. The City implemented its asset management system, Cartegraph, in 2016 and the City utilizes Cartegraph for inspections data, photos, and maintenance tasks.

## 9.2 Maintenance Program

If necessary, inspections are followed by maintenance to ensure continued functionality. The City Inspector assigns maintenance or repair tasks in Cartegraph immediately following an inspection. The maintenance schedule is:

- Within 1 year for typical facility maintenance, except catch basins
- Within 6 months for catch basins
- Within 2 years for maintenance that requires capital construction of less than \$25,000.



## 9.3 Post-storm Inspection Program

The City conducts spot checks of potentially damaged permanent treatment and flow control facilities, after major (greater than 24-hour-10-year recurrence interval rainfall) storm events. If spot checks reveal widespread damage/maintenance needs, inspect all stormwater treatment and flow control facilities that may be affected.

At least 95 percent of all sites where inspection is required, either cyclically or storm-event related, are inspected.

## 9.4 Privately Maintained Stormwater System Inspection Program

In 2017, the City implemented a cloud-based system to manage the Privately Maintained Stormwater Inspection Program. The City inspects privately maintained stormwater systems as part of Phase II permit requirements, as well as to reduce flooding, protect water quality, and to protect the City's MS4. Inspections

are conducted either annually or every other year, depending on the Phase II permit requirements as they pertain to each privately maintained stormwater system. The City also provides education to property and/or business owners during the inspection process. The education includes: stormwater system knowledge, watershed knowledge, pollution prevention, and BMPs.

## 9.5 O&M Pollution Prevention

The City is continuing practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads, or highways owned or maintained by the City and road maintenance activities conducted by the City. The following activities are addressed:

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

## 9.6 Training & Regional Coordination

At least once per year, the City provides ongoing training for employees with construction, operation or maintenance job functions which may affect stormwater quality. In addition, the City typically coordinates with the Ecology Spill Response members for field training exercises.

City maintenance crews are responsible for spills response. Although City crews are primarily responsible for spills within the right-of-way, they are often the first group to respond to spills regardless of where they are located. Spill kits are provided in City maintenance vehicles to address minor spills. Assistance is sought out in the event that spill kits could not contain quantities that exceed its capacity.

The City also coordinates O&M timing and practices that may involve surface water run-on or shared pipes with neighboring jurisdictions to enhance downstream water quality.

The City purchased a Spill Response trailer in 2020 to supplement our program. The City will continued to use the Spill Response trailer in 2021.

## 9.7 Program Updates

The City will update its program and implement new program requirements to meet additional requirements of the re-issued Phase II Permit before the deadlines of June 30<sup>th</sup> and December 31, 2022.

## 10. Source Control Program for Existing Development

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A new source control program for existing development which meets all Phase II Permit requirements will be developed in 2021 and implemented no later than August 1, 2022.

## 11. MONITORING AND ASSESSMENT

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This section summarizes the Phase II permit requirements for monitoring and assessment, and describes current activities the City has implemented to meet the Phase II requirements.

Section S8 requires the City to:

- Notify DOE of its choice to independently conduct Status and Trends Monitoring and Effectiveness Studies, or participate by paying annually into the Regional Stormwater Monitoring Program (RSMP) that will be conducted by DOE.
- Pay into the RSMP to implement the Source Identification Information Repository (SIDR) element of the RSMP.
- Provide information as requested for effectiveness and source identification studies.

### 11.1 Current Activities

The City has chosen to pay into a collective fund for Phase II permit sections S8.A.2 *Regional Status and Trends Monitoring* and S8.B.2 *Stormwater Management Program (SWMP) Effectiveness and Source Identification Studies*. In 2021, the City continued to meet its annual payment obligation. In addition, the City continued to collaborate with the King County Lake Stewardship Monitoring Program to conduct water quality monitoring at Lake Boren, as well as coordinate with other agencies to participate in regional studies and monitoring.

## DEFINITIONS AND ACRONYMS

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**AKART** means all known, available, and reasonable methods of prevention, control and treatment. See also State Water Pollution Control Act, chapter 90.48.010 RCW and chapter 90.48.520 RCW.

**Applicable TMDL** means a TMDL which has been approved by EPA on or before the issuance date of this Permit, or prior to the date that Ecology issues coverage under this Permit, whichever is later.

**Beneficial Uses** means uses of waters of the state, which include but are not limited to use for domestic, stock watering, industrial, commercial, agricultural, irrigation, mining, fish and wildlife maintenance and enhancement, recreation, generation of electric power and preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the state.

**Best Management Practices** are the schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices approved by Ecology that, when used singly or in combination, prevent or reduce the release of pollutants and other adverse impacts to waters of Washington State.

**BMP** means Best Management Practice.

**Bypass** means the diversion of stormwater from any portion of a stormwater treatment facility.

**Census** defined urban area means Urbanized Area.

**Circuit** means a portion of a MS4 discharging to a single point or serving a discrete area determined by traffic volumes, land use, topography or the configuration of the MS4.

**City** means the City of Newcastle.

**Component** or **Program Component** means an element of the Stormwater Management Program listed in S5 Stormwater Management Program for Cities, Towns, and Counties or S6 Stormwater Management Program for Secondary Permittees, S7 Compliance with Total Maximum Daily Load Requirements, or S8 Monitoring of this permit.

**Conveyance system** means that portion of the municipal separate storm sewer system designed or used for conveying stormwater.

**CWA** means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L.(6-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.).

**Discharge Point** means the location where a discharge leaves the Permittee's MS4 through the Permittee's MS4 facilities/BMPs designed to infiltrate.

**Ecology** means the Washington State Department of Ecology.

**Entity** means a governmental body, or a public or private organization.

**EPA** means the U.S. Environmental Protection Agency.

**General Permit** means a permit which covers multiple dischargers of a point source category within a designated geographical area, in lieu of individual permits being issued to each discharger.

**Groundwater** means water in a saturated zone or stratum beneath the surface of the land or below a surface water body. Refer to chapter 173-200 WAC.

**Hazardous substance** means any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical, or biological properties described in WAC 173-303-090 or WAC 173-303- 100.

**Heavy equipment maintenance** or **storage yard** means an area where any heavy equipment, such as mowing equipment, excavators, dump trucks, backhoes, or bulldozers and other heavy equipment are washed, maintained, or stored.

**Hydraulically near** means runoff from the site discharges to the sensitive feature without significant natural attenuation of flows that allows for suspended solids removal. See Appendix 7 Determining Construction Site Sediment Damage Potential for a more detailed definition.

**Hyperchlorinated** means water that contains more than 10 mg/Liter chlorine.

**Illicit connection** means any infrastructure connection to the MS4 that is not intended, permitted or used for collecting and conveying stormwater or non-stormwater discharges allowed as specified in this permit (S5.C.5). Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the MS4

**Illicit discharge** means any discharge to a MS4 that is not composed entirely of stormwater or of non-stormwater discharges allowed as specified in this permit (S5.C.5).

**Impervious surface** means a non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non- vegetated surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or stormwater areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater.

**Land disturbing activity** means any activity that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to clearing, grading, filling and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered land disturbing activity. Vegetation maintenance practices, including landscape maintenance and gardening, are not considered land disturbing activity. Stormwater facility maintenance is not considered land disturbing activity if conducted according to established standards and procedures.

**LID** means low impact development.

**LID BMP** means low impact development best management practices.

**LID Principles** means land use management strategies that emphasize conservation, use of onsite natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.

**Low Impact Development** means a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

**Low impact development best management practices** means distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration. LID BMPs include, but are not limited to, bioretention, rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, vegetated roofs, minimum excavation foundations, and water re-use.

**Material Storage Facilities** means an area where bulk materials (liquid, solid, granular, etc.) are stored in piles, barrels, tanks, bins, crates, or other means.

**Maximum Extent Practicable** refers to paragraph 402(p)(3)(B)(iii) of the federal Clean Water Act which reads as follows: Permits for discharges from municipal storm sewers shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system, design, and engineering methods, and other such provisions as the Administrator or the State determines appropriate for the control of such pollutants.

**MEP** means Maximum Extent Practicable.

**MS4** means municipal separate storm sewer system.

**Municipal Separate Storm Sewer System (MS4)** means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains): (i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of Washington State. (ii) Designed or used for collecting or conveying stormwater. (iii) Which is not a combined sewer; (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.; and (v) Which is defined as “large” or “medium” or “small” or otherwise designated by Ecology pursuant to 40 CFR 122.26.

**National Pollutant Discharge Elimination System (NPDES)** means the national program for issuing, modifying, revoking, and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the state from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington State Department of Ecology.

**Native vegetation** means vegetation comprised of plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and which reasonably could have been expected to naturally occur on the site. Examples include trees such as Douglas Fir, western hemlock, western red cedar, alder, big-leaf maple; shrubs such as willow, elderberry, salmonberry, and salal; and herbaceous plants such as sword fern, foam flower, and fireweed.

**New development** means land disturbing activities, including Class IV General Forest Practices that are conversions from timber land to other uses; structural development, including construction or installation of a building or other structure; creation of hard surfaces; and subdivision, short subdivision and binding site plans, as defined and applied in chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development. Refer to Appendix 1 for a definition of hard surfaces.

**NOI** means Notice of Intent.

**Notice of Intent** means the application for, or a request for coverage under a General Permit pursuant to WAC 173-226-200.

**Notice of Intent for Construction Activity** means the application form for coverage under the Construction Stormwater General Permit.

**Notice of Intent for Industrial Activity** means the application form for coverage under the General Permit for Stormwater Discharges Associated with Industrial Activities.

**NPDES** means National Pollutant Discharge Elimination System.

**Outfall** means a point source as defined by 40 CFR 122.2 at the point where a discharge leaves the Permittee’s MS4 and enters a surface receiving waterbody or surface receiving waters. Outfall does not include pipes, tunnels, or other conveyances which connect segments of the same stream or other surface waters and are used to convey primarily surface waters (i.e., culverts).

**Permittee**, unless otherwise noted, means city, town, or county Permittee, Co-Permittee, New Permittee, Secondary Permittee, and New Secondary Permittee.

**Physically Interconnected** means that one MS4 is connected to another storm sewer system in such a way that it allows for direct discharges to the second system. For example, the roads with drainage systems and municipal streets of one entity are physically connected directly to a storm sewer system belonging to another entity.

**Project site** means that portion of a property, properties, or right-of-ways subject to land disturbing activities, new hard surfaces, or replaced hard surfaces. Refer to Appendix 1 for a definition of hard surfaces.

**QAPP** means Quality Assurance Project Plan.

**Qualified Personnel** means someone who has had professional training in the aspects of stormwater management for which they are responsible and are under the functional control of the Permittee. Qualified Personnel may be staff members, contractors, or volunteers.

**Quality Assurance Project Plan** means a document that describes the objectives of an environmental study and the procedures to be followed to achieve those objectives.

**RCW** means the Revised Code of Washington State.

**Receiving waterbody or receiving waters** means naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and marine waters, or ground water, to which a MS4 discharges.

**Redevelopment** means, on a site that is already substantially developed (i.e., has 35% or more of existing hard surface coverage), the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land disturbing activities. Refer to Appendix 1 for a definition of hard surfaces.

**Regional Stormwater Monitoring Program** means, for all of western Washington, a stormwater-focused monitoring and assessment program consisting of these components: status and trends monitoring in small streams and marine nearshore areas, stormwater management program effectiveness studies, and a source identification information repository (SIDIR). The priorities and scope for the RSMP are set by a formal stakeholder group. For this permit term, RSMP status and trends monitoring will be conducted in the Puget Sound basin only.

**RSMP** means Regional Stormwater Monitoring Program.

**Runoff** is water that travels across the land surface and discharges to water bodies either directly or through a collection and conveyance system. See also “Stormwater.”

**Sediment/Erosion-Sensitive Feature** means an area subject to significant degradation due to the effect of construction runoff, or areas requiring special protection to prevent erosion. See Appendix 7 Determining Construction Site Sediment Transport Potential for a more detailed definition.

**Shared water bodies** means water bodies, including downstream segments, lakes and estuaries that receive discharges from more than one Permittee.

**SIDIR** means Source Identification Information Repository.

**Significant contributor** means a discharge that contributes a loading of pollutants considered to be sufficient to cause or exacerbate the deterioration of receiving water quality or instream habitat conditions.

**Source control BMP** means a structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. Structural Source Control BMPs are physical, structural, or mechanical devices, or facilities that are intended to prevent pollutants from entering stormwater. Operational BMPs are non-structural practices that prevent or reduce pollutants from entering stormwater.

**Stormwater** means runoff during and following precipitation and snowmelt events, including surface runoff, drainage or interflow.

**Stormwater Associated with Industrial and Construction Activity** means the discharge from any conveyance which is used for collecting and conveying stormwater, which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, or associated with clearing, grading and/or excavation, and is required to have an NPDES permit in accordance with 40 CFR 122.26.

**Stormwater Management Program** means a set of actions and activities designed to reduce the discharge of pollutants from the MS4 to the MEP and to protect water quality, and comprising the components listed in S5 (for cities, towns, and counties) or S6 (for Secondary Permittees) of this Permit and any additional actions

necessary to meet the requirements of applicable TMDLs pursuant to S7 Compliance with TMDL Requirements, and S8 Monitoring and Assessment.

**Stormwater Treatment and Flow Control BMPs/Facilities** means detention facilities, treatment BMPs/facilities, bioretention, vegetated roofs, and permeable pavements that help meet Appendix 1 Minimum Requirements #6 (treatment), #7 (flow control), or both.

**SWMP** means Stormwater Management Program.

**TMDL** means Total Maximum Daily Load.

**Total Maximum Daily Load** means a water cleanup plan. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources.

The calculation must include a margin of safety to ensure that the water body can be used for the purposes the state has designated. The calculation must also account for reasonable variation in water quality. Water quality standards are set by states, territories, and tribes.

They identify the uses for each water body, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing), and the scientific criteria to support that use. The Clean Water Act, section 303, establishes the water quality standards and TMDL programs.

**Tributary conveyance** means pipes, ditches, catch basins, and inlets owned or operated by the Permittee and designed or used for collecting and conveying stormwater.

**UGA** means Urban Growth Area.

**Urban Growth Area** means those areas designated by a county pursuant to RCW 36.70A.110.

**Urbanized Area** is a federally-designated land area comprising one or more places and the adjacent densely settled surrounding area that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. Urbanized Areas are designated by the U.S. Census Bureau based on the most recent decennial census.

**Vehicle Maintenance** or **Storage Facility** means an area where any vehicles are regularly washed or maintained, or stored.

**Water Quality Standards** means Surface Water Quality Standards, chapter 173-201A WAC, Ground Water Quality Standards, chapter 173-200 WAC, and Sediment Management Standards, chapter 173-204 WAC.

**Waters of the State** means those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the state" as defined in chapter 90.48 RCW which includes lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and water courses within the jurisdiction of the State of Washington.

**Waters of the United States** refers to the definition in 40 CFR 122.2.