



State of Oregon
Department of
Environmental
Quality

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Individual Permit

National Pollutant Discharge Elimination System Municipal Separate Storm Sewer Systems Phase I Individual Permit

Modification #1

Oregon Department of Environmental Quality
Stormwater Program
700 NE Multnomah St., Suite 600
Portland, OR 97232

DEQ initiated major permit modification of Schedule B.1 to modify the monitoring required for pesticides.

Issued pursuant to Oregon Revised Statute 468B.050 and Section 402 of the Federal Clean Water Act

Issued to:	Clackamas County	City of Gladstone	Permit No.: 101348
	City of Happy Valley	City of Johnson City	File No.: 108016
	City of Lake Oswego	City of Milwaukie	
	City of Oregon City	City of Rivergrove	
	City of West Linn	City of Wilsonville	
	Oak Lodge Water Services District	Water Environment Services	

Major Receiving Streams:

Basins	Willamette River
Sub-basins	Lower Willamette River, Clackamas River, Tualatin River
Streams	Abernathy Creek, Barlow Creek, Beaver Creek, Boardman Creek, Carli Creek, Clackamas River, Cow Creek, Deer Creek, Fanno Creek, Johnson Creek, Kellogg Creek, Livesay Creek, Mt. Scott Creek, Newell Creek, Oswego Lake, Park Place Creek, Pecan Creek, Phillips Creek, Richardson Creek, River Forest Creek, Rock Creek, Sieben Creek, Springbrook Creek, Tanner Creek, Trillium Creek, Tryon Creek, Tualatin River, Willamette River, and other creeks and tributaries, named and unnamed, to which the co-permittees' MS4s discharge.

Wasteload Allocations (if any):

A Total Maximum Daily Load (TMDL) that includes waste load allocations (WLAs) for urban stormwater has been established for the Willamette River Basin, including the Lower Willamette River, Clackamas River and Tualatin River subbasins, Springbrook Creek, and Oswego Lake. Waste load allocations are listed on the next page and addressed in Schedule D of this permit.

Sources Covered By This Permit

This permit covers all existing and new discharges of stormwater from the Municipal Separate Storm Sewer Systems (MS4s) within the services boundaries of the incorporated cities or within the service areas of Water Environment Services (WES), and Oak Lodge Water Services District that are within the Portland Metro Area's Urban Growth Boundary (UGB), in accordance with the requirements, limitations and conditions set forth.

Christine SVETKOVICH

Christine Svetkovich
Northwest Region Administrator

May 4, 2023
Issuance Date

May 5, 2023
Effective Date

WLAs Per Co-Permittee Under This Permit

DMA/Permittee Name	Final Revised Willamette Basin Mercury TMDL/WQMP (2019-DEQ)	TMDL for Mercury in the Willamette Basin, OR (2019-EPA)	Willamette Basin Mainstem Bacteria TMDL (2006)	Willamette Basin TMDL: Lower Willamette Subbasin (2006)	Tualatin TMDL (2012)	Sandy Basin TMDL (2005)
Gladstone	Total mercury	Total mercury	E.coli	E.coli		
Johnson City	Total mercury	Total mercury	E.coli	E.coli		
Lake Oswego	Total mercury	Total mercury	E.coli	E.coli	Bacteria, Chlorophyll a (Total Phosphorous), Dissolved Oxygen, pH	
Milwaukie	Total mercury	Total mercury	E.coli	E.coli, DDT		
Oak Lodge Water Services District	Total mercury	Total mercury	E.coli	E.coli		
Oregon City	Total mercury	Total mercury	E.coli	E.coli		
Rivergrove (WES)	Total mercury	Total mercury			Bacteria, Chlorophyll a (Total Phosphorous), Dissolved Oxygen, pH	
Clackamas County	Total mercury	Total mercury	E.coli	E.coli, DDT		E.coli
Happy Valley	Total mercury	Total mercury	E.coli	E.coli, DDT		
Water Environment Services	Total mercury	Total mercury	E.coli	E.coli		
West Linn	Total mercury	Total mercury	E.coli		Bacteria, Chlorophyll a (Total Phosphorous), Dissolved Oxygen, pH	
Wilsonville	Total mercury	Total mercury	E.coli			

More information on TMDLs in Oregon is available at <https://www.oregon.gov/deq/wq/tmdls/Pages/default.aspx>

PERMITTED ACTIVITIES

Until this permit expires, is modified or revoked, the co-permittees are authorized to discharge municipal stormwater to surface waters of the state only in conformance with the requirements, limitations and conditions set forth in the following schedules. Where conflict exists between specific conditions (found in Schedules A-D) and general conditions (Schedule F), the specific conditions supersede the general conditions.

Unless specifically authorized by this permit, another National Pollutant Discharge Elimination System permit, or other applicable state or federal permit, any other direct or indirect discharges to waters of the state is prohibited, including discharges to an underground injection control system.

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MS4 Phase I Individual Permit
Clackamas Group
Modification Effective: May 5, 2023
Expiration: September 30, 2026

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SCHEDULE A - CONDITIONS FOR MUNICIPAL STORMWATER DISCHARGES

1. Authorized Discharges

Subject to the terms and conditions of this permit, the co-permittees are authorized to discharge municipal stormwater to surface waters of the state from their MS4, within the defined permit coverage area.

This permit also conditionally authorizes discharges from the co-permittees' MS4s, which are categorized as allowable non-stormwater discharges in Schedule A.1.d.

a. Requirement to Reduce the Discharge of Pollutants

The co-permittees must continue to implement, adaptively manage, and enforce a Stormwater Management Program (SWMP) designed to reduce pollutants from the MS4 to the maximum extent practicable, to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act. Compliance with this permit and implementation of the DEQ-approved SWMP Document in accordance with Schedule A.2, establishes the MEP requirement, unless DEQ modifies the permit as provided in Oregon Administrative Rule (OAR) 340-045-0055 to require additional controls.

The co-permittees are responsible for compliance within their respective jurisdictions as identified in this permit, and are not responsible for compliance outside of their jurisdictions.

b. Water Quality Standards

Compliance with all permit requirements constitutes compliance with applicable water quality standards as established in OAR 340-041.

If a co-permittee or DEQ determines that a pollutant in a co-permittee's MS4 discharge is causing or contributing to an exceedance of an applicable water quality standard based on site-specific credible evidence, the co-permittees must take the following corrective actions:

- i. Within 48 hours of becoming aware of or being notified of the exceedance, the co-permittee must begin to investigate the cause of the exceedance;
- ii. Within 30 days of becoming aware of the exceedance, the co-permittee must notify DEQ in writing of the exceedance (for on-going or continuing exceedances, a single written notification will fulfill this requirement); and
- iii. Within 60 days of becoming aware of or being notified of the exceedance, the co-permittee must submit a report to DEQ that documents the following:
 - (A) The results of the investigation, including the date the exceedance was discovered or the date that the co-permittee was notified by DEQ;
 - (B) A description of the conditions that are known or suspected to have caused or contributed to the exceedance; and
 - (C) Corrective actions taken or planned, if any, including the date corrective action was completed or is expected to be completed.

DEQ will review the report submitted and either approve it or require modifications. The co-permittees must implement the corrective action(s) in accordance with the schedule approved by DEQ. DEQ may require a timeline and enforceable milestones for completion of the corrective actions. The details of all corrective actions implemented associated with Schedule A.1.b.iii must be included in the subsequent annual report.

If the exceedance is due to an illicit discharge and the co-permittee confirms that the required response per Schedule A.3.c has occurred, the requirements listed in Schedule A.1.b.i., ii, and iii are not required, though the details of the illicit discharge and response must be included in the subsequent annual report in the illicit discharge section.

If the co-permittee determines that the exceedance is already being addressed by actions associated with implementation of a DEQ-approved Total Maximum Daily Load (TMDL) Implementation Plan, the co-permittee shall submit a report to DEQ with the next annual report that documents the following:

- iv. The results of the investigation, including the date the exceedance was discovered;
- v. A description of the conditions that are known or suspected to have caused or contributed to the exceedance; and
- vi. The applicable actions of the co-permittee's DEQ-approved TMDL Implementation Plan that were or are being implemented.

c. Limitations of Coverage

The permit does not authorize:

- i. Stormwater discharges associated with industrial activities [as defined in 40 CFR §122.26(b)(14)] or stormwater associated with construction activities [as defined in 40 CFR §122.26(b)(14)(x) and (b)(15)]. Such discharges are regulated through DEQ's NPDES Industrial Stormwater General Permits and DEQ's NPDES Construction Stormwater General Permits; or another appropriate NPDES permit.
- ii. Stormwater discharges to underground injection control (UIC) systems.

d. Allowable Non-Stormwater Discharges

The co-permittees must effectively prohibit non-stormwater discharges into the MS4s unless such discharges are otherwise permitted under this subsection, another NPDES permit or other applicable state or federal permit, or are otherwise exempted or authorized by DEQ. The permit does not authorize the discharge of non-stormwater from the MS4, except where such discharges satisfy one of the following conditions:

- i. The non-stormwater discharge is regulated under a separate NPDES permit.
- ii. The non-stormwater discharge is categorized as an authorized or allowable non-stormwater discharge listed below:
 - (A) Uncontaminated water line flushing.
 - (B) Landscape irrigation. For co-permittee owned or operated areas landscape irrigation will be considered allowable only if pesticides and fertilizers are applied in accordance with manufacturer's instructions.
 - (C) Diverted stream flows.
 - (D) Uncontaminated groundwater infiltration (as defined at 40 CFR § 35.2005(20)) to separate storm sewers.
 - (E) Rising groundwaters.
 - (F) Uncontaminated pumped ground water.
 - (G) Potable water sources (including potable groundwater monitoring wells and draining and flushing of municipal potable water storage reservoirs).
 - (H) Startup flushing of groundwater wells.
 - (I) Foundation, footing and crawlspace drains (where flows are not contaminated).
 - (J) Uncontaminated air conditioning or compressor condensate.
 - (K) Irrigation water.

- (L) Springs.
- (M) Lawn watering.
- (N) Individual residential car washing.
- (O) Charity car washing (provided that steam, and heated water are not used, and that washing is restricted to the outside of the vehicle with no rinsing or washing of engines, transmissions, or undercarriages). Co-permittees should consider requiring that only phosphate-free soaps/detergents are used and provide educational materials on the harmful effects that other chemicals, soaps, detergents, and heated water or steam can cause.
- (P) Flows from riparian habitats and wetlands.
- (Q) Dechlorinated swimming pool discharges including hot tubs (heated water must be cooled for at least 12 hours prior to discharge). Swimming pool and hot tub discharges with other pollutants such as bromine and copper may not be discharged to the MS4.
- (R) Fire hydrant flushing and emergency firefighting activities.
- (S) Street and pavement washwaters, including for bridges or pedestrian bridges (provided that chemicals, soaps, detergents, steam, or heated water are not used). Co-/permittees should also consider requiring that areas to be washed first be swept prior to washing, and sweepings collected for proper disposal outside the MS4 system.
- (T) Routine external building wash-down (provided that chemicals, soaps, detergents, steam or heated water are not used).
- (U) Water associated with dye testing activity.
- (V) Discharges of treated water from investigation, removal and remedial actions selected or approved by DEQ pursuant to Oregon Revised Statute (ORS) Chapter 465.
- (W) Any other discharge deemed as *de minimis* by DEQ.

If any of these allowable non-stormwater discharges are or becomes a significant source of pollutants, the co-permittee must prohibit that discharge or require implementation of appropriate best management practices (BMPs) to reduce the discharge of pollutants associated with the source before discharge to the MS4.

2. Permittee's Responsibilities

Each co-permittee is responsible for permit compliance related to its permit coverage area, or where this permit requires the specific co-permittees to take an action.

a. Coordination Among Other Public Entities and Joint Agreements

- i. A co-permittee may work with or delegate implementation of one or more stormwater management program control measure to other regulated MS4's or entities. The co-permittees are responsible for compliance with any permit conditions that another entity fails to implement.
- ii. If a co-permittee elects to work with or delegate implementation of one or more SWMP control measures to another co-permittee or entity, there must be a written agreement between the co-permittee and the other entity memorializing the delegation. This agreement must be made available to DEQ upon request.

b. Maintain Adequate Legal Authority

No later than December 1, 2024 the co-permittees must adopt, update, and maintain adequate legal authority through ordinance(s), code(s), interagency agreement(s), contract(s), and/or other mechanisms to control pollutant discharges into and discharges from its MS4 and to implement and enforce the conditions of this permit, to the extent allowable pursuant to the respective authority granted under state law.

If existing ordinances or regulatory mechanisms are insufficient to meet the criteria required by this permit, the co-permittees must adopt new ordinances. If a co-permittee does not have the authority to adopt ordinances, the co-permittee must utilize all relevant regulatory mechanisms available to it as allowed pursuant to applicable state law.

c. SWMP Document

The co-permittees must develop and maintain written Stormwater Management Program Documents (referred to as SWMP Documents), which describe in detail how the co-permittees implement the required control measures in this permit and reduce the discharge of pollutants. The SWMP Document (whether shared by co-permittees or separate) must be maintained over the course of the permit term and must describe programs and BMPs or refer to publicly available documents detailing the co-permittees' schedules for implementation of any control measure components to be developed during the term of this permit. The SWMP Document is subject to approval by DEQ, and is a requirement of this permit.

Documentation of the actions or activities required by this Permit or described in the SWMP Document must be submitted to DEQ upon request. If any requirement of this permit is being fulfilled by an agreement with another entity in accordance with Schedule A.2.a, the SWMP Document must describe how the requirement is being fulfilled and refer to or include any written agreements describing each party's role.

The co-permittees must make the first iteration of the SWMP Document(s) available for public review prior to submission to DEQ, by at a minimum, posting to the publicly accessible website required in Schedule A.3.b.i. The SWMP Document is due to DEQ on December 1, 2022, after which DEQ will review and approve the submission or require modification(s) of it. The final approved version of the SWMP Document must thereafter be made available to the public through the co-permittees' websites. If DEQ notifies a co-permittee that changes to the SWMP Document are necessary pursuant to Schedule A.2.c or A.2.f, the notification will offer the co-permittees an opportunity to propose alternative program changes to meet the objectives of the requested modification. The co-permittees must implement the approved SWMP Document(s).

The DEQ-approved Stormwater Management Plan currently in effect at the time of this permit renewal should continue to be implemented until the SWMP Document has been approved by DEQ.

d. SWMP Information and Metrics

The co-permittees must track activities and document program implementation of the SWMP control measures (e.g., the number of inspections, enforcement actions, and/or types of public education actions, etc.), and cite relevant information and metrics, reflecting the specific reporting period, in each Annual Report. These metrics should be used by the co-permittees for adaptive management purposes, and where they indicate a trend of reduced effectiveness or performance (e.g., fewer citizens engaged by outreach efforts) the co-permittees are required to consider whether programmatic improvements can be made to reverse the trend.

e. SWMP Resources

Each co-permittee must provide adequate finances, staff, equipment, and other support capabilities to implement the control measures and other requirements outlined in this permit.

f. Review and Modification of the SWMP Document

The co-permittees must continue to follow an adaptive management approach developed under the previous permit iteration in order to assess and modify, as necessary, any or all existing SWMP components and adopt new or revised SWMP components to achieve reductions in

stormwater pollutants to the MEP. In addition to elements required on particular schedules by this permit (i.e., Schedules A.3.c.v, A.3.d.v, and A.3.e.ii) co-permittees may update actions and/or activities described in the approved SWMP Document for adaptive management purposes in accordance with the following procedures:

- i. Modifications that add elements to the approved SWMP Document may be made by the co-permittees at any time. A description of any modifications shall be included in the Annual Report for that year.
- ii. Modifications to delete, adjust, or replace elements in the approved SWMP Document with an alternate action or activity may be made by the co-permittees at any time. Modification must be supported by documentation to be submitted to DEQ with the subsequent annual report, which must include:
 - (A) An analysis of why the new action is an appropriate alternative from the standpoint of effectiveness, feasibility and/or cost; and,
 - (B) Expectations on the effectiveness of the replacement action or activity.

3. Stormwater Management Program Control Measures

Until the SWMP Document required per Schedule A.2.c. is approved by DEQ, the co-permittees must continue to implement all existing SWMP control measures appropriate to their jurisdictions, and, after the effective date of the permit, must begin to revise their SWMP control measures, as needed, in order to implement any new control measure components required by this permit.

Table 1 identifies required due dates for new program control measures. DEQ may extend the due date(s) or implementation date(s) for any individual stormwater management plan control measure in the event of any extraordinary circumstances including but not limited to pandemic, wildfire, earthquake, flood or other natural disaster provided that the co-permittee requests an extension in advance and provides all documentation available regarding the specific impacts as to why the deadline cannot be met. In that circumstance, DEQ will respond to the extension request and will document any revised due date(s) when applicable.

a. Public Education and Outreach

The co-permittees must continue to implement a documented public education and outreach strategy to inform the public about the impacts of stormwater discharges on receiving waterbodies and the actions that they can take to reduce pollutants in stormwater runoff. The education and outreach strategy must identify pollutants of concern, the priority audience(s), specific education and/or activities, the entity or individual responsible for implementation, and be designed to address pollution from municipal stormwater within the co-permittees' communities. The strategy may incorporate elements of cooperative efforts undertaken with other regulated MS4s or efforts by other groups or organizations and must be included in the SWMP Document directly or by reference and be prepared to initiate implementation upon DEQ's approval of the SWMP Document.

i. Education and Outreach Program

The co-permittees' public education and outreach programs must include educational materials, activities and/or actions for the community. At a minimum, educational efforts should prioritize and focus on audience groups listed in Schedule A.3.a.iii, as applicable to the co-permittees' community and water quality concerns. The goal of the education and outreach program is to change the behaviors and practices by the public and the business community that cause or contribute to adverse stormwater impacts on receiving waters and

to identify and remove barriers to adopting alternative behaviors and practices, if possible. The program should promote information and specific actions to:

- (A) Increase audience understanding of specific stormwater quality issues in the waterways of the community and which pollutants, products, and behaviors contribute to the problems;
- (B) Communicate and demonstrate how to reduce pollutant discharges in stormwater runoff;
- (C) Encourage participation by the public in the protection and enhancement of local waterways and wildlife, as well as responsibility in behaviors to prevent illicit discharge from entering the MS4 or impacting receiving waters; and,
- (D) Promote, publicize, and facilitate reporting of illicit discharges.

To be considered adequate, the public education and outreach program must at a minimum include the activities in Schedule A.3.a.ii-iv below.

ii. Stormwater Education Activities

The co-permittees must contribute to, distribute, or offer educational messages and/or activities to or for the public at similar levels of effort as those associated with the previous permit.

Educational messages or activities may include printed materials (e.g., brochures or newsletters); electronic materials (e.g., social media, websites, or e-newsletters); mass media (e.g., utility bill inserts, transit advertisements or signage in highly trafficked corridors, newspaper articles or public service announcements); workshops, or other educational events or formats.

The co-permittees may use existing materials if applicable. Giving consideration to the community's overall demographics and the prioritized audiences' demographics, the co-permittees must consider delivering messages in other languages and using other culturally relevant information and techniques to ensure diversity, equity, and inclusion, as applicable.

iii. Priority Audiences and Topics

The co-permittees must at minimum, conduct, participate in, and/or contribute to education and outreach to the priority audiences identified below, as applicable to the community and water quality concerns. The co-permittees must focus efforts on conveying relevant messages using the priority topics identified below or stormwater issues of significance in their community.

- (A) Priority Audiences:
 - 1. General public (e.g., renters, homeowners, homeowner associations, youth, and other groups);
 - 2. Local elected officials, land use planners, engineers, developers, and/or employees of the co-permittees responsible for implementing the SWMP, as appropriate;
 - 3. Construction site operators (See Schedule A.3.iii.B.10 below);
 - 4. Businesses (including industrial and commercial facilities); and,
 - 5. Any other groups/entities as appropriate.
- (B) Pollution Reduction Topics:
 - 1. Impacts of illicit discharges on receiving waters and how to report them.
 - 2. Appropriate practices or techniques to avoid adverse water quality impacts due to impervious surfaces.

3. BMPs for proper use, application, storage, and disposal of pesticides, herbicides, fertilizers, and other household chemicals.
4. BMPs to avoid or reduce discharge of litter and trash to the MS4 or surface waters.
5. BMPs for recycling programs.
6. BMPs to avoid discharges from power washing, carpet cleaning, and auto repair and maintenance.
7. Low-impact development and green infrastructure approaches.
8. Watershed awareness education, including how storm drains lead to local creeks and rivers, and potential impacts to fish and other wildlife.
9. Operation & Maintenance practices for privately owned stormwater quality management facilities.
10. Construction site control measures and BMPs, including information on where in-depth training on erosion prevention and sediment control can be obtained
11. Stormwater issues of significance identified by co-permittees.

iv. Tracking and Assessment

The co-permittees must describe the program in the SWMP Document and document implementation of the Public Education and Outreach requirements in each Annual Report. In each Annual Report, the co-permittees must summarize or report on metrics and/or tracking measures related to their implementation of the program (e.g., estimated number of members of each priority audience reached with each educational activity or type of educational activity, measurable goals reached, etc.), and plans for the following year.

b. Public Involvement and Participation

The co-permittees must continue to implement a public involvement and participation program that provides opportunities for effective public participation in the maintenance, further development, and/or adaptive management of each co-permittee's stormwater program. The co-permittees must comply with their public notice requirements, if any, when implementing a public involvement participation process.

i. Publicly Accessible Website

The co-permittees must each maintain and promote a publicly accessible website with information on the co-permittee's SWMP implementation, the SWMP Document, contact information, and educational materials. The website must be maintained with current information, and be reviewed for accuracy at least annually and kept updated. The co-permittee's website must incorporate the following:

- (A) Illicit discharge complaint or report requirements (see Schedule A.3.c.v).
- (B) Drafts of documents listed in this permit as requiring public comment (i.e., the SWMP Document in Schedule A.2.c, the Industrial/Commercial Facilities Strategy in Schedule A.3.g.ii, and the Monitoring Plan in Schedule B.1.c) must be posted and available for public comment for a minimum of 30 days, and comments must be considered prior to final issuance. Final reports, plans and other documents relevant to the MS4 programs must also be posted, as appropriate.
- (C) Links to ordinances, policies and/or guidance documents related to the construction, post-construction, and commercial/industrial stormwater management control programs, including education, training, licensing, and permitting.

(D) Contact information for relevant staff, including phone numbers, mailing addresses and email addresses.

ii. Stewardship Opportunity

The co-permittees must continue to create or partner in the development and/or implementation of stewardship opportunities to foster public involvement. The co-permittees shall provide at least one of the following stewardship opportunities or develop a more locally relevant equivalent:

- (A) Community watershed restoration or cleanup activities,
- (B) Storm drain marking or stenciling,
- (C) Volunteer monitoring,
- (D) Riparian plantings/facility enhancement,
- (E) Neighborhood low-impact development activities,
- (F) Adopt-A-Road or similar programs aimed at green infrastructure vegetation management,
- (G) Clean up events associated with waterways,
- (H) Community advisory committee, or
- (I) Other locally relevant opportunities.

iii. Tracking and Assessment

The co-permittees must describe the programs in the SWMP Document(s) and document implementation in each Annual Report. In each corresponding Annual Report, the co-permittees must summarize or report on metrics or tracking measures related to implementation of the program.

c. Illicit Discharge Detection and Elimination

The co-permittees must continue to implement and enforce a comprehensive program to detect and eliminate illicit discharges into the MS4, to the extent allowable by state laws. In addition, co-permittees must continue to implement procedures to prevent, contain, and respond to spills, as well as seepage from sanitary sewer system, which may discharge into the MS4 in accordance with all applicable federal and state laws, including proper notification to the Oregon Emergency Response System (OERS). An illicit discharge is any discharge to an MS4 that is not composed entirely of stormwater. Conditional exceptions are identified in Schedule A.1.d. Procedures and processes required below must be documented or referenced in the SWMP Document.

i. MS4 Map

(A) MS4 Map and Digital Inventory

The co-permittees must continue to maintain and update a current map of their MS4. The MS4 map may be in the form of a web-based or digital inventory, and must include the location of outfalls and an outfall inventory, conveyance system and structural stormwater control locations, and chronic illicit discharges as applicable (see Schedule A.3.c.i.B-D, below), as well as annual dry-weather priority screening sites as designated under Schedule A.3.c.v (Dry Weather Screening Program). The co-permittees must delineate their MS4s by storm sewer drainage basin or catchment area, as appropriate, and identify the location and characteristics of any ongoing dry weather flows.

(B) Outfall Inventory

The co-permittees must maintain inventories of all the known outfall locations, owned or operated by the co-permittees. The outfall location must include a unique identifier (e.g., alphanumeric code identifier), any geographic information (e.g., streets, manholes, or milepost markers) necessary to locate these outfalls in the field, and the name(s) of the receiving water(s). To the extent data are available, co-permittees should include outfall characteristics such as presence of dry weather flows and details of the collection area for each (e.g., approximate acreage and relative proportions of land uses contributing to the outfall, impervious area contributing stormwater, tree cover, etc.).

(C) Conveyance System and Stormwater Control Locations

The co-permittees must continue to maintain maps of the MS4 collection system and all known structural stormwater controls. Where applicable, features must include a unique identifier (e.g., alphanumeric code identifier) and any geographic information (e.g., streets, manholes, or milepost markers) necessary to locate these features in the field.

(D) Chronic Illicit Discharges

The co-permittees must include the location(s) of any known chronic illicit discharge(s), as necessary for ongoing investigations or repeat/recurring issues in dense areas or commercial districts, for example, as applicable.

Co-permittees must submit or provide access to their updated MS4 map that includes the appropriate descriptions with the initial SWMP Document No later than December 1, 2022, and thereafter must make map(s) and digital inventories available to DEQ upon request.

ii. Ordinance and/or Other Regulatory Mechanisms

The co-permittees must continue to prohibit non-stormwater discharges into the MS4 (except those conditionally allowed by Schedule A.1.d) through enforcement of an ordinance or other regulatory mechanism, to the extent allowable under state law. The co-permittees must implement appropriate enforcement procedures and actions to ensure compliance.

iii. Enforcement Procedures

The co-permittees must continue to implement their enforcement and response procedures as developed under the previous permit. The SWMP Document must describe or reference the enforcement and response procedures. The procedures should describe how repeat violations are addressed; the timelines for compliance; specifically address commercial and industrial facilities or activities as described in Schedule A.3.g of this permit; and consider factors such as the amount and type of pollutant discharged, and whether the discharge was intentional or accidental, if known, and whether the discharge could have been prevented.

iv. Program to Detect and Eliminate Illicit Discharges

At a minimum, the co-permittees' programs to detect and eliminate illicit discharges must include the following activities:

(A) Illicit Discharge Complaints or Reports

The co-permittees must publicize a phone number, webpage, and/or other communication channel that the public can use to report illicit discharges. The complaint/reporting communication channel must be answered or responded to by trained staff during normal business hours and must include a system to record or capture incoming complaints or reports during non-business hours.

(B) Response to Complaints or Reports

The co-permittees must respond to all complaints or reports of illicit discharges that have the potential to impact receiving waters through the MS4s. For discharges, including spills, which constitute a threat to human health, welfare, or the environment, the co-permittees must respond within 24 hours or as soon as possible after becoming aware of it if notified during weekends or after hours. Spills, or other illicit discharges, that may endanger human health or the environment must be reported in accordance with all applicable federal and state laws, including notification to the OERS (at 800-452-0311). For all other reports of illicit discharges, the co-permittees must respond within an average of two working days, and no greater than four working days.

The co-permittees' complaint response and the associated investigation must at minimum, use the following timelines:

1. Initial Investigation or Evaluation

Conduct an initial investigation or evaluation within five working days or refer the complaint to the appropriate agency.

2. Ongoing Illicit Discharges

If the elimination of the illicit discharge will take more than 15 working days due to technical, logistical, or other reasonable issues, the co-permittees must, within 20 working days of source identification, develop and begin implementation of an action plan to eliminate the illicit discharge in an expeditious manner.

Upon confirmation of an illicit connection, the co-permittees must use the Enforcement Procedures in a documented effort to eliminate the illicit connection within six months, unless otherwise approved by DEQ, to the extent allowable under state law. All known illicit connections to the MS4 must be eliminated.

3. Ongoing Illicit Discharges involving Capital Improvements

If the elimination of the illicit discharge involves the repair or replacement of the co-permittees' wastewater or storm sewer conveyance systems or other capital improvements, the co-permittee must remove the source of the illicit discharge within three years of the date of its identification.

(C) Notification of Other Authorities

If the illicit discharge originates from or discharges to outside the co-permittees' jurisdictional authority, the co-permittee must notify the proper jurisdictional authority as soon as practicable, and at least within one working day of becoming aware of the illicit discharge.

(D) Complaints Tracking

The co-permittees must continue to maintain a procedure or system to document all complaints or reports of illicit discharges into and from the MS4, and all associated investigation activities. The tracking system must be described in the SWMP Document, and complaint tracking information from each prior year must be summarized in each Annual Report.

v. Dry Weather Screening Program

At a minimum, the co-permittees must continue to implement a Dry Weather Screening Program at priority MS4 locations. The co-permittees must review and update the prioritization criteria for dry weather screening locations as described below by the due date of the Annual Report for the 2022-2023 reporting year (December 1, 2023). If necessary, as

specified in Schedule A.2.f, changes to criteria and procedures must be reported on in an update to the SWMP Document. The annual field screening must include a portion or all of the co-permittees' identified priority locations and include a process for information sharing with maintenance staff responsible for the programs required under Schedule A.3.f.iii (Pollution Prevention and Good Housekeeping for Municipal Operations: Inspection, Maintenance, and Cleaning of the MS4 System).

The dry-weather field screening activities should occur after an antecedent dry period of at least 72-hours. The dry-weather field screening activities must be documented and include:

(A) Annual Field Screening of Priority Locations

Priority locations must, when possible, be located at an accessible location downstream of any source of suspected illegal or illicit activity or location as identified by the co-permittees. Priority location designations must be based on analyses of risk of potential for illicit discharge(s), accounting for factors such as hydrological conditions, percent of impervious surface area, total drainage area of the location, population density of the location, infrastructure access density, traffic density, development age (age of the infrastructure and structures or buildings in the area), history of the area, land use types, personnel safety, accessibility, historical complaints or other appropriate factors as identified by the co-permittees. Priority field screening locations must also be identified on the MS4 mapping and digital inventory when the assessment is complete, and may change based on the above criteria if new information comes to light or if a new analysis is conducted.

(B) General Observations

General observations must include visual presence of flow, turbidity, oil sheen, trash, debris or scum, condition of conveyance system or outfall, color, odor, and any other relevant observations related to the potential presence of non-storm water or illicit discharges.

(C) Field Screening and Analysis

If flow is observed, and the source is unknown, a field investigation must be conducted to determine the cause of the dry-weather flow. The field investigation procedures must consider sampling for pollutant parameters that are likely to be found based upon the suspected source of discharge or by other effective investigatory approaches or means to identify the source or cause of the suspected illicit discharge. Field screening pollutant parameter action levels, identified by the co-permittees in response to previous permit requirements and updated as necessary, must be considered where appropriate.

(D) Pollutant Parameter Action Levels

The co-permittees must continue to utilize pollutant parameter action levels as part of the field screening. The pollutant parameter action levels and rationale must be documented in an enforcement response plan (or similar document) and included or linked/referred to in the SWMP Document. Indicator constituents used by the co-permittees' procedures may include but need not be limited to the following: pH, total chlorine, turbidity, temperature, conductivity, easily tested-for indicators of human waste, and sensory indicators (odor, color, sheen, visible suds or other floatables, etc.).

The co-permittees must include the Pollutant Parameter Action levels or associated Monitoring Plan by inclusion or reference in the SWMP Document.

(E) Laboratory Analysis

If general observations and field screening indicate an illicit discharge and the presence of a suspected illicit discharge cannot be identified through other investigatory methods, co-permittees must collect a water quality sample for laboratory analyses for ongoing discharges. The water quality sample must be analyzed for pollutant parameters or identifiers that will aid in the determination of the source of the illicit discharge. The types of pollutant parameters or identifiers may include, but are not limited to genetic markers, industry-specific toxic pollutants, or other pollutant parameters that may be specifically associated with a source type.

vi. Illicit Discharge Detection and Elimination Training and Education

The co-permittees must ensure that all persons responsible for investigating and eliminating illicit discharges and illicit connections into the MS4 are appropriately trained to conduct such activities. All staff directly responsible for conducting dry weather screening activities or responding to reports of illicit discharges and spills into the MS4 must be properly trained to conduct such activities, and training strategies and frequencies for staff must be documented and described or referenced in the SWMP Document.

vii. Tracking and Assessment

The co-permittees must track implementation of the IDDE program requirements. In each corresponding Annual Report, the co-permittees must summarize or report on metrics or tracking measures related to implementation of the program. The Annual Report should include updates regarding any capital improvements needed or implemented associated with the IDDE program.

d. Construction Site Runoff Control

The co-permittees must continue to implement and enforce a construction site runoff control program to reduce discharges of pollutants from construction sites in its coverage area. The co-permittees must continue to implement their existing construction site runoff program as the new requirements are developed and implemented.

i. Ordinance and/or Other Regulatory Mechanism

Through ordinance or other regulatory mechanism, and to the extent allowable under state law, the co-permittees must continue to require erosion, sediment, and waste materials management controls to be used and maintained at all qualifying construction projects from initial clearing through final stabilization to reduce pollutants in stormwater discharges to the MS4 from construction sites.

The co-permittees must require construction site operators to document site specific erosion and sediment controls for construction project sites that results in a minimum land disturbance of equal to or greater than 1,000 square feet.

The co-permittees must use appropriate enforcement procedures and actions to ensure compliance with Schedule A.3.d.ii-vi, below.

ii. Erosion and Sediment Control Plans (ESCPs)

The co-permittees must continue to maintain written specifications that address the proper installation and maintenance of erosion and sediment controls during all phases of construction activity occurring in their coverage area. The written specifications must include an ESCP template, worksheet, checklist, or similar document for construction site operators to document how erosion, sediment, and waste material management controls for non-stormwater wastes (e.g., discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste) will be implemented and maintained at the construction

project site. At a minimum, through ordinance or other regulatory mechanism the co-permittees must:

- (A) Require construction site operator to complete a site-specific Erosion and Sediment Control Plan or other documentation of site-specific controls prior to beginning construction/land disturbance;
- (B) Require the Erosion and Sediment Control Plan be maintained and updated as site conditions change, or as specified by the co-permittees;
- (C) Require Erosion and Sediment Control Plans to be kept on site and made available for review by the co-permittees, DEQ, or another administrating entity during site inspections or upon request; and,
- (D) Continue to ensure that ESCPs for construction sites disturbing one acre or greater are consistent with the substantive requirements of the State of Oregon's 1200-C NPDES permit ESCPs.

Co-permittees may require or issue a simplified ESCP or a list of expected outcomes with prescribed BMPs for small or low-risk construction sites, provided that the co-permittees' criteria and specifications are clear and documented or referenced in the SWMP Document, and provided that construction operators are required to meet expectations and keep documentation of how they meet those expectations on site for reference during operations, maintenance activities, and inspections. The co-permittees must include or refer to a description of all Erosion and Sediment Control Plan requirements in the SWMP Document.

iii. Erosion and Sediment Control Plans Review

At a minimum, the co-permittees must continue to implement procedures to review Erosion and Sediment Control Plans from construction projects that will result in land disturbance of equal to or greater than 1,000 square feet using a checklist or similar document to determine compliance with the ordinance or other regulatory mechanism required.

Erosion and Sediment Control Plan review procedures must include consideration of the construction activities' potential water quality impacts, and remain in accordance with applicable state and local public notice requirements.

iv. Construction Site Inspections

The co-permittees must continue to perform inspections of construction sites to ensure that the approved ESCP or other documented set of controls is properly implemented. The SWMP Document must describe or reference procedures, including:

(A) Minimum Triggers for Inspection

At a minimum, the co-permittees must inspect construction sites if:

1. Sediment and/or turbidity is visible in reported stormwater discharge or dewatering activities from the construction site;
2. A complaint or report is received; or
3. A site meets any other minimum triggers established under the co-permittees' already established inspection program.

(B) Minimum Inspection & Documentation Requirements

Co-permittee inspections of construction sites must follow standardized procedures for inspection and documentation of inspections. Procedures and requirements for inspection and documentation must be detailed in a manual referenced or linked to in the SWMP Document, and include minimum required outcomes, criteria, and/or BMPs for disturbed areas of the site, as well as locations of material and waste storage

areas, stockpile areas, construction site entrances and exits, sensitive areas, and points of discharge to the MS4 or receiving waters. The co-permittees must include or reference in the SWMP Document a description of how the co-permittees site inspection procedures ensure, accomplish, or generate the following:

1. A review and evaluation of the ESCP or other documented set of site-specific controls and the operator's records of maintenance or operation of BMPs where applicable, to determine if the described control measures were installed, implemented, and maintained properly.
2. An assessment of the site's compliance with the co-permittees' ordinances or requirements.
3. Documentation of visual observations and of any existing or potential non-stormwater discharges, illicit connections, and/or discharge of pollutants from the site, as well as of recommendations to the construction site operator for follow-up.
4. A written or electronic inspection report, with photographs as necessary, including documentation of all necessary follow-up actions (e.g., re-inspection, enforcement) to ensure compliance with their applicable requirements.
5. Follow up to verify proper implementation of corrective measures in cases where a co-permittee-employed or contracted inspector finds evidence of erosion or of deficiencies in BMP maintenance or in adherence to ordinances or other regulations, as well as documentation of the corrective action.

v. Enforcement Procedures

The co-permittees must continue to implement and maintain a written escalating enforcement and response procedure for all qualifying construction sites and summarize or reference in the SWMP Document. The procedure must address repeat violations through progressively stricter response, as needed, to achieve compliance. The escalating enforcement and response procedure must describe how the co-permittees will use enforcement techniques to ensure compliance. The enforcement procedures must include timelines for compliance and, when formulating response procedures and penalties should consider factors (or multipliers) such as the type and severity of pollutant discharge, and whether the discharge was intentional or accidental. If the escalating enforcement procedure already in place does not meet these requirements, a revision or update may be submitted with the Annual Report due December 1, 2023, and, if necessary as specified under Schedule A.2.f, added to the SWMP Document at that time.

vi. Construction Runoff Control Training and Education

The co-permittees must ensure that all staff responsible for ESCP reviews, site inspections, and enforcement of the co-permittees' requirements are trained or otherwise qualified to conduct such activities, and training strategies and frequencies must be described or referenced in the SWMP Document.

vii. Tracking and Assessment

The co-permittees must routinely or continuously track all construction sites that result in a total land disturbance of equal to or greater than 1,000 square feet. The inventory must include relevant contact information for each project (e.g., name, address, phone, etc.), the size of the project including area and/or volume of disturbance, the date the co-permittees approved the ESCP in accordance with Schedule A.4.d.iii or in accordance with coverage under the 1200-CN permit as applicable, and whether any complaints have been received or inspections made.

The co-permittees must also track implementation of activities required by the Construction Site Runoff program. In each corresponding Annual Report, the co-permittees must summarize metrics or tracking measures related to implementation of the program, which may include but is not limited to number of regulated construction projects, number of inspections, and number of enforcement actions.

e. Post-Construction Site Runoff for New Development and Redevelopment

The co-permittees must continue to implement their post-construction stormwater pollutant and runoff control program as they develop, implement, and enforce the requirements of Schedule A.3.e to control stormwater runoff from new development and redevelopment project sites in its coverage area and reduce the discharge of pollutants. The co-permittees must describe or refer to full documentation of its programs in the SWMP Document.

i. Ordinance and/or Other Regulatory Mechanism

Through ordinance or other regulatory mechanism, to the extent allowable under state law and within the constraints of land use and zoning regulations, the co-permittees must require the following for project sites discharging stormwater to the MS4 that create or replace impervious surface area at or above the threshold area indicated for each co-permittee in Table 1:

- (A) The use of stormwater controls at all qualifying sites.
- (B) A site-specific stormwater management approach that targets natural surface or predevelopment hydrological function through the installation and long-term operation and maintenance of stormwater controls, with focus on management of quantity and quality of stormwater discharge.
- (C) Long-term operation and maintenance of stormwater controls at project sites that are under the ownership of a private entity.

The co-permittees must use appropriate enforcement procedures and actions to ensure compliance with Schedule A.3.e.v. The local ordinance or other regulatory mechanism adopted must meet the requirements of Schedule A.3.e.ii-vi.

Table 1. Clackamas Group Co-Permittee Post-Construction Thresholds

Co-Permittee	Project Threshold (ft ²)
Clackamas County	5,000
Water Environment Services	5,000
City of Gladstone	5,000
City of Happy Valley	5,000
City of Johnson City	5,000
City of Lake Oswego	3,000
City of Milwaukie	1,000
City of Oregon City	5,000
City of River Grove	5,000
City of West Linn	1,000

City of Wilsonville	5,000
Oak Lodge Water Services District	1,000

ii. **Prioritization of Low Impact Development & Green Infrastructure**

The co-permittees must, by December 1, 2023, review and update or develop and begin implementation of a strategy to require to the maximum extent feasible, the use of Low Impact Development and Green Infrastructure (LID/GI) design, planning, and engineering strategies intended to minimize effective impervious area or surfaces, and reduce the volume of stormwater discharge and the discharge of pollutants in stormwater runoff from development and redevelopment projects. This LID/GI strategy must be documented in the subsequent Annual Report and incorporated into or referenced in the SWMP Document after completion and DEQ approval. In development of this strategy, the co-permittees must review ordinance and development code for opportunities to reduce the volume of discharge by design, engineering, and planning methods that prioritize onsite retention, infiltration, and evapotranspiration and the option of reuse where feasible, in order to make LID/GI the preferred and commonly used approach to site development. The co-permittees may include evapotranspiration and reuse of stormwater in accounting for retention volumes but are not required to exhaust those options prior to allowing treatment or offsite options as described below. Where LID/GI controls that infiltrate or otherwise retain stormwater onsite are infeasible, extended filtration shall be required.

iii. **Post-Construction Stormwater Management Requirements**

The co-permittees must by December 1, 2024 develop and implement enforceable post-construction stormwater management requirements in ordinance or other regulatory mechanism that, at a minimum, prioritize onsite retention of stormwater and pollutant removal, and include technical standards according to either of the following options:

(A) **Numeric Stormwater Retention Requirement Site Performance & Treatment Standards**

If this option is selected, the co-permittee must establish a site performance standard with a Numeric Stormwater Retention Requirement (NSRR) that retains stormwater onsite and minimizes the offsite discharge of pollutants in runoff by utilizing stormwater controls that infiltrate and facilitate evapotranspiration. The NSRR volume must be determined using one of the following methods:

1. Volume-based method (e.g., retain volume created from the first inch of rainfall).
2. Storm event percentile-based method (e.g., retain the 95th percentile storm event-95% of the time the data is below this value).
3. Annual average runoff-based method (e.g., retain 85% of annual average runoff).

The NSRR is met when the NSRR runoff volume (as determined by the method chosen above) from new and/or replaced impervious surfaces is managed by one or more structural stormwater controls with sufficient capacity to retain the stormwater runoff onsite without adversely impacting groundwater quality per DEQ's groundwater protection requirements (OAR 340-40). Permittees may require retention or detention in excess of the NSRR in order to prevent hydromodification or other capacity issues that might result from stormwater runoff discharging from the site.

The first priority of this option is onsite retention, but at sites where the NSRR cannot be met due to technical infeasibility and/or site constraints (including zoning or land use regulations), the co-permittee must require treatment of the runoff volume up to a specified water quality design storm, or at least 80% of average annual runoff, in

structural or extended filtration stormwater control prior to discharge. The evaluation of technical infeasibility or site constraints should be based on justification provided in the site plan (see Schedule A.3.e.iv and v.).

The procedures for allowing treatment of a portion of the NSRR (as opposed to 100% retention of the NSRR, in situations where 100% retention of the NSRR is infeasible or impracticable) should include a description of allowable structural stormwater controls that are designed to target the removal of TSS. The description of allowable structural stormwater controls must include site-specific design requirements, design requirements that do not inhibit maintenance, conditions where each control applies, and the operation and maintenance standards for each type of control. The co-permittee may include an upper and lower bound on the effluent TSS concentration that reflects the practical limitation of an engineered control (e.g., 80% removal of TSS for typical influent concentrations ranging from 20 mg/L to greater than 200 mg/L). The co-permittee must give priority to implementing green infrastructure before considering hardscaped structural stormwater controls (such as concrete vaults and piping, proprietary technologies, or other static non-GI facilities) for stormwater treatment. The co-permittee may adopt specifications created by another entity that comply with these requirements.

All stormwater discharged offsite from new and/or replaced impervious surfaces, at least up to the NSRR volume must target natural surface or predevelopment hydrology (in terms of rate, duration, and/or volume) to minimize the potential for hydromodification impacts offsite except in circumstances where the co-permittee can demonstrate that the risk of hydromodification impacts is negligible, (e.g., large tidally-influenced waterways or flow-managed waterways). The use of treatment trains of post-construction stormwater controls should be encouraged where appropriate for treating stormwater runoff that is managed offsite before discharging to receiving waters, to improve stormwater runoff quality and reduce discharge quantity.

(B) Alternative Site Performance Standards

As an alternative or in addition to Option A in Schedule A.3.e.iii, the co-permittees may establish design requirements including site performance standards determined to generate water quality benefits comparable to the NSRR approach for new development and redevelopment. The alternative site performance standards shall be included in ordinances or other enforceable documents adopted by the co-permittee. Such local requirements and thresholds shall provide equal or similar protection of receiving waters and equal or similar levels of treatment as the NSRR approach.

Co-permittees must demonstrate how alternative compliance approaches prioritize infiltration and LID/GI, include pollutant removal performance goals, target natural surface or pre-development site hydrology, and reduce the discharge of pollutants from new and/or replaced impervious surfaces.

The co-permittees shall set requirements for site layout plans and a minimum set of specific onsite stormwater controls (collectively “site design measures”) based on the GI approach of emphasizing infiltration, evapotranspiration and/or harvesting/reuse of stormwater. Site design measures shall be used to reduce the amount of runoff, comparable to the NSRR, to the extent technically feasible and not prohibited by other constraints such as land use regulations or other state or federal regulations. Any remaining runoff from impervious drainage management areas may be directed to one

or more LID/GI facilities, extended filtration facilities, or other area. Site planning procedures shall require projects to consider site layout options that optimize retention of stormwater.

At sites where retention is infeasible due to technical and/or site constraints, the co-permittees must develop a process whereby at least 80% of average annual runoff from new and/or replaced impervious surfaces, must be treated with an extended filtration stormwater control prior to discharge, to target removal of TSS. Stormwater discharged offsite must target natural surface or predevelopment hydrology (as measured by rate, duration, and/or volume of discharge) to minimize the potential for hydromodification impacts, except in circumstances where the co-permittees can demonstrate that the risk of hydromodification impacts is negligible, (e.g., large tidally influenced waterways or flow-managed waterways).

More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of sub-basin plans or other similar stormwater management planning efforts.

iv. Water Quality Benefit Offset Programs

The co-permittees may develop water quality benefit offset programs as options for sites that, under Option A of Schedule A.3.e.iii, cannot meet the NSRR and for which full treatment of the NSRR design storm event is impracticable, or for sites under Option B that require special consideration for other reasons, or for sites unable to meet other stormwater requirements established by the co-permittees. Economic considerations alone are insufficient reason for not requiring adherence to the retention or treatment standards above. The options may include, but are not limited to stormwater mitigation options, a payment-in lieu program, groundwater replenishment program, or another option that matches the water quality goals of retaining or treating stormwater at any given site. If co-permittees choose to provide one or more water quality benefit offset programs, the co-permittees must develop and document how the alternative option works and what the standards and management systems are to value, estimate, and/or account for the ecological impact of untreated stormwater at qualifying sites. All programs developed should implement mitigation or other projects in the same sub-watershed (as defined in Schedule D) as the proposed project, to the degree possible. Exceptions should be documented with appropriate rationale.

v. Post-Construction Site Runoff Plan Review

The co-permittees must have documented, standardized procedures for the review and approval of structural stormwater control plans for new development and redevelopment projects, and procedures must be detailed or referenced in the SWMP Document.

At a minimum, the co-permittees must review and approve or disapprove plans for structural stormwater control at new development and redevelopment sites that result from the creation or replacement of impervious surface equal to or greater than the co-permittee's assigned post-construction threshold in Table 1; and sites that use alternative compliance to meet the retention requirement, before construction permits are issued. The co-permittees must review plans for consistency with the ordinance/regulatory mechanism and specifications required by Schedule A.3.e.i.

The co-permittees must require and subsequently review and approve or disapprove the written technical justification to evaluate any technical infeasibility or site constraints which prevent the onsite management of the runoff amount stipulated in the NSRR or the site's ability to meet the alternative site performance standard. The written technical justification

must be in the form of a site-specific hydrologic or technical analysis. The co-permittees must establish criteria or circumstances under which such analysis must be conducted, and the results of the co-permittee's review must be documented. Such infeasibility or constraint factors may include, but are not limited to, low infiltration rates, shallow bedrock, high groundwater, groundwater contamination, soil instability as documented by geotechnical analysis, or land use or zoning constraints. The determination that the NSRR or Alternative Site Performance Standard cannot be achieved at a project site must be based on documented infeasibility criteria or constraints considering multiple technical factors.

vi. Long-Term Operation and Maintenance (O&M)

The co-permittees must continue to maintain an inventory and implement a strategy to ensure that all public and private stormwater controls that discharge to the MS4 are operated and maintained to the maximum extent practicable. This strategy must, at minimum, include the following:

- (A) Legal authority allowing the co-permittees to inspect and require effective operation and maintenance of privately owned and operated stormwater controls that discharge to the MS4.
- (B) Continued maintenance of the inventory and mapping developed under the previous permit term for all public stormwater facilities, as well as private facilities which discharge to the MS4 and which have been either constructed since January 15, 2012, used to estimate pollutant load reduction as part of the TMDL benchmark evaluation, or otherwise determined by the co-permittees to be major stormwater facilities or controls.
- (C) Maintenance and inspection criteria, rationale, priorities, frequency, and procedures, and an inspection schedule ensuring compliance with the O&M requirements of each type of stormwater control operated by the co-permittees and by other private entities.
- (D) Tracking mechanism(s) for documenting inspections, as well as verification that site owners are prepared to meet the O&M requirements for private stormwater controls. The tracking mechanism(s) must document enforcement actions and compliance response. For stormwater controls that include vegetation, the O&M requirements must at minimum include requirements to remove sediment accumulation and manage the vegetation community to ensure the functionality of the control. For stormwater controls that include soils in the treatment process, O&M requirements must at minimum include requirements for practices to maintain soil permeability. For manufactured stormwater technology, O&M requirements must include, as applicable, documentation of the model number, manufacturer, or equivalent identifiers where available, information about suppliers and/or vendors, and schedules for replacement at regular intervals, as well as plans or contracts for an appropriate supply of such components to ensure proper treatment function and timely maintenance.
- (E) Required training or appropriate qualifications to inspect private stormwater facilities
- (F) Reporting requirements, where appropriate as determined by the co-permittee, for privately owned and operated stormwater controls.
- (G) The location of all public and private stormwater controls installed in compliance with this permit must be included with the MS4 Map and Digital Inventory described in Schedule A.3.c.i.

vii. Training and Education

The co-permittees must ensure that staff responsible for performing post-construction runoff site plan reviews, administering the post-construction program requirements, and performing O&M practices or evaluating compliance with long-term O&M requirements, are trained or otherwise qualified to conduct such activities, and training strategies and frequencies for staff must be described or referenced in the SWMP Document.

viii. Tracking and Assessment

The co-permittees must maintain records for activities conducted to meet the requirements of the Post-Construction Site Runoff program, and include a descriptive summary of their activities and report on metrics or tracking measures related to implementation of the program in the corresponding Annual Report.

f. Pollution Prevention and Good Housekeeping for Municipal Operations

Each co-permittee must properly operate and maintain its facilities, using pollution prevention and good housekeeping to reduce the discharge of pollutants through the MS4 to waters of the state.

i. Operation and Maintenance Strategy for Existing Controls

For existing structural stormwater controls installed or permitted by the co-permittees prior to the effective date of this permit, the co-permittees must develop and implement an operation and maintenance strategy for both co-permittee-owned controls and controls owned and operated by other non-MS4 and non-NPDES entities discharging to the MS4. The O&M strategy for stormwater controls must include, at minimum, the long-term O&M requirements in Schedule A.3.e.vi.

ii. Inspection, Maintenance, and Cleaning of the MS4

The co-permittees must develop and implement a process for the inspection, maintenance, and cleaning of their MS4 and related structures (including, but not limited to, catch basins, storm drain inlets, water quality facilities, pipes, etc.) to maximize debris and pollutant removal, and verify proper operation of all its municipal structural treatment controls designed to reduce pollutants (including floatables) in storm water discharges to or from its MS4s and related drainage structures. Operation and maintenance activities may include, but are not limited to, the following:

- (A) Inspections of the MS4 and related structures;
- (B) Cleaning of the MS4 and related structures as needed; and
- (C) Proper disposal of materials removed from cleaning of the MS4.

The co-permittees must maintain records of inspection and cleaning activities to facilitate adaptive management, including but not limited to such metrics as an estimated volume of debris removed during O&M activities as a total or by category or type of activity, if known, number of structures of each category inspected, number of structures of each category cleaned, and linear feet of pipe cleaned.

The inspection, maintenance, and cleaning schedule must ensure inspection of the co-permittee-owned or operated catch basins and inlets within the MS4 at least once every five years, unless an alternate schedule is established in the SWMP Document and approved by DEQ, and take all appropriate maintenance or cleaning action based on those inspections to ensure the catch basins and inlets continue to function as designed. The co-permittees may establish an inspection prioritization system for its catch basins and other structural MS4 elements, and adjust inspection frequency as needed for adaptive management, provided the co-permittee describes all relevant factors it uses to prioritize its inspections to specific

geographic or land use areas of the MS4 in the SWMP Document or another document cited/referenced therein.

iii. Pollution Prevention in Facilities and Operations

The co-permittees must continue to conduct municipal O&M activities in a manner that reduces the discharge of pollutants through the MS4 to protect water quality. The co-permittees must review and update existing procedures and schedules for inspection and maintenance of the MS4, and describe or reference in the SWMP Document pollution prevention and good housekeeping related to:

- (A) Operation and maintenance of public streets, roads, and highways, and associated stormwater controls, ditches, and pipes over which the co-permittee has authority;
- (B) Operation, repair, and maintenance of bridges or other over-water infrastructure over which the co-permittee has authority
- (C) Control and minimization of the use and application of pesticides, herbicides, and fertilizers on co-permittee-owned properties and facilities;
- (D) Control or minimization of stormwater runoff from municipal facilities that treat, store or transport municipal waste, such as yard waste or other municipal waste and are not already covered under an NPDES permit, a DEQ solid waste, or other permit designed to reduce the discharge of pollutants;
- (E) Control measures to limit or eliminate infiltration of seepage from the municipal sanitary sewer system to the MS4; and
- (F) Management practices that prevent or control the release of materials related to fire-fighting training activities.

iv. Co-permittee-owned NPDES Industrial Stormwater Permit Facilities

Co-permittee-owned or operated facilities with industrial activity as defined in 40 CFR §122.26(b)(14) discharging stormwater to the waters of the state must continue to maintain coverage under DEQ's NPDES Industrial Stormwater General Permit. The co-permittees may use the actions required in the NPDES Industrial Stormwater Permit to address the applicable facility requirements in Schedule A.3.f.viii.

v. Winter Operations and Maintenance Program

The co-permittees must document and include with or reference in the SWMP Document the jurisdiction's Winter Maintenance and Operations Program that limits impacts to water quality to the degree practicable.

(A) Winter Management Materials

The co-permittees must ensure that all winter materials utilized by the co-permittees on roads for anti-icing and de-icing purposes (e.g., abrasives, sand, deicers including but not limited to MgCl₂, solid salt, etc.) are utilized and stored properly, according to most updated and accepted practices.

(B) Winter Maintenance Strategy

The co-permittees must provide or reference a Winter Maintenance Strategy with the SWMP Document. This document must describe how the co-permittees manage rights-of-way owned or operated by the co-permittees during inclement weather and what Best Management Practices are implemented.

(C) Winter Maintenance Tracking and Reporting

Winter Maintenance activities for streets and roads must be included as an element of the MS4 Annual Report required by this permit beginning in the Annual Report due

December 1, 2022, or no later than upon DEQ's approval of the SWMP Document. The information for each year must include but need not be limited to: a list of materials used, number of winter weather events where winter maintenance materials are used, quantities and general location of each material used in relation to distance (e.g., pounds per mile), and any other actions taken to protect waters of the state for areas where that data is available or becomes available during the permit term.

The co-permittees must implement these requirements in accordance with the O&M strategy for stormwater controls.

vi. Requirements for Pesticide and Fertilizer Applications

Each co-permittee must develop or continue to implement practices based on integrated pest management principles to the extent practicable in order to reduce the discharge of pollutants to the MS4 associated with the application and storage of pesticides and fertilizers. At a minimum, such areas include the co-permittees' public rights-of-way, parks, recreational facilities, golf courses, and any other publicly owned landscaped areas owned or managed by the co-permittee. All employees or contractors of the co-permittees applying pesticides must follow all label requirements, including those regarding application methods, rates, number of applications allowed, and disposal of the pesticide, fertilizer and rinsate.

vii. Litter Control

The co-permittees must continue to implement methods to reduce litter within their jurisdictions. The co-permittees must work cooperatively with other departments, organizations, and/or other entities to control litter on a regular basis and after major public events, in order to reduce the discharge of pollutants and litter to the MS4.

viii. Materials Disposal

All collected material or pollutants removed in the course of maintenance, treatment, control of stormwater, or other wastewaters must be managed and disposed of in a manner such as to prevent such pollutants from entering the waters of the state in accordance with state regulations.

ix. Flood Control, Transportation, and Other Infrastructure

The co-permittees must continue to assess flood control, transportation, and other infrastructure projects during planning stages in order to identify and mitigate potential negative impacts on or to enhance benefits for the water quality of receiving water bodies. This permit does not require co-permittees to take action with respect to flood control itself and does not seek to impose flood control responsibility on any co-permittee.

x. Operations & Maintenance Staff Training

The co-permittees must continue to ensure that staff responsible for evaluating O&M practices, evaluating compliance with long-term O&M requirements, or ensuring pollution prevention at facilities and during operations are trained or otherwise qualified to conduct such activities. Training strategies and frequencies for staff must be described in the SWMP Document.

xi. Tracking and Assessment

The co-permittees must maintain records for activities undertaken to meet the requirements of the Pollution Prevention for Municipal Operations program requirements and include a descriptive summary of their activities in the corresponding Annual Report, as well as relevant metrics or tracking measures.

g. Industrial and Commercial Facilities

The co-permittees must continue to implement a program to reduce pollutants in stormwater discharges to the MS4 from industrial and commercial facilities including, at a minimum: sites the co-permittees have identified as being subject to the DEQ-issued 1200-Z industrial stormwater NPDES general permit; hazardous waste treatment, disposal and recovery facilities; industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986; facilities subject to Section 313 of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11023; sites flagged by a pretreatment program or Industrial User Survey as potentially contributing, or housing activities that may contribute, pollutants to the MS4; and facilities or activities that have been identified by the co-permittee as potentially contributing a significant pollutant load to the MS4. Screening for industrial and commercial sites and activities may be conducted in conjunction with industrial pretreatment program activities or a business licensure program as long as stormwater and MS4 considerations are added to the Industrial User Survey or other questionnaire, or may be conducted separately under a program developed solely for MS4 purposes.

i. Screening for Industrial Stormwater Permitting

The co-permittees must continue to screen existing and new industrial facilities to assess whether they may be subject to the DEQ-issued 1200-Z industrial stormwater NPDES general permit or have the potential to contribute a significant pollutant load to the MS4. The screening must be done on a routine basis, and in no case may screening for new facilities take place less often than once a year. Within 30 days after determining a facility may be subject to a DEQ-issued industrial stormwater permit, the co-permittees must notify the industrial facility and DEQ.

ii. Strategy to Reduce Pollutants from Industrial and Commercial Facilities

The co-permittees must by December 1, 2023, at minimum, review and update as appropriate the Industrial/Commercial Facilities Strategy developed under the previous permit term and include it in the SWMP Document directly or by reference. The Strategy must be posted on the co-permittees' websites for public comment for a minimum of 30 days prior to submission to DEQ for approval and incorporation into the SWMP Document. If the Strategy Document is completed early, wholly incorporated into the SWMP Document, and submitted to public review with the initial SWMP Document, this suffices for the public review requirement. The Strategy document must include, at a minimum:

- (A) The facility types or activities, rationale, and priorities for entities that the co-permittee has determined may have high potential to discharge pollutants of concern to the MS4,
- (B) Inspection procedures, documentation standards, and frequency of inspections; and
- (C) Description of the assessment and tracking of compliance with municipal ordinances related to discharges to the MS4 at industrial and commercial facilities that are potential sources of pollutants in stormwater runoff.

iii. Commercial & Industrial Facility Inspection Staff Training

The co-permittees must ensure that staff responsible for inspecting and evaluating Commercial and Industrial facilities, evaluating compliance with municipal ordinances related to discharges to the MS4, or ensuring pollution prevention at facilities through inspections and/or provision of educational materials on stormwater management, are trained or otherwise qualified to conduct such activities, and training strategies, and frequencies for staff must be described in the SWMP Document.

iv. Tracking and Assessment

The co-permittees must maintain records of activities conducted to meet the requirements of the Commercial & Industrial Facilities program requirements and include a descriptive summary of their activities in the corresponding Annual Report, as well as relevant metrics or tracking measures. Each annual report should include a list of entities referred to DEQ based on co-permittee screening activities, a list of categories of facilities inspected, and an overview of the results of inspections.

h. Infrastructure Retrofit and Hydromodification Assessment Update

The co-permittees must continue to consider the impacts of policy, capital improvements, and retrofit projects on MS4 discharges to receiving waters, considering the goals and proposed actions described in the previous permit’s Hydromodification Assessment and Stormwater Retrofit Strategy reports.

i. Documentation

The co-permittees are required to include in the third Annual Report of this permit term, an assessment of any outcomes related to the Hydromodification Assessment and Stormwater Retrofit Strategy reports. This update may be an appendix or a subsection of the report, and must include, at a minimum:

- (A) An assessment of how the Hydromodification Assessment and Stormwater Retrofit Strategy have been used, considered, or implemented since the time the reports were completed;
- (B) Progress toward or completion of projects identified in the Retrofit Strategy priority list, and a qualitative assessment of the benefits of those projects;
- (C) Description of any further actions taken as a result of the Hydromodification Assessment, and a rationale for those actions since the writing of the reports;
- (D) Narrative describing progress toward addressing gaps in hydromodification information or data related to waterbodies within the co-permittees' jurisdiction as identified in the Hydromodification Assessment; and,
- (E) New goals, tools, priorities, and planned or potential projects for addressing ongoing hydromodification and/or water quality impacts resulting from historical development/infrastructure, and for improving retrofit planning, considering information gathered in the time since the completion of the reports.

i. Summary of SWMP Document Requirements and Deadlines

The following Table 2 summarizes the elements required to be included in, or documented elsewhere and referenced in, the SWMP Document, and may serve as an outline for the SWMP document. Table 2 also includes deadlines for completion of each element, unless a later date is approved in writing by DEQ as outlined in Schedule A.3.

Table 2. SWMP Document Requirements and Schedule A Implementation Deadlines

PERMIT CONDITION	SUMMARY OF REQUIRED ELEMENTS	DUE DATE
A.2.b – Legal Authority	Adopt or update all ordinances as necessary to fulfill the requirements of the permit.	December 1, 2024
A.2.c – SWMP Document	Submit SWMP Document	December 1, 2022

PERMIT CONDITION	SUMMARY OF REQUIRED ELEMENTS	DUE DATE
A.3.a – Education & Outreach	Continue to implement and develop as required by Schedule A.3.a, and fully describe or reference in the SWMP Document, an Education & Outreach Program, including: <ul style="list-style-type: none"> • Program description for education & outreach activities • Priority Audiences & Topics • Tracking & Assessment 	Complete description of proposed program no later than December 1, 2022
A.3.b – Public Involvement & Participation	Continue to implement and develop as required by Schedule A.3.b, and fully describe or reference in the SWMP Document, a Public Involvement & Participation Program, including: <ul style="list-style-type: none"> • Publicly Accessible Website <ul style="list-style-type: none"> ○ IDDE Reporting ○ Draft Documents posted for public comment ○ Links to ordinances, policies, and guidance documents ○ Contact info for relevant staff • Stewardship Opportunity • Tracking & Assessment procedures/goals/metrics 	Complete description of proposed program no later than December 1, 2022
A.3.c – Illicit Discharge Detection & Elimination	Continue to implement and develop as required by Schedule A.3.c, and fully describe or reference in the SWMP Document, an Illicit Discharge Detection & Elimination Program, including: <ul style="list-style-type: none"> • Ordinance or other regulatory mechanism updated as necessary and referred to or included in SWMP Document • MS4 Map with: <ul style="list-style-type: none"> ○ Outfall Inventory ○ Conveyance system and stormwater control facility locations ○ Any known chronic illicit discharges ○ Dry-Weather Priority Screening Sites mapped per Schedule A.3.c.v • Established, documented enforcement procedures • Program to detect and eliminate Illicit Discharges, including procedures for tracking and investigation of complaints and reports and reporting to other authorities • Dry Weather Screening Program including: <ul style="list-style-type: none"> ○ Designation of field screening priority locations ○ Criteria for general observations ○ Field screening & analysis guidelines ○ Pollutant parameter action levels ○ Laboratory analysis procedures • Training program strategy for all staff involved in IDDE, as appropriate • Tracking & Assessment procedures/goals/metrics 	Complete description of proposed program no later than December 1, 2022
Schedule A.3.d – Construction Site Runoff Control	Continue to implement and develop as required by Schedule A.3.d, and describe or reference in the SWMP Document, a	Complete description of

PERMIT CONDITION	SUMMARY OF REQUIRED ELEMENTS	DUE DATE
	program to prevent & control construction site runoff, including: <ul style="list-style-type: none"> • Ordinance or other regulatory mechanism updated as necessary and referred to or included in SWMP Document • ESCP guidelines and requirements for construction site operators • ESCP plan review procedures • Construction site inspection triggers, guidelines, documentation requirements, and follow-up procedures • Enforcement procedures • Training program strategy for all staff involved in construction site runoff control, as appropriate 	proposed program no later than December 1, 2022
Schedule A.3.e – Post-Construction Site Runoff Control	Continue to implement and develop as required by Schedule A.3.e, and fully describe or reference in the SWMP Document, a program to control post-construction site runoff, including: <ul style="list-style-type: none"> • Ordinance or other regulatory mechanism updated as necessary and referred to or included in SWMP Document • LID/GI Prioritization Strategy • Development of technical Post-Construction Stormwater Management Requirements (Site Performance Standards, Treatment Standards, and alternative compliance options) • Plan Review procedures update • Long Term O&M requirements • Training program strategy for all staff involved in post-construction runoff control, as appropriate • Tracking & Assessment procedures/goals/metrics 	LID/GI Strategy and program description by December 1, 2023, ordinance as needed to support program no later than December 1, 2024
Schedule A.3.f – Pollution Prevention and Good Housekeeping for Municipal Operations	Continue to implement and develop as required by Schedule A.3.f, and fully describe or reference in the SWMP Document, a program to control pollution from municipal operations, including: <ul style="list-style-type: none"> • O&M strategy for existing publicly owned stormwater controls • Inspection, Maintenance, and Cleaning program for MS4 systems and structures • Pollution prevention program for facilities & operations • Winter Operations & Maintenance Program • Controls for pesticide & fertilizer application on public land • Litter controls • Materials disposal • Stormwater quality related adjustments as relevant to flood control facilities, transportation, & other infrastructure projects • Training program schedule for all staff involved in pollution prevention for municipal operations, as appropriate 	Complete description of proposed program no later than December 1, 2022

PERMIT CONDITION	SUMMARY OF REQUIRED ELEMENTS	DUE DATE
	<ul style="list-style-type: none"> • Tracking & Assessment procedures/goals/metrics 	
Schedule A.3.g – Industrial & Commercial Facilities	<p>Continue to implement and develop as required by Schedule A.3.g, and fully describe or reference in the SWMP Document, a program to control pollution in stormwater from industrial & commercial facilities, including:</p> <ul style="list-style-type: none"> • Designation, inventory, and inspection of businesses with potentially significant stormwater pollutant sources not already permitted and inspected by DEQ, and enforcement actions per IDDE procedures where necessary • Provision of education for operators of commercial and industrial facilities • Screening & notification for industrial sites that may require an industrial NPDES permit • Training program schedule for all staff involved in the above program areas, as appropriate • Tracking & Assessment procedures/goals/metrics 	<p>Complete description of proposed program no later than December 1, 2022, updated Strategy document by December 1, 2023</p>
Schedule A.3.h – Infrastructure Retrofit and Hydromodification Assessment Update	<p>Report on progress related to the Hydromodification Assessment and Retrofit Strategy reports submitted during the previous permit term</p>	<p>Submission in or attached to Annual Report due December 1, 2023</p>

SCHEDULE B - MONITORING AND REPORTING REQUIREMENTS

1. Monitoring Program

The co-permittees must continue to implement a monitoring program to support adaptive stormwater management and the evaluation of stormwater management program effectiveness in reducing the discharge of pollutants from the MS4.

a. Monitoring Objectives

The monitoring program must incorporate the following objectives:

- i. Evaluate the source(s) of and means for reducing the pollutants of concern applicable to the co-permittees' permit area, including 2018/2020 303(d) listed pollutants, as applicable;
- ii. Evaluate the effectiveness of Best Management Practices (BMPs) in order to help determine BMP implementation priorities;
- iii. Characterize stormwater based on land use type, seasonality, geography, or other catchment characteristics;
- iv. Evaluate status and long-term trends in receiving waters associated with MS4 stormwater discharges;
- v. Assess the chemical, biological, and physical effects of MS4 stormwater discharges on receiving waters; and,
- vi. Assess progress towards reducing TMDL pollutant loads.

b. Monitoring Requirements Table

The monitoring program must incorporate the requirements identified in Table 3. The requirements in Table 3 become effective no later than 60 days after the approval of the Monitoring Plan by DEQ in accordance with Schedule B.1.c.

Table 3. Clackamas Group Environmental Monitoring Requirements

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)
Clackamas Group Collective Mercury Monitoring Requirement			
Instream Mercury Monitoring	Two (2) Locations in the Lower Willamette Basin	Four (4) events/year	Mercury (Total Recoverable)
	Two (2) locations in the Middle Willamette Basin		
	Two (2) Location in the Tualatin River Basin		
	Two (2) Locations in the Clackamas River Basin		
Stormwater Mercury Monitoring	Four (4) sites	Three (3) events/year	Mercury (Total Recoverable)

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)
Gladstone			
Instream Monitoring	One (1) site	Three (3) events/year	Field; Conventional; Metals; Nutrients
Instream Biological Monitoring	Conduct or contribute to an instream biological monitoring project/task.		
Johnson City			
Instream Monitoring	One (1) Site	Five (5) events/permit term	Field; Conventional; Metals; Nutrients
Lake Oswego			
Instream Monitoring	Six (6) monitoring sites	Twelve (12) events/year	Field; Conventional; Metals; Nutrients
Stormwater Monitoring – Wet Weather	Two (2) sites	Two (2) events/year	Field; Conventional; Metals; Nutrients; Flow
Stormwater Monitoring - Pesticides	One (1) site	Six (6) events/permit term	Pesticides
Instream Biological Monitoring	Ten (10) monitoring sites	One (1) event/permit term	N/A
Milwaukie			
Instream Monitoring	One (1) site	Four (4) events/year	Field; Conventional; Metals; Nutrients
Continuous Instream Monitoring	One (1) monitoring station	Ongoing	Temperature Conductivity Dissolved Oxygen Total Dissolved Solids pH
Stormwater Monitoring – Wet Weather	One (1) site	Three (3) events/year	Field; Conventional; Metals; Nutrients
Stormwater Monitoring - Pesticides	One (1) site	Six (6) events/permit term	Pesticides
Instream Biological Monitoring	Conduct or contribute to an instream biological monitoring project/task.		

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)
Oregon City			
Instream Monitoring	Six (6) Sites	Four (4) events/year	Field; Conventional; Metals; Nutrients
Stormwater Monitoring – Wet Weather	Two (2) sites	Three (3) events/year	Field; Conventional; Metals; Nutrients;
Stormwater Monitoring - Pesticides	One (1) site	Six (6) events/permit term	Pesticides
Instream Biological Monitoring	Conduct or contribute to an instream biological monitoring project/task.		
West Linn			
Instream Monitoring	Three (3) sites	Five (5) events/year	Field; Conventional; Metals; Nutrients
Stormwater Monitoring – Wet Weather	One (1) site	Three (3) events/year	Field; Conventional; Metals; Nutrients
Stormwater Monitoring - Pesticides	One (1) site	Six (6) events/permit term	Pesticides
Instream Biological Monitoring	Conduct or contribute to an instream biological monitoring project/task.		
Wilsonville			
Instream Monitoring	Two (2) sites	Four (4) events/year	Field; Conventional; Metals; Nutrients
Stormwater Monitoring – Wet Weather	One (1) site	Three (3) events/year	Field; Conventional; Metals; Nutrients
Stormwater Monitoring - Pesticides	One (1) site	Six (6) events/permit term	Pesticides
Instream Biological Monitoring	Conduct or contribute to an instream biological monitoring project/task.		
Clackamas County, Water Environment Services, City of Happy Valley, and City of Rivergrove			
Instream Monitoring	Four (4) sites	Nine (9) events/year	Field; Conventional; Metals; Nutrients
Instream Biological Monitoring	Eight (8) sites	One (1) event/permit term	N/A

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)
Stormwater Monitoring – Wet Weather	Five (5) sites	Three (3) events/year	Field; Conventional; Metals; Nutrients; flow or rainfall
Stormwater Monitoring - Pesticides	Two (2) sites	Three (3) events/permit term	Pesticides
Oak Lodge Water Services District			
Instream Monitoring	Three (3) sites	Four (4) events/year	Field; Conventional; Metals; Nutrients
Stormwater Monitoring – Wet Weather	One (1) site	Three (3) events/year	Field; Conventional; Metals; Nutrients
Stormwater Monitoring - Pesticides	One (1) site	Six (6) events/permit term	Pesticides
Instream Biological Monitoring	Conduct or contribute to an instream biological monitoring project/task.		

Monitoring Type	Monitoring Location(s)	Monitoring Frequency	Pollutant Parameter Analyte(s)
Special Conditions:			
1) The monitoring frequency reflects the number of required sample events per monitoring location. 2) If after 18 Instream Monitoring events at a given sampling location a pollutant parameter analyte value is reported as a non-detect greater than 90% of the samples, or was during the previous permit term, the pollutant parameter analyte may be eliminated from routine monitoring there. 3) If after 9 Stormwater Monitoring events at a given sampling location a pollutant parameter analyte value is reported as a non-detect greater than 90% of the samples, or was during the previous permit term, the pollutant parameter analyte may be eliminated from routine monitoring there. 4) Field pollutant parameters for Stormwater Monitoring activities include flow rate or rainfall data. 5) Pesticide pollutant parameters that must be considered for purposes of the pesticide monitoring requirement include any pesticides used by the co-permittees within their jurisdictions, and the following: <u>Insecticides</u> : Bifenthrin, Chlorpyrifos, Imidacloprid, Fipronil; <u>Herbicides</u> : Atrazine, Simazine, Sulfometuron methyl, Diuron, 2,4-D, Glyphosate & degradate (AMPA), and 2,6-dichlorobenzamide (dichlobenil degradate). Legacy pesticide monitoring (DDT, Dieldrin) must be conducted for streams where an established TMDL requires it. 6) The Macroinvertebrate monitoring must follow a generally accepted macroinvertebrate monitoring methodology (e.g., DEQ Benthic Macroinvertebrate Protocol for Wadeable Rivers and Streams). The methodology must be documented in the monitoring plan. 7) Monitoring and analysis for Mercury (Total Recoverable) must be conducted in accordance with US EPA method 1631E, with a quantitation limit of 0.5 ng/L. EPA Method 1669 ultra clean sampling protocol is to be used to collect samples, unless another method is approved by DEQ per Schedule B.1.d.iii. Total Mercury sampling is required per the requirements of the Willamette Basin Mercury TMDL, and must be paired with TSS sampling.			
Pollutant parameter(s) identified in each analyte category in Table 3 are as follows:			
Field	Conventional	Nutrients	Metals (Total Recoverable & Dissolved)
Dissolved Oxygen pH Temperature Conductivity	<i>Escherichia coli</i> (E. coli) Hardness Total Alkalinity Dissolved Organic Carbon (DOC) Total Suspended Solids (TSS)	Nitrate (NO ₃) Ammonia Nitrogen (NH ₃ -N) Total Phosphorus (TP) Ortho-Phosphorus (O-PO ₄)	Copper Lead Zinc

c. Monitoring Plan

The co-permittees must update their monitoring plan(s) by December 1, 2022 and begin implementation starting July 1, 2023. Prior to submission of the monitoring plan to DEQ, the co-permittees must provide an opportunity to receive comments from the public by posting to the publicly accessible website(s) required in Schedule A.3.b.i for a minimum of 30 days. The monitoring plan(s) may be prepared by a collective group of co-permittees and/or by individual co-permittees, in accordance with Schedule B.1.e. The monitoring plan(s) must incorporate the following elements:

- i. Identifies how each monitoring objective identified in Schedule B.1.a is addressed and the sources of information used. The co-permittees may use Stormwater Management Plan measurable goals, environmental monitoring activities, historical monitoring data, stormwater modeling, national stormwater monitoring data, stormwater research, or other applicable information to address the monitoring objectives.
- ii. Describes the role of the monitoring program in the adaptive management of the storm water program.
- iii. Describes the relationship between environmental monitoring and a long-term monitoring program strategy.

- iv. Describes in detail or includes by reference to external documents the following information for each environmental monitoring project/task:
 - (A) Project/task organization
 - (B) Monitoring objectives, including monitoring question and background, data analysis methodology and quality criteria, and assumptions and rationale;
 - (C) Documentation and record-keeping procedures;
 - (D) Monitoring process/study design, including monitoring location, description of sampling event or storm selection criteria, monitoring frequency and duration, and responsible sampling coordinator;
 - (E) Sample collection methods and handling/custody procedures;
 - (F) Analytical methods for each water quality parameter to be analyzed;
 - (G) Quality control procedures, including quality assurance, the testing, inspection, maintenance, calibration of instrumentation and equipment; and,
 - (H) Data management, review, validation, and verification.
- v. The monitoring plan may be modified without prior DEQ approval if the following conditions (A) or (B) are met. For conditions not covered in this section, the co-permittees must provide DEQ with the proposed modification to the monitoring plan, and receive written approval from DEQ prior to implementation of the proposed modification. The conditions are as follows:
 - (A) The modification does not reduce the minimum number of data points, which is a product of the number of monitoring locations, frequency, duration, and pollutant parameters identified in Table 3; or,
 - (B) The modification is the result of including elements of another permit, such as a WPCF UIC permit.
- vi. Modifications to the monitoring plan in accordance with Schedule B.1.c.v. must be documented in the subsequent annual report by describing the rationale for the modification, and how the modification will allow the monitoring program to remain compliant with the permit conditions.

d. Sampling and Analysis

The co-permittees must continue to exercise due diligence in collecting and analyzing all environmental monitoring samples required by this permit. All monitoring must be conducted in accordance with the design and procedures identified in Schedule B.1.c.iv. If the co-permittees are unable to collect or analyze any sample, pollutant parameter, or information due to circumstances beyond the co-permittees' reasonable control, DEQ must be notified in writing with the submission of the data. These circumstances may include, but are not limited to, abnormal climatic conditions, unsafe or impracticable sampling conditions, equipment vandalism or equipment failures that occur despite proper operations and maintenance.

- i. In-stream monitoring:
 - (A) A minimum of 50 percent of the water quality sample events must be collected during the wet season (September 1 to April 30),
 - (B) Each unique sample event must occur at a minimum of 72 hours apart.
- ii. Stormwater and Structural BMP Monitoring
 - (A) All water quality samples must be collected during a storm event that is predicted to be greater than 0.1 inch of rainfall

- (B) When possible, samples should be collected after an antecedent dry period of a minimum of 12 hours.
- (C) Precautions must be taken to avoid the collection of samples lacking stormwater runoff, as when the intra-event dry period of a storm exceeds 6 hours, and exceptions must be documented with a rationale for the deviation (e.g., a 24-hr flow-weighted composite sample collection method was employed to compensate).
- (D) Sample Collection Method: Samples must be collected during stormwater runoff producing events that represent the local or regional rainfall frequency and intensity, including event types that may be expected to yield high pollutant loads/concentrations. The sample collection method (e.g., flow-weighted composite, grab sample, etc.) and rationale shall be described in the monitoring plan.
- (E) Flow or rainfall data must be collected, estimated, or modeled for each stormwater monitoring event. If flow or rainfall is modeled or estimated, the procedure shall be described in the monitoring plan.

iii. Sampling Procedures & Analytical Methods

Samples must be analyzed in accordance with EPA approved methods listed in the most recent publication of 40 CFR 136 unless otherwise approved in advance by DEQ. The analysis must utilize appropriate Quality Assurance/Quality Control protocols, such as routinely analyzing replicates, blanks, laboratory control samples and spiked samples, and quantitation limits appropriate for the sampling objective. Field analytical kits are acceptable if the kits use a method approved under 40 CFR 136. This requirement does not apply to illicit detection and discharge elimination field screening activities conducted by the co-permittees as required by Schedule A.3.c.v. Use of alternative test procedures must be done in accordance with 40 CFR 136.

If an approved sampling procedure or analytical method is not identified in 40 CFR 136, or if a co-permittee wishes to deviate from sampling or analytical methods prescribed in 40 CFR 136 or in this permit for other reasons, the co-permittee may propose a suitable procedure or analytical method if the method is described in the monitoring plan, and submitted to DEQ with a justification for review and approval prior to use, or an alternative testing procedure is already approved by the EPA under 40 CFR 136.

iv. Preservation, Transportation, & Holding Times

Analyzed samples must comply with preservation, transportation and holding time recommendations cited in 40 CFR 136, in the most recent edition of Standard Methods for the Examination of Water and Wastewater, or as applicable to the analytical method if no approved analytical method in 40 CFR 136 or the most recent edition of Standard Methods for the Examination of Water and Wastewater exists.

v. Data Submission

Analytical data must be submitted annually to DEQ in the DEQ-provided template, with the corresponding annual report.

e. Coordinated Environmental Monitoring

Environmental monitoring conducted to meet a permit condition in Table 3 may be coordinated among co-permittees or conducted on behalf of a co-permittee by a third party. Co-permittees are responsible for environmental monitoring in accordance with Schedule B requirements. Each co-permittee may utilize data collected by another co-permittee, a third party, or in another co-

permittee’s jurisdiction to meet a permit condition in Table 3 provided the co-permittee establishes an agreement prior to conducting coordinated environmental monitoring.

2. Compliance Evaluation

At least once per year, the co-permittees must evaluate their compliance with the requirements of this permit with an Annual Report. This self-evaluation includes assessment of progress toward implementing the SWMP control measures in Schedule A, and implementation of actions to comply with any additional requirements in or identified pursuant to Schedules B and D.

3. Annual Report

No later than December 1 each year, beginning in 2021, the co-permittees must submit Annual Reports to DEQ in paper and electronic format until DEQ requires the co-permittees to submit it electronically only via EDMS/Your DEQ Online. The reporting period for the Annual Report is from July 1 of the previous calendar year through June 30 of the current year (for example, July 1, 2021 through June 30, 2022). Reporting periods for subsequent Annual Reports are specified in Table 4 below. The co-permittees must make all Annual Reports available to the public, including any required documents attached to the Annual Report through the co-permittees’ maintained website.

DEQ may extend the due date for the annual report in the event of extraordinary circumstances including, but not limited to, pandemic, wildfire, earthquake, flood, or other natural disaster provided the co-permittee requests an extension in writing and provides all documentation available regarding the specific impacts as to why the December 1 deadline cannot be met. In that circumstance, DEQ will respond to the extension request in writing and will document any revised annual report due date when applicable.

The Stormwater Management Plan(s) approved by DEQ under the previous iteration of the permit shall provide the framework, measurable goals, tracking measures, and reporting metrics for annual reporting until the SWMP Document required by this permit is approved by DEQ.

Table 4. Annual Report Deadlines

Annual Report	Reporting Period	Due Date
1st Year Annual Report	July 1, 2020 - June 30, 2021	Dec. 1, 2021
2nd Year Annual Report	July 1, 2021 - June 30, 2022	Dec. 1, 2022
3rd Year Annual Report	July 1, 2022 - June 30, 2023	Dec. 1, 2023
4th Year Annual Report	July 1, 2023 - June 30, 2024	Dec. 1, 2024
5th Year Annual Report	July 1, 2024 - June 30, 2025	Dec. 1, 2025

In addition to the compliance evaluation of Schedule B.2, the annual reporting will be required to include, at a minimum, the following:

- a. The status of implementing the stormwater management program and each control measure program element in Schedule A.3, including progress in meeting measurable goals and program tracking and assessment metrics identified in the SWMP Document as well as additional annual reporting requirements identified in each section, or, prior to SWMP Document approval by DEQ, measurable goals and tracking metrics approved under the previous permit’s approved Stormwater Management Plan(s).
- b. A summary of the adaptive management implementation and any changes or updates to

programs made during the reporting year, including rationales for any proposed changes to the stormwater management program (e.g., new BMPs), and review of related new and historical monitoring data. This summary should also include discussion of the implications of or any findings related to recent years' adaptive management and/or changes made to the SWMP Document, based on data from tracking measures, measurable goals, and/or any monitoring related to the change.

- c. Any proposed changes to SWMP program elements that are designed to reduce TMDL pollutants.
- d. A summary of education & outreach and public involvement activities, progress toward or achievement of measurable goals, and any relevant assessment of those activities. This should include planned adaptive management or other program enhancements to occur in the following years.
- e. A summary describing the number and nature of enforcement actions, inspections, and public education programs, including results of ongoing field screening and follow-up activities related to illicit discharges.
- f. A list of entities referred to DEQ for possible 1200-Z NPDES general permit coverage based on co-permittee screening activities, a list of categories of facilities inspected, and an overview of the results of inspections of commercial and industrial facilities.
- g. A summary of total stormwater program expenditures and funding sources over the reporting fiscal year, and those anticipated in the next fiscal year
- h. A summary of monitoring program results, including monitoring data that are accumulated throughout the reporting year submitted in the DEQ-approved Data Submission Template, and any assessments or evaluations of that data completed by the co-permittees or an authorized third party.
- i. Any proposed modifications to the monitoring plan that are necessary to ensure that adequate data and information are collected to conduct stormwater program assessments.
- j. An overview, as related to MS4 discharges, of concept planning, land use changes and new development activities (including the number of new post-construction permits issued) that occurred within the Urban Growth Boundary (UGB) expansion areas during the reporting year, and those forecast for the following year, where such data is available.
- k. The details of all corrective actions implemented associated with Schedule A.1.b.iii during the reporting year.
- l. Additional Annual Report requirements found in these sections of the permit shall also be complied with:
 - Schedule A.3.c.vii – IDDE
 - Schedule A.3.d.vii – Construction
 - Schedule A.3.e – Post-Construction Site Runoff Program
 - Schedule A.3.f.v.c – Winter Maintenance
 - Schedule A.3.h.i – Hydromodification Assessment and Stormwater Retrofit Strategy Updates
 - Schedule D.3.b – Mercury Minimization Assessment

4. MS4 Permit Renewal Application Package

No later than 180 days prior to permit expiration, the co-permittees must submit a permit renewal application package to support proposed modifications to their programs and stormwater control measures, if any. An electronic copy must also be made available on the co-permittees' websites. The

application package must include an evaluation of the adequacy of the co-permittees' programs and stormwater control measures in reducing pollutants in discharges from the MS4 to MEP, and the conclusions of the annual adaptive management process developed under this permit. The application package must contain:

- a. The permit renewal documentation must be submitted through DEQ's EDMS/Your DEQ Online system if it has been implemented for MS4 permittees by that time;
- b. Any proposed program modifications or new areas of focus for the coming permit term, including the modification, addition, or removal of BMPs incorporated into the SWMP Document, and associated measurable goals;
- c. The information and analysis necessary to support DEQ's independent assessment that the co-permittees' stormwater management programs address the requirements of this permit. The co-permittees must describe how the proposed management practices, control techniques, and other provisions implemented as part of the stormwater program were evaluated using a co-permittee-defined and standardized set of objective criteria relative to the following MEP general evaluation factors:
 - i. Effectiveness – program elements effectively address stormwater pollutants
 - ii. Local Applicability – technically feasible considering local soils, geography, etc.
 - iii. Program Resources – program elements are being implemented considering availability to resources and the co-permittees' stormwater management program priorities.
- d. If applicable, the established TMDL pollutant load reduction benchmarks, pollutant load reduction evaluation, and 303d pollutant evaluation, as required in Schedule D, as well as an updated estimate of total annual stormwater pollutant loads for applicable TMDL pollutants or applicable surrogate parameters, and the following pollutant parameters: nitrate, total phosphorus, ortho-phosphorus, copper, lead, and zinc. The estimates must be accompanied by a description of the procedures for estimating pollutant loads and concentrations, including any modeling, data analysis and calculation method;
- e. A description of proposed changes to the monitoring plan in the form of a monitoring objectives matrix with accompanying narrative describing the rationales supporting such changes, to be developed based on ongoing discussions with DEQ over the course of the permit term regarding the monitoring needs for the next permit;
- f. A description of any service area expansions that are anticipated to occur during the following permit term and a finding as to whether the expansion is expected to result in a substantial increase in area, intensity, or pollutant loads;
- g. A fiscal evaluation of program expenditures for the current permit cycle and projected program allocations for next permit cycle; and,
- h. Updated MS4 maps, including the service boundary of the MS4, projected changes in land use and population densities, projected future growth, location of co-permittee-owned operations, facilities, or properties with storm sewer systems, and the location of facilities issued an industrial NPDES permit that discharge to the MS4.

5. Submissions

The co-permittees must provide DEQ with one hard copy and one electronic copy of the Annual Report and any supplemental information required by the due date in Table 4, above until EDMS/Your DEQ Online is set up for the co-permittees. DEQ will provide instructions to the co-permittees when electronic reporting will be required to begin. Once the co-permittees are required to submit electronically, the co-permittees will no longer be required to submit such materials to DEQ in hardcopy.

All hardcopy Annual Reports, attachments, and other required submittals must be sent to DEQ at the following address:

Oregon Department of Environmental Quality
MS4 Stormwater Program, Attention: 7th Floor
700 NE Multnomah St., Suite 600
Portland, OR 97232
Email: MS4Stormwater@deq.state.or.us

6. Recordkeeping

a. Records Retention

The co-permittees must retain records and copies of all information (e.g., all monitoring, calibration, and maintenance records; all original strip chart recordings for any continuous monitoring instrumentation; copies of all reports required by this permit; annual reports; a copy of the NPDES permit; and, records of all data or information used in the development and implementation of the SWMP) for a period of at least five years from the permit compliance action date or for the term of this permit, whichever is longer. This period may be extended at the request of DEQ at any time.

b. Availability of Records

The co-permittees must submit records to DEQ when requested. The co-permittees must also make all records described in this permit available to the public, in accordance with Oregon public records laws.

SCHEDULE C - COMPLIANCE CONDITIONS AND DATES

Compliance conditions and dates are not included at this time.

SCHEDULE D - SPECIAL CONDITIONS

1. Legal Authority

The co-permittees must maintain adequate legal authority through ordinance(s), interagency agreement(s), or other means to implement and enforce the provisions of this permit.

2. 303(d) Listed Pollutants

a. Applicability

The requirements of this section apply to receiving waters listed as impaired on the 303(d) list without established TMDL waste load allocations to which the co-permittees' MS4 discharges. The co-permittees must:

- i. Review the applicable pollutants that are on the 2018/2020 Integrated Report's 303(d) list, or the most recent USEPA list if approved within three years of the issuance date of this permit, that are relevant to the co-permittees' MS4 discharges with the MS4 Permit Renewal Application Package. Based on a review of the most current 303(d) list at the time, evaluate whether there is a reasonable likelihood for stormwater from the MS4 to cause or contribute to water quality degradation of receiving waters.
- ii. Evaluate whether the BMPs in the existing SWMP Document are effective in addressing and reducing the 303(d) pollutants. If a co-permittee determines that the BMPs in the existing SWMP Document are ineffective in addressing and reducing the applicable 303(d) pollutants, the co-permittee must describe how the SWMP will be modified or updated to address and reduce these pollutants to the MEP.
- iii. Submit a report with the MS4 Permit Renewal Application Package summarizing the results of the review and evaluation, and identify any modifications or updates to the SWMP Document that are necessary to reduce applicable 303(d) pollutants to the MEP.

3. Total Maximum Daily Loads (TMDLs)

a. Applicability

DEQ incorporated performance measures in Schedule A.3.c, d, e, and f to address water quality impairments and EPA-approved or issued TMDL allocations to date. Compliance with the permit's terms and conditions is presumed to be in compliance with TMDL Waste Load Allocations (WLAs) issued before the effective date of this permit, unless specified below.

The requirements of this section apply to the co-permittees' MS4 discharges to receiving waters with established TMDLs or to receiving waters with new or modified TMDLs approved or issued by EPA within three years of the issuance date of this permit. Established TMDLs are noted on page 1 of this permit. Pollutant discharges for those parameters listed in the TMDL with applicable WLAs must be reduced to the maximum extent practicable through the implementation of BMPs and an adaptive management process.

b. Willamette Basin Mercury TMDL

Each co-permittee is responsible for the applicable WLAs included in the Total Maximum Daily Load (TMDL) for Mercury in the Willamette Basin and the implementation requirements associated Water Quality Management Plan issued by EPA on December 30, 2019 and reissued with modification on February 4, 2021. These requirements include:

- i. Develop and submit a mercury minimization assessment with the annual report due December 1, 2022, that documents the current actions, such as BMPs implemented, that

reduce the amount of solids discharged into and from the permitted MS4 system (similar to the actions currently required in Schedule A). If the assessment indicates that mercury and sediment reducing BMPs are fully incorporated into the SWMP Document, a report documenting the results as such is sufficient.

- ii. Continued implementation of the BMPs and other actions described in the mercury minimization assessment that are effective for mercury reduction, along with documentation of implementation in each subsequent annual report.
- iii. An analysis of the effectiveness of the best management practices and any other actions taken and qualitative pollutant load reductions achieved in the MS4 Permit Renewal Application Package. Due to data limitations, mercury benchmarks are not applicable in the first permit cycle after the TMDL is finalized.
- iv. Collection of paired total mercury and total suspended solids samples, as described in Schedule B.
- v. Submittal of paired mercury and total suspended solids monitoring data in the appropriate DEQ data submission template. Given the lack of sufficient mercury data, pollutant load reduction evaluations, benchmarks, and waste load allocation attainment analyses for mercury will not be required in this permit cycle.

c. TMDL Pollutant Load Reduction Evaluation

Progress towards reducing TMDL pollutant loads must be evaluated by the co-permittees through the use of a pollutant load reduction empirical model, water quality status and trend analysis, and other appropriate qualitative or quantitative evaluation approaches identified by the co-permittees. The results of this TMDL pollutant load reduction evaluation must be described in a report and submitted to DEQ with the MS4 Permit Renewal Application Package, in accordance with Schedule B.4. As indicated above in Schedule D.3.b.v, this exercise does not need to include mercury due to insufficient data volume. The report must contain the following:

- i. The rationale and methodology used to evaluate progress towards reducing TMDL pollutant loads.
- ii. An estimate of current pollutant loadings without considering BMP implementation, and an estimate of current pollutant loadings considering BMP implementation for each TMDL parameter with an established WLA. The difference between these two estimated loads is the pollutant load reduction.
- iii. A comparison of the estimated pollutant loading with and without BMP implementation to the applicable TMDL WLA.
- iv. A comparison of the estimated pollutant load reduction to the estimated TMDL pollutant load reduction benchmark established for the permit term, if applicable.
- v. A description of the estimated effectiveness of structural BMPs.
- vi. A description of the estimated effectiveness of non-structural BMPs, if applicable, and the rationale for the selected approach.
- vii. A water quality trend analysis, as sufficient data are available, and the relationship to stormwater discharges for receiving waterbodies within the co-permittees' jurisdictional area with an approved TMDL. If sufficient data to conduct a water quality trend analysis is unavailable for a receiving waterbody, the co-permittees must describe the data limitations. The collection of sufficient data must be prioritized and reflected as part of the monitoring project/task proposal required in Schedule B.4.e.
- viii. A narrative summarizing progress towards the applicable TMDL WLAs and existing TMDL benchmarks, if applicable. If a co-permittee estimates that an existing TMDL benchmark

was not achieved during the permit term, the co-permittee must apply their adaptive management process to reassess the SWMP and current BMP implementation in order to address TMDL pollutant load reduction over the next permit term; and,

- ix. If a co-permittee estimates that TMDL WLAs are achieved with existing BMP implementation, the co-permittee must provide a statement supporting this conclusion.

d. Establishment of TMDL Pollutant Reduction Benchmarks

A TMDL pollutant reduction benchmark must be developed for each applicable TMDL parameter where existing BMP implementation is not achieving the WLA. DEQ recognizes that not enough data may have been collected in the permit term to allow Benchmark development for mercury in stormwater, because it is a new parameter resulting from a new TMDL, so mercury is exempted from this requirement. The TMDL pollutant reduction benchmarks must be submitted with the MS4 Permit Renewal Application Package, as follows:

- i. The TMDL pollutant load reduction benchmark must reflect:
 - (A) Additional pollutant load reduction necessary to achieve the benchmark estimated for the permit term, if not achieved per Schedule D.3.c.iv.; and,
 - (B) The pollutant load reduction proposed to achieve additional progress towards the TMDL WLA during the next permit term.
- ii. The TMDL pollutant load reduction benchmark submittal must include the following:
 - (A) An explanation of the relationship between the TMDL waste load allocations and the TMDL benchmark for each applicable TMDL parameter;
 - (B) A description of how SWMP implementation contributes to the overall reduction of the TMDL pollutants during the next permit term;
 - (C) Identification of additional or modified BMPs that will result in further reductions in the discharge of the applicable TMDL pollutants, including the rationale for proposing the BMPs; and,
 - (D) An estimate of current pollutant loadings that reflect the implementation of the current BMPs and the BMPs proposed to be implemented during the next permit term.

4. Definitions:

- a. **Adaptive Management** is a structured, iterative process designed to refine and improve stormwater programs over time by evaluating results and adjusting actions based on what has been learned.
- b. **Antecedent Dry Period** is the period of dry time between precipitation events that include less than 0.1 inch of precipitation.
- c. **Best Management Practices (BMPs)** means schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs are also treatment requirements operating procedures, and practices to control runoff, spillage, or leaks, sludge, or waste disposal, or drainage from raw material storages. See 40 CFR § 122.2 and 122.44(k). For the purposes of this permit, BMPs are synonymous with structural and non-structural stormwater controls and include the schedule of activities, controls, prohibition of practices, maintenance procedures and other management practices designed to prevent or reduce pollution.
- d. **CFR** means the Code of Federal Regulations, which is the official annual compilation of all regulations and rules promulgated during the previous year by the agencies of the United States

government, combined with all the previously issued regulations and rules of those agencies that are still in effect.

- e. **Chronic Illicit Discharges** are continuous or repeated illicit discharges to an MS4 potentially resulting from sanitary/wastewater connections to an MS4, sanitary/wastewater inflows into an MS4, unpermitted industrial wastewater discharges to the MS4, or other types of illegal dumping or poor housekeeping practices upstream from an outfall where irregular flows, color, smell, or other monitoring parameters indicate an issue that may need repeat investigations over time to ensure cross connections or illegal dumping are remedied. Chronic illicit discharges may not be long-term and ongoing as in the case of illicit connections that can be stopped easily. Chronic illicit discharges may be defined by inconclusive findings of outfall investigations indicating pollutant discharge or repeated reports by members of the public that have not been traced back to a definite source.
- f. **Clean Water Act (CWA)** refers to what was formally called the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, 33 U.S.C. § 1251 et seq. [40 CFR §122.2].
- g. **Construction activity** includes, but is not limited to, clearing, grading, excavation, and other site preparation or ground disturbing work related to the construction of residential buildings and non-residential buildings, and heavy construction (e.g., highways, streets, bridges, tunnels, pipelines, transmission lines and industrial non-building structures).
- h. **Control Measure**, as used in this permit, refers to any action, activity, Best Management Practice, or other method used to control the discharge of pollutants in MS4 discharges.
- i. **Discharge** of a pollutant means any addition of any “pollutant” or combination of pollutants to “waters of the state” from any “point source,” or any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the state from surface runoff, which is collected or channeled by humans; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person, which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any “indirect discharger” [40 CFR §122.2].
- j. **Effective Impervious Area** is defined as the subset of the total impervious area often hydrologically connected to stream networks via stormwater infrastructure. Many methods of calculating effective impervious area have been developed, and its importance in runoff modeling and watershed health has been well established in stormwater related academic and scientific literature, making it a governing characteristic of urban watersheds.
- k. **Erosion** is the process of carrying away soil particles by the action of water, wind, or other process.
- l. **Erosion and Sediment Control Plan** is a site-specific plan, map, or document that illustrates and/or lists erosion and sediment control measures that are implemented by type and location on a construction site, that for operators and inspectors alike: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes stormwater controls to prevent pollutants in stormwater discharges from the construction site; (3) tracks or records updates and

- corrective actions implemented as site conditions or needs change; and (4) identifies procedures the operator will implement to comply with the terms and conditions of this general permit.
- m. **Evaporate** is rainfall that is changed or converted into a vapor.
 - n. **Evapotranspiration** is the sum of evaporation and transpiration of water from the earth's surface to the atmosphere. It includes evaporation of liquid or solid water plus the transpiration from plants.
 - o. **Extended Filtration** is the technique of using stormwater facilities designed to promote stormwater runoff filtration through natural or engineered media. The runoff is treated through physical, biological, and chemical processes as it filters through the media of the facility. Filtration is promoted by constructing the facility with media of an appropriate infiltration rate and typically includes an underlying aggregate rock reservoir or other engineered flow-through and filtration media, with an underdrain to convey to a discharge location.
 - p. **Final Stabilization** is determined by satisfying the following criteria: (1) there is no reasonable potential for discharge of a significant amount of construction related sediment or turbidity to surface waters; (2) construction materials and waste have been removed and disposed of properly. This includes any sediment that was being retained by the temporary erosion and sediment controls; (3) all temporary erosion and sediment controls have been removed and disposed of properly, unless doing so conflicts with local requirements; (4) all soil disturbance activities have stopped and all stormwater discharges from construction activities that are authorized by this permit have ceased; (5) all disturbed or exposed areas of the site are covered by either final vegetative stabilization or permanent stabilization measures. However, temporary or permanent stabilization measures are not required for areas that are intended to be left unvegetated or unstabilized following construction (such as dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, or materials), provided that measures are in place to eliminate or minimize erosion.
 - q. **Green Infrastructure (GI)** is a specific type of stormwater control using vegetation, soils, and natural processes to manage stormwater. At the scale of a neighborhood or site, green infrastructure refers to stormwater management systems designed to mimic nature by reducing and/or storing stormwater through infiltration, evaporation, and transpiration. At the site level, such measures may include the use of plant or soil systems, permeable pavement or other pervious surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters. At the scale of city or county, green infrastructure refers to the patchwork of natural areas that provides flood protection and natural processes that remove pollutants from stormwater.
 - r. **Impaired Water** means any waterbody that does not meet applicable water quality standards for one or more parameters as identified on Oregon's 303(d) list.
 - s. **Infiltration** is the process by which storm water penetrates into soil.
 - t. **Illicit Connections** include, but are not limited to, pipes, drains, open channels, or other conveyances that are connected to the MS4 but were constructed for or are currently being used to convey non-stormwater discharges to the public stormwater system or waters of the state and are controlled under the permittee's IDDE program.
 - u. **Illicit Discharge** is any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater except discharges authorized under Section A.4.a.xii., discharges permitted by a NPDES permit or other state or federal permit, or otherwise authorized by DEQ.
 - v. **Impervious Surface** is any surface resulting from development activities that prevents the infiltration of water or results in more runoff than in the undeveloped condition. Common

impervious surfaces may include but are not limited to building roofs, traditional concrete or asphalt paving on walkways, driveways, parking lots, gravel lots and roads, and packed earthen materials.

- w. **Integrated Pest Management** is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant plant varieties.
- x. **Low Impact Development (LID)** is a stormwater management approach that seeks to mitigate the impacts of increased runoff and stormwater pollution using a set of planning, design and construction approaches and stormwater management practices that promote the use of natural systems, green infrastructure, and other techniques for infiltration, filtration, evapotranspiration, and reuse of rainwater, and can occur at a wide range of landscape scales (e.g., regional, community and site). Low impact development is a comprehensive land planning and engineering design approach to stormwater management with a goal of mimicking the pre-development hydrologic regime of urban and developing watersheds.
- y. **Maximum Extent Practicable (MEP)** is the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges that was established by Section 402(p)(3)(B)(iii) of the Clean Water Act [33 U.S.C §1342(p)(3)(B)(iii)].
- z. **Minimize** means to reduce and/or eliminate to the extent achievable using control measures (including BMPs) that are technologically available, economically practicable, and achievable in light of best industry or municipal practices.
- aa. **Municipal Separate Storm Sewer System (MS4)** is defined in 40 CFR §122.26(b) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made 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 sewage, industrial wastes, storm water, 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 Clean Water Act that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works as defined at 40 CFR §122.2.
- bb. **Municipality** means a city, town, borough, county, parish, district, association, or other public body created by or under state law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the Clean Water Act.
- cc. **National Pollutant Discharge Elimination System (NPDES)** is 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 Clean Water Act [40 CFR §122.2].
- dd. **Non-structural Stormwater Controls** or **BMPs** are stormwater controls in the form of development standards or other regulatory mechanisms intended to minimize and treat stormwater by minimizing impervious surfaces and by using soil infiltration, evaporation, and transpiration. These controls may also take the form of procedural practices to prevent pollutants from contaminating stormwater. The use of this term in this Permit is consistent with the discussion of non-structural stormwater BMPs in 64 Federal Register 68760 (December 9, 1999) which encompasses preventative actions that involve management and source controls such as:
(1) policies and ordinances that provide requirements and standards to direct growth to identified

areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive waterbodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; (2) policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure; (3) education programs for developers and the public about project designs or stormwater design standards that minimize water quality impacts; and (4) other measures such as minimization of the percentage of impervious area after development, use of measures to minimize directly connected impervious areas, and other source control measures such as good housekeeping, street sweeping, preventive maintenance, spill prevention, and public education and outreach.

- ee. **Outfall** is defined as a point source at the point where a municipal separate storm sewer discharges to waters of the State, and does not include open conveyances connecting two municipal separate storm sewers or pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the State and are used to convey waters of the State.
- ff. **Owner** or **Operator** is the owner or operator of any “facility or activity” subject to regulation under the NPDES program.
- gg. **Pesticide** as used in this Permit carries the same definition as used in the Federal Insecticide, Fungicide, and Rodenticide Act and is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Under FIFRA, pest is any insect, rodent, nematode, fungus, weed, or any other form of terrestrial or aquatic plant or animal life or virus, bacteria, or other micro-organism
- hh. **Pollutant** is dredged spoil; solid waste; incinerator residue; sewage; garbage; sewerage sludge; munitions; chemical wastes; biological materials; radioactive materials; heat; wrecked or discarded equipment; rock; sand; cellar dirt; and industrial, municipal, and agricultural waste discharged into water. [40 CFR §122.2]
- ii. **Pollutants of Concern** are defined in NPDES permitting as 1) pollutants with applicable Technology Based Effluent Limitations (TBELs) defined in an NPDES permit based on national or state standards or on a case by case basis, 2) pollutants for which a wasteload allocation (WLA) has been assigned to a discharge through a TMDL, 3) those pollutants identified in a previous iteration of the discharger’s permit as needing Water Quality Based Effluent Limitations (WQBELs), 4) pollutants identified through monitoring as present in the effluent or stormwater discharges, or 5) pollutants not in any of the previous categories but otherwise expected to be present in the discharge. For this permit, use of the term is intended to focus on pollutants known by the co-/permittee to be present in stormwater per categories 4) and 5), and prioritized for reduction via stormwater controls identified in this permit.
- jj. **Post-Construction Site Runoff Plan** is a plan developed by a site owner or operator and/or their designer to demonstrate compliance with the post-construction stormwater management and long-term operation and maintenance requirements of this permit.
- kk. **Predevelopment Hydrologic Function** is the hydrology of a site reflecting the local rainfall patterns, soil characteristics, land cover, evapotranspiration, and topography. The term predevelopment as used in predevelopment hydrologic function is consistent with the term predevelopment as discussed in Federal Register Volume 64, Number 235 and refers to the runoff conditions that exist onsite immediately before the planned development activities occur.

Predevelopment is not intended to be interpreted as the period before any human-induced land disturbance activity has occurred.

- ll. **Redevelopment** is a project on a previously developed site that results in the addition or replacement of impervious surface.
- mm. **Replace or Replacement:** in the context of this permit, these words will usually refer to the removal of an impervious surface that exposes soil followed by the placement of an impervious surface. Replacement does not include repair or maintenance activities on structures or facilities taken to prevent decline, lapse, or cessation in the use of the existing structures, facilities, or impervious surface, as long as no additional hydrologic impact results from the repair or maintenance activity.
- nn. **Stormwater** or **stormwater runoff** includes snow melt runoff, and surface runoff and drainage, and is defined in 40 CFR §122.26(b)(13). “Stormwater” means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels, or pipes into a defined surface water channel or a constructed stormwater control or infiltration facility.
- oo. **Stormwater Control** refers to non-structural, structural stormwater controls and/or BMPs.
- pp. **Stormwater Management Program (SWMP)** refers to a comprehensive program that includes legal authority, permitting and stormwater control and facility design standards, capital projects and retrofits, monitoring and a stormwater management plan that collectively manages the quality of stormwater discharged from the municipal separate storm sewer system. For the purposes of this permit, the SWMP consists of the actions and activities conducted by the co-permittees as required by the permit and described in the co-/permittees’ SWMP Document.
- qq. A **SWMP Document** is the written summary that describes the comprehensive management practices, structural and non-structural controls or BMPs, techniques, systems, and design and engineering methods employed to reduce the discharge of pollutants from the MS4 to the MEP in accordance with the terms of the permit. A SWMP Document includes or references stormwater plans, manuals, documents, or code/ordinances, as applicable, describing the unique and/or cooperative means by which an individual co-/permittee or entity implements the specific stormwater management control measures required by the permit.
- rr. **Stormwater Mitigation Bank Program** is a program for offsite compliance that establishes a market with an entity that tracks the life cycle of an offsite mitigation credit by certifying the credit, issuing a tradable credit to the seller, transferring the ownership of the credit from the seller to the buyer, and use or retirement of the credit to receive a benefit when buyer of the credit is unable to meet a retention requirement on their site.
- ss. **Stormwater Payment-in-Lieu Program** is a program for offsite compliance where the co-/permittee or site owner/operator pays a fee in lieu of full compliance with Schedule A.3.e.iii on the development site with this fee based on volume ratios (e.g., volume of stormwater to be retained onsite to the volume to be retained at the mitigation site) or impervious area unavailable for infiltration, at a rate or rates specified by the co-/permittee. The co-/permittee(s) can aggregate fees and apply them to a public stormwater structural or non-structural control at a later point in time.
- tt. **Structural Stormwater Controls** or **BMPs** are stormwater controls that are physically designed, installed, and maintained to prevent or reduce the discharge of pollutants in stormwater to minimize the impacts of stormwater on waterbodies. As noted in the 64 Federal Register 68760 (December 9, 1999), examples of structural stormwater controls or BMPs include: (1) storage practices such as wet ponds and extended-detention outlet structures; (2)

- filtration practices such as grassed swales, sand filters and filter strips; and, (3) infiltration practices such as infiltration basins and infiltration trenches.
- uu. **Subwatershed** is a subdivision of a Watershed and is the sixth-level, 12-digit unit of the hydrologic unit hierarchy as defined by the National Watershed Boundary Dataset (USGS et al. 2013)
- vv. **Total Maximum Daily Load (TMDL)** or **applicable TMDL** is any TMDL, which has been issued or approved by EPA on or before the issuance date of this permit.
- ww. **TMDL Pollutant Load Reduction Benchmark (TMDL benchmark):** An estimated total pollutant load reduction target for each parameter or surrogate, where applicable, for waste load allocations established under an EPA-approved or EPA-issued TMDL. A benchmark is the anticipated pollutant load reduction goal to be achieved during the permit cycle through the implementation of the stormwater management program and BMPs identified in the SWMP Document. A benchmark is used to measure the effectiveness of the stormwater management program in making progress toward the waste load allocation, and is a tool for guiding adaptive management. A benchmark is not a numeric effluent limit; rather it is an estimated pollutant reduction target that is subject to the MEP standard. Benchmarks may be stated as a pollutant load range based upon the results of a pollutant reduction empirical model.
- xx. **Transpiration** means to release water vapor into the atmosphere through plant stomata or pores.
- yy. **Uncontaminated**, for the purposes of this Permit, means that the MS4 discharge does not: result in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at any time since November 16, 1987; or result in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or contribute to a violation or exceedance of an applicable Oregon water quality standard.
- zz. **Waters of the State** means Lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state, or within its jurisdiction.

SCHEDULE F - NPDES PERMIT GENERAL (MS4)

Revision Date, October 1, 2015

The general conditions in this schedule apply only to the extent they do not conflict with the requirements contained in Schedules A through E. If the permit requirements in Schedule A through D conflict with these general conditions, the permit requirements in Schedule A through D will control.

SECTION A. STANDARD CONDITIONS

A1. Duty to Comply with Permit

The permittee must comply with all conditions of this permit. Failure to comply with any permit condition is a violation of Oregon Revised Statutes (ORS) 468B.025 and the federal Clean Water Act and is grounds for an enforcement action. Failure to comply is also grounds for DEQ to terminate, modify and reissue, revoke, or deny renewal of a permit.

A2. Penalties for Water Pollution and Permit Condition Violations

The permit is enforceable by DEQ or EPA, and in some circumstances also by third parties under the citizen suit provisions of 33 USC § 1365. DEQ enforcement is generally based on provisions of state statutes and Environmental Quality Commission (EQC) rules, and EPA enforcement is generally based on provisions of federal statutes and EPA regulations.

ORS 468.140 allows DEQ to impose civil penalties up to \$25,000 per day for violation of a term, condition, or requirement of a permit. The federal Clean Water Act provides for civil penalties not to exceed \$25,000 per day for each violation of any condition or limitation of this permit.

Under ORS 468.943, unlawful water pollution in the second degree, is a Class A misdemeanor and is punishable by a fine of up to \$25,000, imprisonment for not more than one year, or both. Each day on which a violation occurs or continues is a separately punishable offense. The federal Clean Water Act provides for criminal penalties of not more than \$50,000 per day of violation, or imprisonment of not more than 2 years, or both for second or subsequent negligent violations of this permit.

Under ORS 468.946, unlawful water pollution in the first degree is a Class B felony and is punishable by a fine up to \$250,000, imprisonment for not more than 10 years or both. The federal Clean Water Act provides for criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment of not more than 3 years, or both for knowing violations of the permit. In the case of a second or subsequent conviction for knowing violation, a person is subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.

A3. Duty to Mitigate

The permittee must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit. In addition, upon request of DEQ, the permittee must correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

A4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application must be submitted at least 180 days before the expiration date of this permit.

DEQ may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

A5. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

- a. Violation of any term, condition, or requirement of this permit, a rule, or a statute.
- b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts.
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- d. The permittee is identified as a Designated Management Agency or allocated a wasteload under a total maximum daily load (TMDL).
- e. New information or regulations.
- f. Modification of compliance schedules.
- g. Requirements of permit reopener conditions.
- h. Correction of technical mistakes made in determining permit conditions.
- i. Determination that the permitted activity endangers human health or the environment.
- j. Other causes as specified in 40 CFR § 122.62, 122.64, and 124.5.

The filing of a request by the permittee for a permit modification, revocation or reissuance, termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

A6. Toxic Pollutants

The permittee must comply with any applicable effluent standards or prohibitions established under Oregon Administrative Rules (OAR) 340-041-0033 and 307(a) of the federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the federal Clean Water Act within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

A7. Property Rights and Other Legal Requirements

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, or authorize any injury to persons or property or invasion of any other private rights, or any infringement of federal, tribal, state, or local laws or regulations.

A8. Permit References

Except for effluent standards or prohibitions established under section 307(a) of the federal Clean Water Act and OAR 340-041-0033 for toxic pollutants, and standards for sewage sludge use or disposal established under section 405(d) of the federal Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

A9. Permit Fees

The permittee must pay the fees required by OAR.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

B1. Proper Operation and Maintenance

The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

B2. Need to Halt or Reduce Activity Not a Defense

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee must, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B3. Bypass of Treatment Facilities

a. Definitions

- (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs b and c of this section.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

- (1) Bypass is prohibited and DEQ may take enforcement action against a permittee for bypass unless:
 - i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventative maintenance; and
 - iii. The permittee submitted notices and requests as required under General Condition B3.c.

- (2) DEQ may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when DEQ determines that it will meet the three conditions listed above in General Condition B3.b(1).
- c. Notice and request for bypass.
 - (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, a written notice must be submitted to DEQ at least ten days before the date of the bypass.
 - (2) Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required in General Condition D5.

B4. Upset

- a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of General Condition B4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in General Condition D5, hereof (24-hour notice); and
 - (4) The permittee complied with any remedial measures required under General Condition A3 hereof.
- d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

B5. Treatment of Single Operational Upset

For purposes of this permit, a single operational upset that leads to simultaneous violations of more than one pollutant parameter will be treated as a single violation. A single operational upset is an exceptional incident that causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one federal Clean Water Act effluent discharge pollutant parameter. A single operational upset does not include federal Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational upset is a violation.

B6. Public Notification of Effluent Violation

If effluent limitations specified in this permit are exceeded or an overflow occurs that threatens public health, the permittee must take such steps as are necessary to alert the public, health agencies and other affected entities (for example, public water systems) about the extent and nature of the discharge in accordance with the notification procedures developed under General Condition B7. Such steps may

include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

B7. Emergency Response and Public Notification Plan

The permittee must develop and implement an emergency response and public notification plan that identifies measures to protect public health from bypasses or upsets that may endanger public health. At a minimum the plan must include mechanisms to:

- a. Ensure that the permittee is aware (to the greatest extent possible) of such events;
- b. Ensure notification of appropriate personnel and ensure that they are immediately dispatched for investigation and response;
- c. Ensure immediate notification to the public, health agencies, and other affected entities (including public water systems). The response plan must identify the public health and other officials that will receive immediate notification;
- d. Ensure that appropriate personnel are aware of and follow the plan and are appropriately trained;
- e. Provide emergency operations; and
- f. Ensure that DEQ is notified of the public notification steps taken.

B8. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in such a manner as to prevent any pollutant from such materials from entering waters of the state, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

C1. Representative Sampling

Sampling and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit, and must be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points must not be changed without notification to and the approval of DEQ. Samples must be collected in accordance with requirements in 40 CFR part 122.21 and 40 CFR part 403 Appendix E.

C2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected must be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

C3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR part 136 or, in the case of sludge (biosolids) use and disposal, approved under 40 CFR part 503 unless other test procedures have been specified in this permit.

For monitoring of recycled water with no discharge to waters of the state, monitoring must be conducted according to test procedures approved under 40 CFR part 136 or as specified in the most

recent edition of Standard Methods for the Examination of Water and Wastewater unless other test procedures have been specified in this permit or approved in writing by DEQ.

C4. Penalties for Tampering

The federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit may, upon conviction, be punished by a fine of not more than \$10,000 per violation, imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.

C5. Reporting of Monitoring Results

Monitoring results must be summarized each month on a discharge monitoring report form approved by DEQ. The reports must be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

C6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR part 136 or, in the case of sludge (biosolids) use and disposal, approved under 40 CFR part 503 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the discharge monitoring report. Such increased frequency must also be indicated. For a pollutant parameter that may be sampled more than once per day (for example, total residual chlorine), only the average daily value must be recorded unless otherwise specified in this permit.

C7. Averaging of Measurements

Calculations for all limitations that require averaging of measurements must utilize an arithmetic mean, except for bacteria which must be averaged as specified in this permit.

C8. Retention of Records

Records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities must be retained for a period of at least 5 years (or longer as required by 40 CFR part 503). Records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit must be retained for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of DEQ at any time.

C9. Records Contents

Records of monitoring information must include:

- a. The date, exact place, time, and methods of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

C10. Inspection and Entry

The permittee must allow DEQ or EPA upon the presentation of credentials to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

C11. Confidentiality of Information

Any information relating to this permit that is submitted to or obtained by DEQ is available to the public unless classified as confidential by the Director of DEQ under ORS 468.095. The permittee may request that information be classified as confidential if it is a trade secret as defined by that statute. The name and address of the permittee, permit applications, permits, effluent data, and information required by NPDES application forms under 40 CFR § 122.21 are not classified as confidential [40 CFR § 122.7(b)].

SECTION D. REPORTING REQUIREMENTS

D1. Planned Changes

The permittee must comply with OAR 340-052, "Review of Plans and Specifications" and 40 CFR § 122.41(l)(1). Except where exempted under OAR 340-052, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers may be commenced until the plans and specifications are submitted to and approved by DEQ. The permittee must give notice to DEQ as soon as possible of any planned physical alternations or additions to the permitted facility.

D2. Anticipated Noncompliance

The permittee must give advance notice to DEQ of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

D3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and EQC rules. No permit may be transferred to a third party without prior written approval from DEQ. DEQ may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under 40 CFR § 122.61. The permittee must notify DEQ when a transfer of property interest takes place.

D4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. Any reports of noncompliance must include the cause of

noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

D5. Twenty-Four Hour Reporting

The permittee must report any noncompliance that may endanger health or the environment. Any information must be provided orally (by telephone) within 24 hours from the time the permittee becomes aware of the circumstances, unless a shorter time is specified in the permit. During normal business hours, the DEQ regional office must be called. Outside of normal business hours, DEQ must be contacted at 1-800-452-0311 (Oregon Emergency Response System).

The following must be included as information that must be reported within 24 hours under this paragraph:

- a. Any unanticipated bypass that exceeds any effluent limitation in this permit;
- b. Any upset that exceeds any effluent limitation in this permit;
- c. Violation of maximum daily discharge limitation for any of the pollutants listed by DEQ in this permit; and
- d. Any noncompliance that may endanger human health or the environment.

A written submission must also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission must contain:

- e. A description of noncompliance and its cause;
- f. The period of noncompliance, including exact dates and times;
- g. The estimated time noncompliance is expected to continue if it has not been corrected;
- h. Steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and
- i. Public notification steps taken, pursuant to General Condition B7.

DEQ may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

D6. Other Noncompliance

The permittee must report all instances of noncompliance not reported under General Condition D4 or D5, at the time monitoring reports are submitted. The reports must contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. The estimated time noncompliance is expected to continue if it has not been corrected; and
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

D7. Duty to Provide Information

The permittee must furnish to DEQ within a reasonable time any information that DEQ may request to determine compliance with the permit or to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit. The permittee must also furnish to DEQ, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it has failed to submit any relevant facts or has submitted incorrect information in a permit application or any report to DEQ, it must promptly submit such facts or information.

D8. Signatory Requirements

All applications, reports or information submitted to DEQ must be signed and certified in accordance with 40 CFR § 122.22.

D9. Falsification of Information

Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed \$125,000 per violation and up to 5 years in prison per ORS chapter 161. Additionally, according to 40 CFR § 122.41(k)(2), any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or non-compliance will, upon conviction, be punished by a federal civil penalty not to exceed \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

D10. Changes to Discharges of Toxic Pollutant

The permittee must notify DEQ as soon as it knows or has reason to believe the following:

- a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following “notification levels:
 - (1) One hundred micrograms per liter (100 µg/l);
 - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
 - (4) The level established by DEQ in accordance with 40 CFR § 122.44(f).
- b. That any activity has occurred or will occur that would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
 - (4) The level established by DEQ in accordance with 40 CFR § 122.44(f).

SECTION E. DEFINITIONS

- E1. *BOD* or *BOD₅* means five-day biochemical oxygen demand.
- E2. *CBOD* or *CBOD₅* means five-day carbonaceous biochemical oxygen demand.
- E3. *TSS* means total suspended solids.
- E4. *Bacteria* means but is not limited to fecal coliform bacteria, total coliform bacteria, *Escherichia coli* (*E. coli*) bacteria, and *Enterococcus* bacteria.
- E5. *FC* means fecal coliform bacteria.
- E6. *Total residual chlorine* means combined chlorine forms plus free residual chlorine
- E7. *Technology based permit effluent limitations* means technology-based treatment requirements as defined in 40 CFR § 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-041.
- E8. *mg/l* means milligrams per liter.

- E9. $\mu\text{g}/\text{l}$ means microgram per liter.
- E10. kg means kilograms.
- E11. m^3/d means cubic meters per day.
- E12. *MGD* means million gallons per day.
- E13. *Average monthly effluent limitation* as defined at 40 CFR § 122.2 means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
- E14. *Average weekly effluent limitation* as defined at 40 CFR § 122.2 means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.
- E15. *Daily discharge* as defined at 40 CFR § 122.2 means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge must be calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge must be calculated as the average measurement of the pollutant over the day.
- E16. *24-hour composite sample* means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.
- E17. *Grab sample* means an individual discrete sample collected over a period of time not to exceed 15 minutes.
- E18. *Quarter* means January through March, April through June, July through September, or October through December.
- E19. *Month* means calendar month.
- E20. *Week* means a calendar week of Sunday through Saturday.