



# Stormwater Management Program Plan

*December 2021 **DRAFT***



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## 1. INTRODUCTION

### 1.1 Overview

When precipitation from rain and snow flows over hard surfaces like roads, roofs, and parking lots, it can pick up oils, chemicals, debris, and other pollutants that end up washing into waterways. While this runoff may take a direct path to the waterway, in developed areas it commonly gets conveyed through storm sewers to waterbodies. Thurston County's *Stormwater Management Program Plan* (Stormwater Plan) describes the various activities, procedures, and practices the County uses to help reduce the adverse impacts from runoff coming from storm sewer systems owned or operated by the County. The annual revision of the Stormwater Plan reflects changes in regulations, advancements in stormwater management, and the evolution of the County's procedures and practices. The Stormwater Plan also serves as an informative guide to County staff responsible for carrying out these programs as well as a resource for the public to learn about the County's stormwater management efforts.

#### 1.1.1 Regulatory Context

In 1948, the United States enacted the Federal Water Pollution Control Act, which was revamped in 1972 and became known as the Clean Water Act. This Act set standards to limit harmful substances from entering the water we all share. Under this act, the U.S. Environmental Protection Agency (EPA) established stormwater regulations for the municipal stormwater permit program. In Washington State, EPA delegates administration of municipal stormwater permits to the Department of Ecology (Ecology). In addition to applying federal stormwater regulations, Ecology-issued permits also apply regulations under the State Water Pollution Control Act.

Since January of 2007, the County has been required to comply with these federal and state water pollution control laws through an Ecology-issued [municipal stormwater permit](#) (Permit). This Permit conditionally authorizes the discharge of stormwater to surface waters and to ground waters from County owned or operated separate storm sewer systems<sup>1</sup> within the regulated area.

The Permit requires the County to develop, implement and annually update a Stormwater Plan designed to reduce discharges of pollutants from its municipal stormwater systems to protect water quality. The Stormwater Plan requires the following program components:

- Stormwater planning
- Public education and outreach
- Public involvement and participation

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<sup>1</sup> Separate storm sewer systems involve those used for collecting or conveying only stormwater runoff. Thurston County does not have any combined systems that handle both sewage and stormwater runoff.



- Municipal storm sewer mapping and documentation
- Illicit discharge detection and elimination
- Controlling runoff from new development, redevelopment, and construction sites
- Municipal operations and maintenance
- Source control program for existing development
- Planned actions to meet applicable Total Maximum Daily Load (TMDL) requirements
- Planned actions to meet the Permit's monitoring requirements

In addition to developing and implementing these programs, the Permit requires the County to submit an annual report to the Washington State Department of Ecology documenting the County's progress in fulfilling the Permit's requirements.

### **1.1.2 Area and Facilities Covered**

Thurston County's Permit covers unincorporated urbanized areas<sup>2</sup> and urban growth areas associated with permitted cities (i.e., the Cities of Lacey, Olympia, and Tumwater) falling under the jurisdictional control of the County. The geographic scope of the permit coverage evolves as the County's jurisdictional control transfers due to annexations to permitted cities. [Appendix A](#) details the County's 2020 Permit boundary. The County also implements several of the programs described in the Stormwater Plan countywide.

## **1.2 Stormwater Management Program Plan Organization**

[Section 1: Introduction](#) provides an introduction/overview of the County's stormwater management program, the regulatory context of the program, the area and facilities affected, and permit history.

[Section 2: Stormwater Management Program Administration](#) describes the County's stormwater-related internal and external coordination mechanisms, utility fee funding structure, and the Stormwater Plan revision process.

[Section 3: Stormwater Planning](#) describes the County's program to inform and assist in the development of policies and strategies as water quality management tools to protect receiving waters.

[Section 4: Public Education and Outreach](#) describes the County's programs designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts as well as encourage public participation in stewardship activities.

[Section 5: Public Involvement and Participation](#) describes the ongoing opportunities for public involvement and participation in developing, implementing, and revising the Stormwater Plan.

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<sup>2</sup> A federally-designated land area comprising one or more places and the adjacent densely settled surrounding area that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. The U.S. Census Bureau designates *urbanized areas* based on the most recent decennial census.



[Section 6: Storm Sewer System Mapping and Documentation](#) describes the program for mapping and documenting the County's municipal separate storm sewer system (MS4), including stormwater system asset management.

[Section 7: Illicit Discharge Detection and Elimination](#) describes the ongoing program designed to prevent, detect, characterize, trace, and eliminate unauthorized connections and illicit discharges into the County's MS4.

[Section 8: Controlling Runoff from New Development, Redevelopment, and Construction Sites](#) describes the County's program and enforcement mechanisms to reduce pollutants in stormwater runoff to its MS4 from new development, redevelopment, and construction activities.

[Section 9: Municipal Operations and Maintenance](#) describes the County's operations and maintenance program to prevent or reduce pollutant runoff from its municipal operations.

[Section 10: Source Control Program for Existing Development](#) describes the program to prevent and reduce pollutants in runoff from areas that discharge to the County's MS4.

[Section 11: Compliance with Total Maximum Daily Load Requirements](#) describes the County's TMDL-related obligations for stormwater discharges from its MS4.

[Section 12: Monitoring and Assessment](#) describes the County's participation in the Regional Stormwater Monitoring Program as well as any stormwater monitoring or stormwater-related studies conducted by the County.

## 2 STORMWATER MANAGEMENT PROGRAM ADMINISTRATION

### 2.1 Internal Coordination

The responsibility for the overall administration of the Stormwater Plan and compliance coordination for the Permit lies with the County's *Stormwater Program Coordinator* in consultation with the County's *Stormwater Coordination Team* (SCT). The County's various departments, divisions, and programs distribute functional responsibilities associated with the County's Stormwater Plan.

#### 2.1.1 *Stormwater Coordination Team (SCT)*

The SCT assists in addressing stormwater management-related policy issues as well as providing a framework for communication, coordination, and cooperation in the development and implementation of the County's stormwater management program. The SCT also serves as a resource to County departments for feedback on stormwater-related programs and policies. The SCT meets quarterly and consists of representatives from County departments and programs required to commit or expend resources related to stormwater management. Meeting summaries, focusing on action items and recommendations, are kept, and distributed to SCT members. When appropriate, the SCT directs assignments to subcommittees.

Duties and responsibilities of the SCT include:

1. Making recommendations regarding stormwater management-related policies, programs, and planning.
2. Providing regular updates on program direction and evolving policy issues to the Storm and Surface Water Advisory Board (SSWAB), a citizen advisory committee to the Board of County Commissioners (BoCC).
3. Providing recommendations on preferred approaches to meet regulatory obligations
4. Guiding development and deployment of the County's Stormwater Plan by making recommendations regarding:
  - Funding, staffing, and other resources necessary to support its development and implementation
  - The roles and responsibilities of the County departments and programs that are essential for its successful implementation
  - How best to carry out stormwater-related work or, if that is not possible, suggest priorities on what should be done so the risks and downsides are understood
5. Ongoing evaluation of the Stormwater Plan's effectiveness.
6. Improving communication among affected workgroups in County departments and programs.

7. Assisting in the resolution of stormwater-related problems and conflicts.

### **2.1.2 Permit Implementation Tracking Tool**

The County uses the spreadsheet-based stormwater permit implementation tracking tool to aid in:

- Communicating stormwater permit obligations among department, programs, and staff
- Identifying resource and staffing needs
- Assigning roles and responsibilities among departments and staff
- Developing work programs and budgets
- Tracking permit compliance
- Generating annual reporting assignments

The tool undergoes continuous updates to reflect staffing changes and organizational realignments.

## **2.2 Intergovernmental Coordination**

The County coordinates with local, state, and federal governments, tribes, and various stakeholder groups. Improved intergovernmental coordination helps identify areas for stormwater retrofit, maintenance, illicit discharge detection and elimination, spill response, monitoring, source control, and education. As appropriate, the County works with these groups to help coordinate the implementation of our Stormwater Plan.

The County actively participates in numerous groups and committees to coordinate stormwater-related policies, programs, and projects. This helps leverage resources, maximize program effectiveness, and foster information sharing. These groups and committees, ranging from local to national involvement, include such areas as permit coordination, operations and maintenance, education and outreach, basin planning, salmon recovery, TMDLs, nonpoint pollution<sup>3</sup>, monitoring, floodplain management, and technical advisory functions.

## **2.3 Storm and Surface Water Utility Fees**

Most property owners in unincorporated Thurston County pay storm and surface water utility fees. The rates, Thurston County Code 15.06, vary depending on the property's use (e.g., residential, multi-family, commercial, industrial, agricultural, government, public and private roads, and vacant land), square feet of impervious surface, and whether the property lies within the regulatory boundaries of the Permit. The storm and surface water utility rate consists of two components, a base rate and a capital rate. The rates appear as a single stormwater charge on

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<sup>3</sup> A term used to describe pollution resulting from many diffuse sources, in direct contrast to point source pollution which results from a single source.

annual property tax statements. Ratepayers alleging an error in billing, such as basin location, acreage, impervious surface coverage, or land use classification may appeal their charge. The County offers a rate fee credit program as a way for schools and non-residential properties to reduce their stormwater fees. The fee credit program is designed to recognize schools, commercial businesses, and other non-residential property owners whose activities support the County's stormwater management goals by granting these parcel owners up to a 50 percent credit on their stormwater rates and charges. Non-residential properties include, but are not limited to, retail, wholesale, or services businesses; offices; public buildings; and places of worship.

Beginning in 2022, the County expects to begin efforts to develop a Storm and Surface Water Comprehensive Plan. This document would look at the political and regulatory drivers as well as the goals of the County commissioners. The plan would also look at the rates and how those might change over time. Proposed increases in the utility rates are subject to public hearing and approval by the County commissioners.

More information on the County's storm and surface water utility fees and rate fee credit program can be found at: <http://www.thurstoncountywa.gov/sw/Pages/rs-statement-billing.aspx>.

### **2.4 Tracking Stormwater-Related Training**

The County's *Stormwater Training Plan* ([Appendix B](#)) facilitates deployment of the training requirements set forth in the Permit. This pertains to the following program areas:

- Illicit discharge detection and elimination
- Controlling runoff from new development, redevelopment, and construction sites
- Operation and maintenance
- Source control
- Enforcement

For each of these program areas, the training plan describes the key target audience, curriculum, training delivery mechanism, and training frequency. With the reissuance of the Permit, the County reviewed its existing training programs, including training needs associated with future implementation of the source control program for existing development. In 2021, the Training Plan underwent a significant revision to increase the resolution of training target audiences as well as the details to the curriculum description and training delivery mechanisms. The training documentation form underwent revision to better correspond with the revised training plan and to reflect a shift to more online training offerings.

The County continues to explore the feasibility and process for integrating the elements of the training plan into the County's electronic Learning Management System (LMS) to improve efficiency of notification, tracking, and training attendance documentation. Pursuing enhanced functionality aims were put on pause as the County had to reassess the County's financial standing before moving forward again with the deployment of Countywide Enterprise Resource Planning system which was expected to include enhancements in LMS functionality. The County intends to move forward once the County's financial picture improves. In the interim, we continue to explore minor organizational adjustments that could enhance our ability in using the existing LMS to track and deploy stormwater-related staff training. We expect to continue this work in 2022.

### **2.5 Stormwater Plan Revision Process**

The County updates its Stormwater Plan annually for submittal with its annual municipal stormwater permit compliance report to Ecology. In addition to including planned activities in the coming year, the County may identify trends, common problems, or solutions that spur the need to revise aspects of the Stormwater Plan as part of our ongoing evaluation and continuous improvement of program areas. The SCT identified chapter leads to coordinate the ongoing review of the Stormwater Plan's content. The Stormwater Plan revision process involves circulating the revised draft for internal staff review as well as review by the SSWAB.

## 3. STORMWATER PLANNING

### 3.1 Overview

The Permit requires the County to implement a stormwater planning program to inform and assist in the development of policies and strategies to protect the beneficial uses of our receiving waters. The County has invested in efforts to inform and improve our collective understanding of stormwater-related impacts and effectiveness of the stormwater management programs and practices. We intend to build off this work in the development and deployment of the stormwater planning program. Elements of this program will include:

- Convening an inter-disciplinary team to inform and assist in the program's development, progress, and influence
- Coordinating stormwater management needs with locally initiated or state-mandated long-range land use plans used to guide efforts to accommodate growth or transportation demand
- Continuing to require low impact development (LID) principals and LID BMPs when updating, revising, and developing new local development-related codes, rules, standards, or other enforceable documents
- Stormwater Management Action Planning (SMAP) for at least one high priority catchment area

The County will utilize its inter-disciplinary SCT, led by a core subgroup to assist in the stormwater planning program's development and deployment. In addition, the County intends to leverage its existing coordination efforts with local, state, and federal governments; tribes; and various stakeholder groups interested in stormwater management and water resources to help inform program efforts.

### 3.2 Coordination with Long-range Plan Updates

Stormwater management needs and receiving water conditions help inform County planning, policy, and implementation strategies. This includes locally initiated or state-mandated long-range land use plans used to accommodate growth or transportation.

#### 3.2.1 *Thurston County Comprehensive Plan*

The County's *Comprehensive Plan* directs the vision for defining and identifying how the County will respond to future growth and change. The *Comprehensive Plan*, a long-range planning document, contains the following value statements to express the vision for future growth:

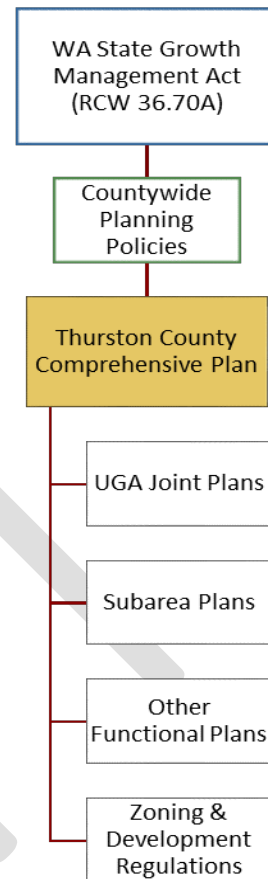
- Support and preserve the human environment
- Continue commitment to public participation
- Preserve the natural environment, water quality, open spaces, and natural resource base

- Promote economic health and diversified economic activities
- Promote variety and accessibility of living environments
- Manage growth effectively
- Maintain and improve a safe and effective transportation system

Thurston County adopts the *Comprehensive Plan* under the authority of the Washington State Growth Management Act (GMA), RCW 36.70A. Other legislation, including the Planning Commission Act (RCW 35.63), provide additional authority for and the procedures to follow in guiding and regulating the physical development of the County.

The Growth Management Act and the Thurston County County-Wide Planning Policies, a regional framework adopted by the Board of County Commissioners in collaboration with the seven cities and towns within Thurston County, guides the content of the *Comprehensive Plan*. The *Comprehensive Plan* contains goals and policies to govern the unincorporated areas of Thurston County. In turn, the Plan guides several other kinds of specialized plans (i.e., Joint Plans, Subarea Plans, and Functional Plans) and regulations.

The *Comprehensive Plan* mentions stormwater planning in almost all its chapters, most prominently in Chapters 6 – Capital Facilities, Chapter 7 – Utilities, and Chapter 9 – Environment. Updates to these sections of the *Comprehensive Plan* include consultation with stormwater program staff and the County’s Storm and Surface Water Advisory Board.



### 3.2.2 Watershed Planning

The County participates in extensive watershed planning, including portions of four watersheds identified by the state as Water Resource Inventory Areas (WRIAs). These include the Upper and Lower Chehalis (WRIAs 22/23), the Deschutes (WRIA 13), Kennedy-Goldsborough (WRIA 14), and the Nisqually (WRIA 11) watersheds. The 2018 Streamflow Restoration Act required the County to work with other partners in the watersheds to create Watershed Plans that offset the impact of new domestic permit-exempt wells and achieve a net ecological benefit within the watersheds.

The County also uses watershed-based approaches to meet state and federal water quality requirements. The County has completed watershed studies for the Deschutes, Henderson Inlet, Nisqually, and Totten-Eld Inlets watersheds using a watershed characterization-based



strategy. This science-based examination of the watershed's features and how those features interact to affect the watershed's natural environment, provides baseline information for policymakers to use when making regulatory and land-use decisions. [\*Methodology to a Watershed Based Approach to Clean Water and Natural Resource Management\*](#) contains additional information on the approach the County follows for its watershed characterizations. These methodologies incorporate a similar process as recommend by Ecology's *Driver-Pressure-State-Impact-Response* (DPSIR) conceptual model approach. This model identifies land use as the driver for impacts to aquatic ecosystems. Ecology recommends applying to DPSIR approach to organize stormwater related ecosystem recovery efforts and use monitoring to inform adaptive management.

### **3.2.3 Capital Improvement Program and Capital Facilities Plan**

The County prepares the stormwater utility's Capital Facilities Plan (CFP) with six and 20-year planning horizons for inclusion in the Capital Facilities Program. CFP projects include those that require more than minor maintenance or repair and involve a substantial cost and/or engineering and permitting effort. Previously completed capital projects include culvert replacements to address road flooding, the construction of runoff treatment and infiltration facilities to replace failing drywells in older subdivisions, and implementation of other standalone runoff treatment and flow control facility retrofits, such as wet ponds and detention ponds in older developments.

The CFP includes project descriptions, estimated construction dates, costs, and proposed methods of financing. The CFP is updated annually using a [priority rating form](#) to rank the projects. The ranking system rates projects using approximately 60 different criteria. The criteria are scored from 0-5 and weighted by category. The categories include:

- Project location (i.e., whether the project falls inside or outside an urban growth area, the municipal stormwater permit boundary, or a sensitive or priority watershed; project proximity to water bodies; wells; etc.)
- Project feasibility (i.e., ease of permitting, utility or site constraints, number of parcels and their ownership effected by the project, project impacts on adjacent activities, and ease of construction)
- Identified high priority projects (i.e., identified in TMDL water cleanup plans or basin plans, known public health and safety issues, priorities identified by outside agencies and tribes, and beneficial impacts to neighborhoods);
- Water quality and quantity conditions (i.e., amount of flow control and treatment the project provides, size of area treated, and pollutant removal effectiveness)
- Environment, habitat, and ecology (i.e., habitat enhancement, wetlands restoration, streambank protection, open space connectivity, and/or stream channel restoration)
- Public stewardship (i.e., total project cost to the stormwater utility compared to total budget, cost per acre of treated impervious surface, public education and outreach potential, cost of maintenance and operations, and outside funding opportunity)

The County's Storm and Surface Water Advisory Board (SSWAB) vets and recommends the ranked list of projects for approval by the BoCC. Projects are scheduled for design and construction based on the project's approved ranking, the project cost, and the available funding for each year of the County's six-year Capital Improvement Program. The County Comprehensive Plan further identifies future needs for projects that cannot be funded in the six-year plan.

### **3.2.4 Draft Thurston Climate Mitigation Plan**

The *Thurston Climate Mitigation Plan* was finalized in December, 2020. In early 2021, the Thurston Board of County Commissioners unanimously approved a resolution declaring a climate emergency (Resolution 15983) and unanimously approved a resolution accepting the Thurston Climate Mitigation Plan in partnership with the cities of Lacey, Olympia, and Tumwater (Resolution 15984). The plan presents a framework for climate mitigation in our region, including local strategies and actions local governments can take. Working with the Thurston Regional Planning Council, Thurston County and the cities of Lacey, Olympia, and Tumwater crafted this strategic roadmap. With acceptance of the plan, the Board of County Commissioners committed the County to implementing the mitigation plan. Those commitments may influence the County's approaches to stormwater management.

### **3.3 Low Impact Development Policies and Regulations**

The *Thurston County Comprehensive Plan* contains policies for incorporating LID principles into local planning efforts, including achieving specific LID performance standards for stormwater facilities (see Chapter 7 – Utilities). The Thurston County Code includes requirements limiting the amount impervious and hard surfaces allowed for development projects (e.g., TCC 20.07.090 Hard and Impervious Surface Limits).

As explained further in *Section 8.2*, Thurston County Code Chapter 15.05 contains the County's stormwater standards, which adopts by reference the *County's Drainage Design and Erosion Control Manual* (DDECM). The DDECM, among other things, incorporates the guidelines for LID. In 2016, the County updated its building and zoning regulations to incorporate LID principles. Thurston County Code Titles updated include Titles 14, 15, 18, 20, 21, 22, and 23. Title 24 – Critical Areas incorporates LID principles into critical area protections. The Thurston County 2020-2021 Official Docket of Development Code Amendments includes a project to address implementation of LID regulations on small lots, for lots needing long access driveways, within the Ken Lake Special Overlay District, and limits on large rural lots.

### **3.4 Stormwater Management Action Planning (SMAP)**

The Permit requires the development of a *Stormwater Management Action Plan* (SMAP). Based on permit requirements for the SMAP, the County proposes the following approach:

- Review current watershed plans developed under the *Science to Policy* (STP) project for Woodard Creek, McLane Creek, Black Lake, and the Deschutes River to see how they line up with the Permit's SMAP requirements.<sup>4</sup>
- By March 31, 2022, generate and submit a watershed inventory, including a brief description of the relative conditions of the receiving waters and the contributing areas. To meet the SMAP's receiving water assessment step, review and update the comprehensive watershed evaluation performed as part of the STP project.
- Review STP project basin prioritization work as well as other existing County work products related to identifying and evaluating drainage basins to indicate which receiving waters will be included in the SMAP's receiving water prioritization process. The County will prepare a map of the delineated basins with references to the watershed inventory table.
- Based on updated information and the work above, document the priority ranking process used to identify high priority receiving waters.
- Complete a *Stormwater Management Action Plan* for at least one high priority watershed by March 31, 2023. An approach under consideration involves evaluating whether the *Woodard Basin Retrofit Study* and *Woodard Basin STP project* combined can fulfill this task. If not, the County will develop a SMAP for an identified high priority basin.

Depending on the basin selected for the SMAP, the County will partner with neighboring jurisdictions on this work if the watersheds cross jurisdictional boundaries.

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<sup>4</sup> The Permit allows for the use of existing information.

## 4. PUBLIC EDUCATION AND OUTREACH PROGRAM

### 4.1 Overview

Thurston County recognizes the essential role individuals and businesses can play in proactively preventing or reducing polluted stormwater runoff and stormwater flooding—issues that present challenges to thriving communities, a prosperous economy, public safety, and a healthy environment.

Thurston County's public stormwater education and outreach consists of various programs and campaigns designed to assist and empower citizens, property owners, business owners, and other community stakeholders in addressing the stormwater issues that directly impact them. This section provides an overview of program activities conducted in 2020.

We design and deploy our education and outreach programs in several ways, including direct efforts by staff, collaborative relationships throughout Thurston County government, external organizations and regional collectives, and via contractors. Program deployment occurs on an ongoing/annual basis or as customized time-bound campaigns that fall under three types of intended outreach outcomes required by the permit: 1) general awareness, 2) behavior change, and 3) stewardship.

#### ***4.1.1 Internal, Local, and Regional Partnerships***

Interdepartmental County teams from a variety of programs regularly coordinate internally to share insights, brainstorm consistent and effective messaging, and reduce inefficiencies, plus improve program strategies involved in external communication, education, and outreach activities. Internal departments and divisions involved with stormwater related education and outreach include:

- Public Works (PW) department
  - Water Resources (WR) division which oversees the stormwater utility
  - Solid Waste division
- Community Planning and Economic Development (CPED) department
  - Community Planning (CP) division
  - Thurston County Washington State University (WSU) Extension
- Public Health and Social Services (PHSS) department
  - Environmental Health (EH) division
- Emergency Management (EM) department
- Central Services (CS) department

In 2022, Education and Outreach staff across multiple departments and divisions will begin meeting quarterly with the goal of improved reach, coordination of efforts, and consistency in messaging.

The County also recognizes the co-benefits of external partnerships in leveraging resources, reducing effort overlaps, and reaching a wider audience when applicable. The County continues to coordinate some of our stormwater education and outreach efforts with the Cities of Lacey, Olympia, and Tumwater as part of a regional interlocal agreement (ILA) called the Regional Environmental Education Program (REEP).

The REEP ILA with the Cities of Lacey, Olympia, and Tumwater provides a method for the County and the Cities to voluntarily collaborate in the funding, development, implementation, and assessment of joint stormwater education and outreach programs. Through this ILA, the Cities and the County also coordinate the regional Stream Team program, which includes stormwater pollution prevention best management practices, habitat restoration trainings, as well as local stewardship opportunities.

In 2021, the County also continued networking and exploring opportunities for education and outreach collaboration on a broader regional scale through the Puget Sound-wide STORM (Stormwater Outreach for Regional Municipalities) work group. In 2021, the County with City partners, distributed *Puget Sound Starts Here* coffee sleeves to local businesses and participated in STORM's *Puget Sound Starts Here* online campaign to raise awareness on stormwater-related issues. This effort included a focus on messaging to underserved communities (Spanish, Korean, and Vietnamese-speaking communities).

Furthermore, the County participated in the STORM-led regional "Leaking Dumpsters" pilot campaign through the REEP partnership. The campaign's main goal is to improve water quality by nudging regional businesses and multi-family housing complexes to shut their dumpster lid every time they use it. Participating municipalities are currently assessing the pilot program's effectiveness before updating the campaign for 2022.

## **4.2 General Awareness Programs**

### **4.2.1 Stormwater Utility Business Communications**

In 2021, the County published information to provide general awareness regarding the impacts of stormwater on surface waters, impacts from impervious surfaces, stormwater utility-funded programs, the County's spill reporting hotline, annual ratepayer information, best management practices, and tips to homeowners. Tips to homeowners included how and where to dispose of potentially hazardous materials, the do's and don'ts of stormwater swale maintenance, tips for private stormwater system inspections and maintenance, bagging and trashing pet waste every time, how and when to clear leaves and debris from local storm drains, natural lawncare recommendations, and reducing water pollution by fixing vehicle leaks. Information is published via several communication channels including:

- Annual stormwater utility mailing to ratepayers
- [Stormwater utility website](#)
- Educational materials such as signs, flyers, and online resources
- Regional Stream Team quarterly newsletters and social media channels

- Stormwater utility capital facilities projects signs and public information

The County also worked on the development of a pollution prevention sign targeting dumpsters located at multi-family housing developments and businesses throughout Thurston County. The sign went through final review and testing in the late part of 2021 and will be printed and placed throughout the community in 2022.

### **4.2.2 Community Events**

At community events, the County uses displays and promotional handouts to provide information on: 1) stormwater utility services and programs and how they benefit our communities; and 2) general impacts of stormwater runoff on local waters, including how land use, development, and residential and business activities and behaviors can impact surface and groundwaters.

Due to the impacts from COVID-19, many in-person community events were cancelled and/or shifted to the virtual platform for 2021. As an alternative way to get messaging out to the community, the regional Stream Team program boosted information and messaging via its social media channels, including Facebook and Instagram and submitted articles to *Thurston Talks*, a local paper available online. Additionally, Stream Team increased its video and image-based BMP messaging online via its website and through monthly emails.

### **4.2.3 K-12 Education Sponsorships**

The County contracts with three local nonprofit organizations that collaborate to assist teachers in developing and implementing water quality education curriculum and provide opportunities for students to participate in hands-on learning: South Sound GREEN (SSG), Nisqually River Education Program (NREP), and the Chehalis Basin Education Consortium (CBEC).

Together, these three organizations coordinate to provide every unincorporated Thurston County public school serving K-12 students the opportunity to participate in the program. They provide teacher trainings and help students learn about the entire water cycle, including the impacts of stormwater runoff from impervious surfaces to surface waters and other water sources.

In 2021, due to COVID-19, the County worked with these three organizations to offer virtual and in-person chum salmon student field trips to McLane Creek Nature Trail. The virtual field trips include an online workbook and videos. Through both the virtual field trip and in-person field trips, students learn how stormwater runoff can impact streams and salmon. They also learn about actions they can take to reduce stormwater pollution and protect streams and salmon.

Due to COVID-19, SSG, NREP and CBEC modified their fall 2021 water quality testing activities so that students could still experience and learn about water quality testing without



having to visit monitoring sites in large groups. In 2022, the County will continue to work with SSG, NREP, and CBEC to assist them with modifying program activities, as needed.

### **4.2.4 Capital Improvement Projects**

In 2021, the County continued contracting with WSU Extension to install water-wise demonstration plantings at a County facility. WSU Extension involved volunteers through the Stream Team program to help plant the site. In 2022, the County plans to work with WSU Extension to install informational signs at the demonstration site.

### **4.2.5 Stream Team – General Awareness**

The County and its city partners produce quarterly Stream Team newsletters, which are emailed to volunteers and distributed throughout the community at public locations and local businesses. The quarterly newsletter includes articles related to stormwater to help raise general awareness. Stream Team also posts messages on its social media channels, including Facebook and Instagram, to help raise awareness around stormwater issues and to promote best management practices such as picking up pet waste, taking cars to commercial car washes, and fixing automotive leaks.

In 2021, Stream Team contracted with WSU Native Plant Salvage to re-run its newly developed 100% virtual *Naturescaping for Water and Wildlife* multi-part workshop. The online workshop was developed in 2020 and initially delivered in early 2021. It was delivered again in late 2021 due to its enormously positive reception by the community. The workshop teaches people how to design and install a planting plan using native and non-invasive water-wise plants. The workshop includes background information related to stormwater and preventing non-point source pollution and erosion, plus protecting water quality and habitat.

Stream Team also converted its in-person *Marine Creature Mondays*’ program into an online program in 2021. Instead of hosting groups of people in-person at Boston Harbor Marina, on Mondays in the summer, Stream Team posted short informative videos to the [Stream Team website](#) weekly on marine creatures throughout 2021 as well. The *Marine Creature Mondays*’ program helps participants learn about how stormwater impacts marine creatures and actions they can take to protect marine creatures and their habitat.

In 2022, due to the uncertainty regarding COVID-19, the regional Stream Team partners plan to continue offering the online *Naturescaping* workshop. In addition, they will expand their offering of online workshops to include a landscaping workshop for shoreline owners.

### **4.2.6 Tracking & Reporting General Awareness Activities**

The County tracks program-related metrics for its general awareness programs and reports many of these in the Permit’s annual report submission to Ecology. General awareness metrics tracked include:



- Number of participants in an activity, such as a workshop presentation, or field trip
- Number of clicks or views online
- Number of printed outreach materials distributed
- Number of pet waste stations and bag dispensers for leashes distributed

### **4.3 Behavior Change Programs**

#### ***4.3.1 Behavior Change Program Evaluation and Future Direction***

Behaviors from residents and business practices can contribute to significant environmental problems including stormwater pollution. The County began working on its primary behavior change program in 2020 which addresses residential lawn care practices.

As a first step, the County implemented a long-term follow-up survey for participants from a previous local lawn care program, called Go GREEN, which was implemented in 2014 & 2015.

The 2014 & 2015 Go GREEN lawn care program included a wide variety of incentives and education around multiple lawn care behaviors. At the same time, jurisdictions in the north part of Puget Sound implemented a yard care program, which included lawn care practices. The County used the results from its follow-up survey and from the North Sound's follow-up survey to inform the development of a pilot program in 2021. During this same time, the County developed an internal mapping tool using interdepartmental data to more effectively prioritize its pilot and campaign audience based on residential lawn care practices direct link to local water quality impacts. The County also developed internal messaging, designed a postcard mailer, built the program web pages and associated application documents, and created lucrative partnerships (including with a local soil-testing lab and educator) to prepare for pilot launch in 2022.

Additionally, the County is partnering with its REEP City partners and many jurisdictions in the regional STORM program on a multi-year behavior change project focused on best management practices related to dumpsters. In 2020, the County and its partners began gathering initial data on dumpster maintenance and on the focus audience. In 2021, using compiled data and research, project partners developed a pilot program and outreach materials designed around the behavior of shutting dumpster lids after each use. Pilot assessment occurred in the late part of 2021. This effort was modified using analytics collected from regional pilots. Program implementation, which will include design updates, strategic messaging, education, and outreach, is scheduled to begin in 2022, with each jurisdiction working more independently moving forward. The County will focus on its County-specific dumpster program, while continuing to share insights amongst the REEP and STORM partners.

### **4.3.2 Private Stormwater Facilities Maintenance**

In 2020, the County converted its in-person private stormwater facilities workshop into a virtual workshop, along with participation from the Cities of Lacey, Olympia, and Tumwater. The workshop was marketed to Homeowner Associations (HOAs), property management companies, and residents of Thurston County. The County and its city partners offered this workshop again in summer of 2021 and a similar virtual workshop to landscapers, stormwater contractors, and property management companies in fall 2021. The County and its City partners will continue offering these workshops virtually through 2022, the first for HOAs, property management companies, and residents in the spring and the second prioritizing landscapers, stormwater contractors, and property management companies in the fall.

The virtual workshops provide customized information through online learning and field-based virtual learning on how to properly inspect, maintain, budget, perform annual planning, and file annual reports for private stormwater facilities. Additionally, the workshops included information about the general impacts of stormwater runoff as well as low impact development principles and facilities while better connecting participants to their jurisdiction's stormwater inspector.

The interjurisdictional team provides handouts with consistent messaging on how to best inspect and maintain private stormwater facilities. In 2021 the County and its City partners began developing a stormwater system inspections and maintenance calendar which links important dates with related inspection and maintenance activities. The goal is for this tool to increase compliance, nudging residents and contractors when to complete important activities, and reminding them of important considerations (like nesting birds) falling within the timeline as well.

Furthermore, the County maintains an online list of contractors that perform private stormwater facilities maintenance services. Contractors who complete the County's private facilities maintenance workshop can opt to be included on this list.

In 2021, the County, in partnership with its City partners, began developing a Private Stormwater Facilities Inspections & Maintenance video which goes over best practices for several stormwater facility types. Once finalized and vetted internally, we plan to incorporate the video in our workshops as well as offer it as an additional resource on our jurisdictional websites. Thurston County's YouTube channel will also include this video to ensure broad accessibility.

### **4.3.3 Stormwater Site and Erosion Control**

In 2021, the County and the Cities of Lacey, Olympia, and Tumwater continued to promote the Temporary Erosion and Sediment Control (TESC) flipbook created in 2020 to CESCL's

and construction site inspectors. This flipbook presents best management practices related to stormwater site and erosion control.

In addition, the County began developing a CESCL “light” internal training which will be finalized and marketed to staff in 2022.

### **4.3.4 Reduction of Fecal Coliform Bacteria in Stormwater**

Recognizing that improper maintenance and operation of septic systems can lead to polluted runoff and impaired water quality, the County conduct septic system maintenance education and outreach by providing citizens with:

- Educational materials
- Workshops on proper septic system operation and maintenance
- Mailings to sites with Operational and Maintenance Certificates
- Self-inspection trainings
- A list of professionals certified to perform septic system services
- Incentives and financial assistance

The County offered self-certification workshops throughout 2021, which were a hybrid model of online and in-person learning. Participants viewed septic maintenance videos online and then took a field training outside at the County’s septic park. These hybrid workshops were put on hold during the fall and winter months due to it being the rainy season. The County plans to roll out another hybrid model of workshops in early 2022.

For animal manure, the County provides free site visits, educational materials, and information to direct property owners to other helpful resources in support of the County’s nonpoint ordinance for managing animal manure.

To encourage dog walkers to pick up their dogs’ waste, the County coordinates the distribution of free pet waste signs and bag dispensers to residential neighborhoods in unincorporated Thurston County. Qualifying applicants receive a free “Don’t Let Your Pooch Pollute” metal sign(s), bag dispenser(s) and an initial set of 500 pet waste bags per dispenser. We follow up with applicants within the first year to ensure the pet waste stations have been installed and to gather qualitative information. We also dispense free bone-shaped pet waste bag dispensers that can attach to a dog leash at various community events. In 2021, the County analyzed the survey results from a survey sent in 2020 to all the contacts who received pet waste stations. The purpose of the survey was to: 1) assess how many stations are still being maintained; 2) encourage residents to continue stocking the stations with pet waste bags; and 3) determine if new contacts need to be found to maintain the pet waste stations.

Both programs support applicable Total Maximum Daily Load (TMDL) Water Cleanup Plans which include permit-required actions to address fecal coliform bacteria comingling with stormwater within the Henderson Inlet Watershed and Nisqually River Basin. In 2021, the

County sent postcards to residents within the Henderson and Nisqually Watersheds encouraging them to pick up pet waste and informing them how to request a pet waste station(s) for their neighborhood.

### **4.3.5 Safer Yard Care & Pest Control**

The County has an ongoing Integrated Pest Management (IPM) education program which helps residents learn about least-toxic methods for managing weed, pest, and disease problems. Residents can learn about IPM through the County's *Common Sense Gardening Program*, which includes brochures, fact sheets, and retail staff trainings at local lawn and garden stores.

Residents can also learn about IPM methods from WSU Extension Master Gardeners who conduct outreach at community events and public locations year-round throughout Thurston County. In addition, the County also maintains an online yard care products website called *Grow Smart Grow Safe* and distributes a bi-monthly electronic newsletter called *Thurston Home and Garden* to over 500 residents, which includes timely tips related to lawncare and other stormwater-related messaging for residents.

The County works with local businesses that sell yard care products to encourage the purchase of lawn and yard care products that are safer for people, pets, and our local waters. Several local businesses participate in annual staff training on safer lawn and garden care products available at their store locations. We provide stores with "apron cards" to help staff refer to and share more information with consumers. During the peak yard care season, we send secret shoppers to stores to evaluate the effectiveness of the store staff training and provide display racks at local garden centers and nurseries that contain informative brochures on lawn care and gardening practices, including the County's *Common Sense Gardening* guide series.

Additionally, the County provides staff trainings at the retail stores, which includes take-home outreach materials. The outreach materials provide information on how to choose safer products, how to apply them properly, and how to limit run-off from the products used in their neighborhoods. The County also provides information for the proper disposal of unwanted yard care products at HazoHouse. In addition, the County helps train local landscaping professionals in the Washington-state certification ECOPro program and chair the program's steering committee.

The County coordinates the Noxious Weeds Control Program, which provides residents with site visits, weed identification and control recommendations, weed disposal, and other resources and information free of charge. Thurston County's Noxious Weeds Control Program website contains information on how to identify noxious weeds and how to get rid of them safely.

### **4.3.6 Hazardous Materials Management and Disposal**

The County distributes information to residents on the proper storage and disposal of household hazardous chemicals and wastes through information published on the County website, in publications and newsletters, through the *Healthy Homes Program*, at retail stores, and by conducting community and school presentations.

We provide free technical assistance and information about hazardous material, waste regulations, and the County's Nonpoint Source Pollution Ordinance (Article VI of the Sanitary Code) to businesses considered to be *small quantity generators* (SQGs). Technical assistance campaigns have included outreach to automotive shops, landscapers, marinas, golf courses, nurseries, pesticide applicators, schools, commercial printers, dentists, dry cleaners, auto recyclers, and paint contractors.

In addition, the County includes tips on how to safely store, use and dispose of household hazardous waste in its bi-monthly electronic *Thurston Home and Garden* newsletter.

#### **4.4 Stewardship Programs**

##### **4.4.1 Thurston Youth WIN (Work Involvement Now)!**

For the past few years, the County coordinated the Thurston Youth WIN! Program, which encourages youth groups in unincorporated Thurston County to apply to participate in annual events and community projects that address stormwater issues. The County provides stipends up to \$400 for up to ten eligible groups a year that successfully complete an approved project where youth and sponsors provide a minimum of 40 total hours of volunteer labor. This program also intends to help reduce the number of charity carwashes popular with youth groups that could result in illicit discharges and contribute harmful pollution to the County's MS4. Examples of eligible community projects include such activities as clean up and removal of invasive weeds from neighborhood stormwater ponds. Due to COVID-19, the County did not offer this program in 2021; however, plans to revisit options for the program for 2022.

##### **4.4.2 Stream Team**

Stream Team is a regional volunteer program focused on providing residents with education related to stormwater and opportunities to participate in stormwater-related stewardship, such as habitat restoration projects. Thurston County coordinates this regional program along with the Cities of Lacey, Olympia, and Tumwater. Stream Team volunteers support the McLane Creek Natural Trail Maintenance and Salmon Stewards programs as well as participate in volunteer events coordinated by WSU Extension, a contractor for Thurston County.

##### **4.4.3 McLane Creek Nature Trail Maintenance**

The County contracts with WSU Extension to coordinate volunteer events to help maintain the Washington State Department of Natural Resources' (DNR) McLane Creek Nature Trail. Volunteers receive education and real-world examples of stormwater issues and how land

management practices and forest ecosystems help support clean water. The trail also provides accessible chum salmon spawning viewing locations for the County's McLane Creek Salmon Stewards program and County-sponsored student salmon viewing fieldtrips.

#### **4.4.4 McLane Creek Salmon Stewards**

The County provides training and incentives to volunteers (i.e., Salmon Stewards) who serve during the wild chum salmon run along the McLane Creek Nature Trail in late Fall. The volunteers assist at observation points to provide facilitation during high traffic times to keep visitors and dogs away from spawning salmon, answer questions about salmon life history, and make connections between stormwater runoff and clean water for both fish and residents. They also assist with student field trips to observe chum spawning in McLane Creek. Due to COVID-19, the County did not train and coordinate volunteers this year. Instead, the County posted educational signs onsite and posted information, photographs, and videos of chum spawning in the creek on the regional Stream Team website and on its Facebook and Instagram pages.

#### **4.4.5 Native Plant Salvage Program (NPSP) Sponsorship**

The County oversees a sponsorship agreement for WSU Extension's Native Plant Salvage Program (NPSP), which provides additional volunteer opportunities and training on how to identify, remove, and transplant native plants. Volunteers may participate in native plant salvage events at sites slated for development, restoration, and at the McLane Creek Nature Trail. Some of the salvaged native plants may later be used for Thurston County capital improvement, restoration, enhancement, or mitigation projects which can help support protection of clean water.

This program also provides year-round volunteer events and opportunities to sustain an active volunteer base in the county. These volunteers tend to also participate in other stewardship programs such as *Stream Team*, McLane Creek Nature Trail Maintenance, and/or McLane Creek Salmon Stewards.

#### **4.4.6 Tracking & Reporting Stewardship Activities**

The County tracks the following metrics related for its stewardship programs:

- Number of participants in an activity
- Number of volunteer hours
- Number of trees planted

The County documents participant levels in the Permit's annual report to Ecology.



## 5. PUBLIC INVOLVEMENT AND PARTICIPATION

### 5.1 Overview

Public involvement in the County's Stormwater Program directly links public agencies and elected officials to interested citizens. It greatly enhances the quality and effectiveness of stormwater utility programs by gathering information from community members, creating a shared sense of responsibility and leveraging local knowledge. In addition, the County sees public involvement as a means to inform and educate citizens, leading to support in the adoption of stormwater solutions with the aim of fostering innovation and more cost-effective solutions. Public participation can help inform and shape the ordinances enacted by the County's elected officials and administered by its departments. It also helps support and compliment the County's regulatory obligations such as implementing programs and actions to help achieve state water quality standards with the aim of making the County's waters more "drinkable, fishable and swimmable."

In order to meet its obligations under the Permit, as well as to maximize the benefits of public involvement, Thurston County has established the Storm and Surface Water Advisory Board (SSWAB) and conducts extensive public contact through the County's Education and Outreach Program (*Section 4*). In addition, the County hosts a website for the stormwater utility.

During 2020, the County began engaging staff, SSWAB, and permittee partners in exploring approaches to effectively engage overburdened communities as well as examine to what extent, if any, the County's stormwater management programs may disproportionately impact certain communities.

### 5.2 Opportunities for Public Involvement

#### 5.2.1 Storm and Surface Water Advisory Board

The Storm and Surface Water Advisory Board (SSWAB) was established in 1990 by Thurston County Resolution No. 9514, and most recently revised in [Resolution No. 15450](#), in order to provide review and recommendations on issues affecting the County's stormwater utility. SSWAB members, appointed by the Board of County Commissioners (BoCC), serve staggered three-year terms. By resolution, SSWAB composition shall include nine voting members from the utility rate boundary, with two members selected from each of the three BoCC Districts and three members selected at large.

SSWAB develops an annual meeting schedule each November for the following calendar year. Generally, six meetings are held per year. Meetings are open to the public and, upon request, meeting materials are provided to those interested in tracking SSWAB activities. While historically held in-person, these transitioned to video conference meetings (with phone-in accommodations) in spring 2020 due to COVID-19. Specific duties of the SSWAB established by County Resolution include:



1. Providing public involvement and accountability within the rate boundary where the County collects fees and charges for the stormwater utility.
2. Specifically reviewing and providing recommendations to staff and the BoCC on the stormwater utility annual work program, budget, Capital Facilities Plan, rates, and policy proposals.
3. Carrying on regular communications with the public and other water resource concerned groups to bring a broad water resource perspective to the stormwater utility. When requested, Storm and Surface Water Advisory Board Members may also serve on, or provide input to, ad hoc committees dealing with other water resource-related issues within Thurston County.

SSWAB identified and developed performance metrics for the stormwater utility and make sure that they align with community values. This culminated in recommendations presented as part of SSWAB's annual briefing to the County Commissioners. SSWAB's recommendations included several performance metrics; proposing an effectiveness study of the County's pet waste pollution prevention program; and developing a business plan for the Utility to guide proactive strategies, planning, and set level of service. [SSWAB's web page](#) contains their full briefings, including their detailed recommendations.

### **5.2.2 Stormwater Education and Outreach Program**

The County also encourages public involvement in the County's stormwater management program through the broad range of education and outreach programs sponsored by the County. *Section 4* (Education and Outreach) provides a detailed discussion of additional education and outreach programs and activities supported by the stormwater utility that provide opportunities for public involvement and encourage stewardship, many of which had to be modified due to COVID-19.

### **5.2.3 Special Projects**

The stormwater utility also provides opportunities for public involvement and outreach as part of special projects including:

- Property owner and community meetings related to specific capital projects proposed for design or construction.
- Outreach to stakeholders related to updates of stormwater-related ordinances and guidance.

### 5.3 Website

This [ThurstonStormwater.org](http://ThurstonStormwater.org) website provides access to news and resources related to the County's stormwater program, such as the *Thurston County Stormwater Management Program Plan* (i.e., this document), *Drainage Design and Erosion Control Manual*, and *Annual Report* to the Washington State Department of Ecology. As an obligation under its Permit, the County posts its current version of this Stormwater Plan and most recent submittal of its annual report on the stormwater utility's website no later than May 31<sup>st</sup> each year.

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## 6. STORM SEWER SYSTEM MAPPING DOUCMENTATION

### 6.1 Municipal Storm Sewer System Mapping

As a component of Thurston County's ongoing asset management program, the County maintains mapping data of its municipal separate storm sewer system (MS4) in a Geographic Information System (GIS). Staff can access this data through the County's VUEWorks asset management software program.

### 6.2 Mapping Features

The County's datasets meet the Permit's mapping and documentation requirements. Examples of these features include:

- Known MS4 outfalls and discharge points
- Receiving waters
- Stormwater treatment and flow control BMPs
- Tributary conveyances, associated drainage areas and land use
- Connections to and from the MS4
- Size and material of conveyances and outfalls

### 6.3 Asset Management

The County built a very detailed foundation of data used for daily operation and maintenance related to illicit discharge detection and elimination (IDDE), stormwater facility asset management, utility locates, facility inspections, work order generation, service requests, and technical assistance. County asset management efforts focus on maintenance, identifying structural defects, as well as condition inspection tracking and reporting on the overall condition of its stormwater infrastructure assets.

The County uses VUEWorks asset and maintenance management software to maintain a map of its MS4 in a GIS database. The County edits the data to fit within the established database structure using data collected in the field, from CAD files, or recorded drawings. Importing the data into VUEWorks results in a searchable database for everyday use in the field and office.

The County continues to map new or newly installed or discovered stormwater infrastructure throughout unincorporated Thurston County. Ultimately, the County aims to map the location of all public and relevant private stormwater infrastructure<sup>5</sup> in the unincorporated areas of the County, both inside and outside the Permit regulated area. This is an ongoing challenge due to facility replacement, new development and redevelopment, and discovery of previously unknown systems.

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<sup>5</sup> *Relevant private stormwater infrastructure* generally refers to stormwater systems subject to requirements contained in the County's municipal stormwater permit.

## 7. ILLICIT DISCHARGE DETECTION AND ELIMINATION

### 7.1 Core Program Functions

An *illicit discharge* (ID) means any direct or indirect non-stormwater discharge to a storm drainage facility except those specifically allowed in Thurston County Code Chapter 15.07.060. Examples of illicit discharges include trash or debris, construction material, petroleum products, human and animal waste, chemical spills, and vehicle collision spills. An *illicit connection* (IC) refers to any man-made conveyance connected to the County's storm sewer system without a permit or other form of written approval by the Director of Thurston County Department of Public Works, excluding roof drains and other similar type connections. Examples of illicit connections include sanitary sewer connections and floor drains connected directly to the municipal separate storm sewer system.

Thurston County designed its Illicit Discharge Detection and Elimination (IDDE) program to perform the following four core functions on an ongoing basis:

1. Identify potential illicit discharges or illicit connections to the County's storm sewer system (i.e., MS4).
2. Detect, record, and report the characteristics and scope of those discharges or connections.
3. Eliminate any illicit discharges or illicit connections.
4. Utilize education and outreach programs to help prevent illicit discharges and illicit connections from occurring.

To meet its obligation under its municipal stormwater permit, as well as successfully perform these core functions, the County has undertaken the task of mapping its storm sewer system, implementing an ordinance that prohibits illicit discharges and connections, conducting ongoing ID/IC detection staff trainings, and incorporating ID/IC detection into its stormwater facilities inspection program.

### 7.2 IDDE Ordinance

On September 7, 2010, the BoCC adopted Ordinance 14404, which amended Chapter 15.05 of the Thurston County Code (TCC) and created Chapter 15.07 Illicit Discharge Detection and Elimination Ordinance. This ordinance prohibits the discharge of pollutants into storm drainage facilities within unincorporated Thurston County.

The County initiated a review of its IDDE ordinance to identify amendments needed to reflect, among other things, the administrative changes triggered by the stormwater utility's reorganization. Work on that review will continue in 2022.

### 7.3 IDDE Program

The County maintains publicly listed and publicized phone numbers that citizens, field personnel, and outside agencies can call to report a suspected illicit discharge, illicit connection, or an illegal dumping action. Incidents within the County limits may be reported to the stormwater utility spill reporting number (360-867-2099), the Hazardous Waste complaint number (360-867-2664), or through the [online reporting form](#) located on the County's Stormwater Utility webpage. After-hour emergencies or large-scale incidents get reported through the Department of Ecology's Emergency Spill Hotline (360-407-6300) or by calling 911.

While Thurston County receives reports from a variety of sources, trained stormwater field staff are the primary identifiers of ID/IC. The County's ongoing IDDE program includes private, commercial, and public storm system inspections. The County may discover an ID/IC while:

- Conducting video inspections for system condition assessments, general locating, or construction approval
- Performing daily field work and routine inspections
- Conducting dry weather outfall inspections
- Conducting biannual stormwater pollution prevention plan (SWPPP) inspections

Some, but not all, illicit discharges have obvious and distinct colors, odors, or visual indicator. Other illicit discharges may not be as easy to detect using visual and olfactory senses. County uses the following indicators when performing field screenings:

- Visible signs of staining, residues, or oily substances in the water or detained within ditches, channels, catch basins, or surrounding pavement and soils
- Pungent odors coming from the drainage system (e.g., discharge smells rancid or like sewage, sulfide, petroleum/gas, etc.)
- Abnormal water flow during the dry weather season
- Excessive sediment deposits or turbid waters, particularly near active off-site construction sites
- Floatables (e.g., discharge includes sewage, an oil sheen, suds, etc.)

### 7.4 Notification Procedures

Upon identifying an illicit discharge or illicit connection, the County implements procedures to eliminate the illicit discharge or illegal connection. For illicit discharges, this also involves characterizing the discharge, tracing its source, and taking appropriate actions to keep the discharge from spreading or causing harm.

In the event of a spill, the County follows the steps outlined in *Figure 1* on the following page. When staff encounter uses of herbicides by private citizens to storm drainage facilities, *Thurston*

*County Procedure: Responding to the Private Use of Herbicides in Storm Drainage Facilities* ([Appendix C](#)) provides direction to County personnel regarding the procedures for responding.

When the County becomes aware of an illicit discharge, including spills, into our storm sewer system which constitute a threat to human health, welfare, or the environment, the County takes appropriate action to correct or minimize the threat and notify the Stormwater Operations Manager (360-239-8369) of the incident to initiate the appropriate notification as follows:

- Notify Ecology's southwest regional office (360-407-6300) and other appropriate spill response authorities immediately, but in no case later than with 24 hours of obtaining knowledge of the illicit discharge or spill.
- Immediately report spills or other discharges which might cause bacterial contamination of marine waters, such as discharges resulting from broken sewer lines and failing onsite septic systems, to:
  - Ecology's southwest regional office (360-407-6300)
  - The Department of Health Shellfish Program (360-236-3330 during business hours; 360-789-8962 outside of business hours)
- Immediately report spills or discharge of oils or hazardous substance to:
  - Ecology's southwest regional office (360-407-6300)
  - The Washington Emergency Management Division (1-800-258-5990)

### **7.5 Response and Remediation**

The County responds to identified illicit discharges, illicit connections, or illegal dumping activities using escalating enforcement actions. The first step and preferred approach to address these problems involves pursuing voluntary compliance through private property owner or responsible party education. Often, business operators and property owners are not aware of the existence of illicit connections or activities on their properties that may constitute an illegal discharge. In these cases, providing the responsible party with information about the connection or operation, the environmental consequences, and suggestions on how to remedy the problem may be enough to secure voluntary compliance. Education begins during the site investigation upon confirmation of the illicit discharge or connection.

When voluntary compliance through education does not produce the desired results, the County will pursue enforcement action. Before initiating enforcement, staff are advised to adhere to the authorities and obligations detailed in Chapter 15.07.100 TCC, consult with the Water Resources Division Manager, and inform other County departments, including the Prosecuting Attorney's Office, as necessary.

Thurston County's Public Health and Social Services (PHSS) Department may also use Article 6 of the Sanitary Code to enforce compliance with IDDE through their Environmental Health Division. PHSS tracks and documents investigations and enforcement actions using the software program Amanda.

### 7.6 Prevention

As part of its ongoing education and outreach program (*Section 4*), the County employs multiple strategies to inform the local community of the importance that preventing illicit discharges plays in protecting water resources and the aquatic environment. These strategies include communications made through social media, the County's website, mailings, newsletters, and brochures as well as during public events, public workshops, and online and print communications published by the regional Stream Team program.

### 7.7 Training

Field staff and staff responsible for the identification, termination, clean-up, and reporting of illicit discharges (including spills and illicit connections) receive training to conduct these activities as described in the County's *Stormwater Training Plan* ([Appendix B](#)). Employees requiring training include all field staff, including staff responsible for assessing outfalls, and staff responsible for response, tracing, clean-up, and enforcement.





# Spill Response

**Safety First!** If the spill looks hazardous, call 911.

## STEP 1: IS THE SPILL REPORTABLE?

YES - the spill IS reportable if ANY of the following are true:

1. It is within a non-paved area (i.e., gravel, dirt, grass).
2. It entered a stormwater facility (i.e., catchbasin, ditch, pond) and/or surface water.
3. It is contained to a paved surface, AND
  - a) It is GREATER than 3 feet in size or
  - b) It has the potential to travel (i.e., downslope, mobilized by rain).

## STEP 2: MAKE THE CALL!



Immediately report the spill to your supervisor **AND**  
Report it to the County spill hotline at (360) 239-8369.

Leave a detailed message, including:

- 1) Location of spill,
- 2) What spilled,
- 3) How much, and
- 4) Your contact info.

**By Law the County MUST  
Track & Report Spills.**

## STEP 3: ASSESS THE RISK.

- 1) Non-hazardous spill? Contain & clean-up.
2. Spill looks hazardous? Call 911!

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

### 8.1 Overview

This section describes the current and planned compliance activities associated with Section S5.C.4 of the Permit related to Controlling Runoff from New Development, Redevelopment, and Construction Sites. In 2020, the County began reviewing its policy and procedural framework as well as exploring opportunities for process improvements. This effort has resulted in changes and will continue in 2022.

### 8.2 Technical Guidance and Standards

The [\*Drainage Design and Erosion Control Manual \(DDECM\)\*](#) establishes requirements and provides guidance for managing the quantity and quality of stormwater runoff generated from development and redevelopment in unincorporated Thurston County. This manual represents an update to the 2009 Thurston County DDECM and is written to comply with the Permit and be equivalent to the Ecology 2014 *Stormwater Management Manual for Western Washington* (SWMMWW). The 2016 manual was adopted by the County under Thurston County Code 15.05 on October 18, 2016 and became effective December 31, 2016. The principal change in the new manual involves incorporating the guidelines for Low Impact Development. Thurston County Code Chapter 20 was updated in 2016 as well to incorporate Low Impact Development principles into the zoning codes. Work to update the DDECM has been underway with adoption expected to occur by June 30, 2022.

The 2016 DDECM applies to all applications submitted after January 1, 2017 that do not have prior vesting under a previous manual. Projects submitted before January 1, 2017, but construction started after January 1, 2022 shall be subject to the 2016 DDECM (or the current DDECM if the 2016 DDECM has been superseded).

### 8.3 Permitting and Site Plan Review for New Development and Redevelopment

The County requires all applicants to submit *Drainage and Erosion Control Plans and Reports* meeting the requirements of the DDECM. The County reviews these documents prior to development permit issuance.

In response to the technical complexities introduced into the 2016 DDECM revision, along with an increase in construction and development applications, the County developed the following tools:

- A project review flow-charts (Appendix D) for projects:
  - a) Triggering DDECM Core Requirements #1-#11
  - b) Not subject to DDECM Core Requirements #6 & #7 and all single-family residential projects

- Stormwater design checklists and fact sheets to improve the completeness and adequacy of plan submittals. The County expects this to reduce the amount of time and workload associated with incomplete applications, project plan deficiencies and resubmittals.

As required by the Permit, the County provides copies of the Notice of Intent (NOI) for construction or industrial activities to representatives of the proposed new development and redevelopment project as part of our review process.

### **8.4 Stormwater Controls during Construction**

*DDECM Volume II* describes construction stormwater pollution prevention requirements and key consideration and mechanics for construction stormwater BMPs including:

- Elements to consider when preparing a Construction SWPPP
- Requirements for construction erosion and sediment control, including seasonal limitations
- Standards and specification for source control, and runoff conveyance and treatment BMPs for construction stormwater control and site management

### **8.5 Site Inspections**

#### ***Pre-construction***

The County conducts a preconstruction erosion and sediment control inspection of all permitted projects that will have land disturbing activities prior to clearing and construction. Land disturbing activities include, but are not limited to clearing, grading, filling, and excavation as well as compaction associated with stabilization of structures and road construction.

#### ***During Construction***

During construction projects, the County inspects to verify proper installation, maintenance, and functioning of erosion and sediment controls.

#### ***Prior to Final Approval/Occupancy***

All projects receive a final inspection to verify that the site is stabilized to prevent erosion and permanent stormwater controls are properly installed and functioning prior to final approval/occupancy. Development Review staff conducts these inspections for smaller projects, such as single-family homes. Inspections for larger projects that will require annual reporting on maintenance of stormwater facilities are performed jointly with the Development Review and Water Resources staff responsible for performing the required ongoing post-construction inspections.

All private projects that connect to the County's MS4 require approval, including submittal of the *Stormwater Conveyance System Connection Application*. Upon approval, Development Review staff meets with Water Resources and Maintenance Operations staff in the field to

ensure work is complete, and the County receives the necessary information to ensure proper ongoing maintenance.

For private facilities (i.e., single family residence, residential subdivision, or commercial/industrial project), the party (or parties) responsible for maintenance of stormwater facilities and BMPs must execute a project-specific agreement with the County to maintain stormwater facilities and implement a pollution source control plan consistent with the provisions in the DDECM. The responsible party must sign and record the agreement with the Thurston County Auditor's Office prior to final project acceptance by the County.

For County public works projects, the County coordinates per the procedures described in [Appendix E](#) which clarify staff involvement and oversight responsibilities as they pertain to stormwater project design, construction, and post-construction handoff.

*Construction Stormwater Inspection and Enforcement Procedures* ([Appendix F](#)) documents how Thurston County complies with the inspection and enforcement requirements in Permit Condition S5.C.4. The procedures:

- Ensure that standards and specifications set forth in the *DDECM* are consistently implemented, inspected, documented, and enforced.
- Provide a “level playing field” for project proponents, developers, contractors, and builders in Thurston County.
- Protect Thurston County residents, businesses, and stormwater utility ratepayers from incurring unnecessary damage and operations and maintenance (O&M) costs resulting from improper stormwater and drainage work occurring during the construction phase of a project.

Thurston County uses an escalating enforcement policy ([Appendix G](#)) to enforce erosion and sediment control compliance, which range from verbal correction notices to stop work orders depending on the nature of the non-compliance issue.

### ***Ongoing Operation and Maintenance Verification***

Upon the construction's completion, the County performs inspections to verify the proper operation and maintenance of post-construction stormwater facilities. As required by the DDECM, the developer, per agreement, provides for ongoing maintenance of the facilities until the facilities are turned over to the County, HOA, or other private party. The County conducts annual inspections to ensure proper function of stormwater treatment and flow control facilities unless maintenance records exist to justify a different frequency. The County inspects all catch basins and inlets every two years within its municipal stormwater permit boundary and every two to four years outside the Permit boundary.

During inspection of stormwater facilities County personnel may discover unauthorized modifications to those facilities. If this occurs, staff should refer to *Thurston County Procedure: Responding to the Unauthorized Modification of Storm Drainage Facilities* ([Appendix H](#)).

### 8.6 Enforcement Mechanisms

If sediment and erosion control BMPs are not adequately installed and maintained during construction, the County will attain compliance utilizing steps laid out in the escalating enforcement policy per *Public Works Policy Pol-820* ([Appendix G](#)). If noncompliance leads to a *Stop Work Order* being placed on the property, Thurston County Code contains provisions for enforcement in Title 26.

### 8.7 Information Management

#### ***Private project inspection tracking***

County Permit Center staff utilize the AMANDA software to record and maintain inspections and enforcement of private projects.

#### ***County project inspection tracking***

The County uses Ecology's inspection report forms to track inspections of County construction projects. For projects that require coverage under Ecology-issued construction permits, the County enters discharge monitoring report (DMR) information into Ecology's electronic WQWebDMR system. The County retains hardcopies of the inspection forms for projects that do not require an Ecology permit.

### 8.8 Training

#### ***New Development and Redevelopment Stormwater Controls Training***

Staff responsible for reviewing development and redevelopment submittals attend training, both general and specific, pertaining to Thurston County's drainage standards. Most training occurs via outside sources such as those sponsored by Ecology, Washington State University extension, Center for Watershed Protection, and the Washington Stormwater Center. Supplemental Thurston County-specific training occurs on the job. Additional information and updates regarding practices and procedures is shared during weekly staff meetings or during one to one discussion. For additional information on related training, please see the *Stormwater Training Plan* in [Appendix B](#).

#### ***Construction Stormwater Pollution Prevention Training***

All County staff responsible for performing erosion inspections must obtain Certified Erosion and Sediment Control Lead (CESCL) certification. This certification training occurs through outside sources. For additional information on related training, please see the *Stormwater Training Plan* in [Appendix B](#).



## 9. MUNICIPAL OPERATIONS AND MAINTENANCE

### 9.1 Overview

Thurston County developed its Municipal Stormwater Operations and Maintenance Program (O&M Program) to comply with the Permit to prevent or reduce pollutant runoff from municipal operations. The County reviews the O&M Program annually and updates it as necessary. The County performs the inspections and maintenance procedures.

### 9.2 Technical Guidance and Maintenance Standards

The *2016 DDECM Volume IV* provides guidance on how to prepare and implement a source control plan to prevent stormwater pollution. *DDECM Volume V* provides the maintenance standards for permanent stormwater management facilities. Work to update this manual is scheduled for completion by June 30, 2022. The [\*Regional Road Maintenance Endangered Species Act Guidelines\*](#) (RRMG) requires the use of a field guide which, among other things, includes stormwater source control BMPs for routine maintenance activities.

The County performs maintenance promptly as necessary to remain compliant with standards. Unless circumstances exist beyond the County's control, when an inspection identifies an exceedance of the maintenance standard, maintenance within the Permit area occurs as follows:

- Within one year for typical maintenance of facilities, except catch basins
- Within six months for catch basins
- Within two years for maintenance that requires capital construction of less than \$25,000

Circumstances beyond the County's control include:

- Denial or delay of access by property owners<sup>6</sup>
- Denial or delay of necessary permit approvals
- Unexpected reallocations of maintenance staff to perform emergency work

### 9.3 Inspections and Record Keeping

The various responsible departments maintain records of training, inspection, and maintenance (or repair) activities as required for annual permit compliance reporting.

As described in *Section 6*, the County inventories and maintains a map of its MS4 in a GIS database accessible through the County's asset management software (i.e., VUEWorks). Public Works Water Resources inspects permanent stormwater facilities that the County owns or operates. Records of all inspections get documented in VUEWorks.

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<sup>6</sup> To date, stormwater maintenance inspectors have not encountered a situation where access has been denied. However, should such an event emerge, inspectors can seek assistance from the Sheriff's Office to gain access.

### 9.4 Maintenance Practices

The following subsections describe procedures relevant to stormwater maintenance practices as they relate to the County's various facilities. Thurston County Public Works has been a member of the Regional Road Maintenance ESA Program (RRMP) since 2001. The RRMP assisted the County in developing a regional road maintenance program designed to meet the requirements of the Endangered Species Act (ESA). This program helps contribute to the conservation of ESA-listed species by relying on the use of pre-approved BMPs for routine maintenance activities and adaptive management improvements.

#### 9.4.1 Stormwater Treatment and Flow Control Facilities

Public Works Operations performs cleaning of County stormwater treatment and flow control facilities and follows the *RRMG Part 1- Maintenance Category #2* and SWPPP requirements. In addition, the County develops O&M plans for its treatment and flow control facilities. The County tracks inspection, work orders, and maintenance of stormwater facilities in VUEWorks. The County performs spot checks of its permanent stormwater treatment and flow control BMPs/facilities after major storm events (24-hour storm event with a 10-year or greater recurrence interval). If spot checks indicate widespread damage/maintenance needs, all affected stormwater treatment and flow control BMPs/facilities are inspected. Repairs or appropriate maintenance action occurs in accordance with maintenance standards established above.

#### 9.4.2 Catch Basins and Inlets

The County inspects the catch basins and inlets it owns or operates within the geographic scope of the Permit every two years. When a catch basin inspection identifies an exceedance of a maintenance standard, the necessary maintenance occurs within the Permit's six-month timeline.

#### 9.4.3 Vegetation Management

The County's *Integrated Pest and Vegetation Management Policy* provides guidelines for County staff involved with operations and provides advice related to pest and vegetation management. The County uses the Integrated Pest Management Program to minimize pollutant discharge from landscaped areas on County property. The County uses *RRMG – Part 1 Maintenance Category #15* for activities involving repairing, replacing, installing, removing, and/or maintaining vegetation within the right of way, stormwater infrastructure, easements, and mitigation sites.

#### 9.4.4 Snow and Ice Control



Public Works Operations follows the *RRMG Part 1- Maintenance Category 10* when deicing County streets and facilities. For sidewalks, the County uses an amount of deicing product required for pedestrian safety. In parking lots, the County applies liquid anti-icing chemical and sand in the event of severe snow conditions. The County employs BMPs as part of maintaining storage of snow and ice control products such as salt, liquid deicers, and sand. These BMP practices include the proper containment, handling, and cleanup related to using and storing these materials.

### **9.4.5 Dust Control**

The County's unpaved roads get re-graded and re-rocked periodically to control erosion and potholing. While uncommon, if dust emissions become significant, the County will consider dust control practices such as re-rocking with a cleaner grade of rock as outlined in the *RRMG* or those listed in [\*Ecology Publication #96-433 \(revised July 2016\) Methods for Dust Control\*](#).

### **9.4.6 Enclosed Drainage Systems**

For enclosed drainage systems within the Permit boundary, the County uses guidelines in *RRMG Part 1 Maintenance Category #2*. Areas outside of the Permit boundary are cleaned as resources made available.

### **9.4.7 Exterior Building Maintenance**

#### Exterior Painting

Thurston County's buildings and exterior facilities consist of mostly stone, brick, and metal which do not require painting. When facilities require painting, it takes place during dry weather. All materials used during painting are removed from the area to an approved site for cleaning and crews protect storm drain inlets within 25 feet of work site.

#### Exterior Washing

Wash water containing oils, soaps, or detergents are collected and conveyed to appropriate treatment such as a sanitary sewer system. Wash water not containing oils, soaps, or detergents can drain to soils that have sufficient natural attenuation capacity for dust and sediment. *DDECM Volume IV, A1.3 Washing and Steam Cleaning Vehicles/Equipment/Building Structures*, contains further guidance for exterior washing.

#### Roof Drains

*DDECM Volume IV, A7.9 Roof/Building Drains at Manufacturing and Commercial Buildings*, contains the guidance that the County uses for roof drain maintenance.

### **9.4.8 Roads**

The County implements the following practices, policies, and procedures to reduce stormwater impacts associated with runoff from County road maintenance activities.

### Street Sweeping

Road Operations sweeps curbed streets in the County using regenerative air street sweepers. The sweepers have vacuum and sweeping capabilities for efficient removal of sediment, debris, and other pollutants. The Public Works Department coordinates sweeping within the Permit boundary using route priority map books. Outside of Permit area, the County follows the *RRMG – Part 2 section 2.150*.

### Road Repair and Resurfacing

The County performs regular municipal street repair and maintenance activities following the *RRMG Part 1 Maintenance Category #1*.

### Pavement Striping Maintenance

The County only uses Department of Transportation-approved paint applied to meet Washington State Department of Transportation standards.

### Roadside Ditches

The County maintains its roadside ditches as needed and to maintain the capacity for which they were originally constructed as well as to minimize bare or thinly vegetated surfaces. Maintenance practices include erosion and sediment control as needed. *RRMG Part 1, Maintenance Category #4* and/or the DDECM's BMPs for *Maintenance of Roadside Ditches* (Volume IV, Section A7.13) contain further guidance used by the County.

## **9.4.9 Waste Handling and Disposal**

The following addresses the generally applicable stormwater runoff pollution prevention BMPs associated with waste handling and disposal:

### BMPs for Storage of Liquid or Dangerous Waste

- Clean-up leaks and spills.
- Store containers in impervious containment under a roof.
- Liquids – Use tight fitting lids or bungs; use of drip pans; inspect containers for damage and leaks.
- Solids – Elevate or otherwise protect from stormwater.
- If generating “dangerous waste” or identifying hot loads follow [\*Ecology Publication #09-04-015 \(revised 2014\) Shop Guide for Dangerous Waste Management\*](#). In addition, the County follows all developed SWPPP's for County facilities and WARC Decant Operation Plan.
- Comply with *Uniform Fire Code* if waste is flammable, reactive, or explosive.
- Cover trash cans and dumpsters.

### BMPs for Storage or Transfer (outside) of Solid Raw Materials, By-products, or Finished Products

- Provide (impervious where necessary) containment with berms, dikes, etc. and/or cover to prevent run-on and discharge of leachate pollutants and total settleable solids.
- Do not hose down materials/product to the stormwater system.
- Protect storm drainage (e.g., catch basins) and surface water entry points nearest to the pile.
- Sweep regularly.
- Treat runoff where it has a pathway to the storm sewer or surface waters.

### Dangerous or Special Wastes

These waste materials typically contain hazardous substances, oils, or exhibit hazardous characteristics such as corrosiveness, ignitability, reactivity, toxicity, or environment persistence. State regulations (WAC 173-303-330) require training for anyone handling and managing these wastes (including, but not limited to waste designation, packaging, labeling, preparing shipping documents, and transporting). Appropriate County staff receive training in the handling and managing of dangerous or special waste, such as hazardous waste operations and emergency response (HAZWOPER) training. Spills that include dangerous waste materials trigger a 911 response.

### Street Wastes

Thurston County complies with the Western Washington Phase II Permit, *Appendix 6 – Street Waste Disposal*. Street waste generated by street sweeping or cleaning of catch basins by a vactor (vacuum) truck are taken to the decant facility located at the County's Waste and Recovery Center. The waste is processed in accordance with the Decant Facility Operations Plan. Prior to removal from the facility, the solids material gets tested to ensure contaminant levels fall within permitted limits. Tested solids suitable for reuse are used on pit reclamation projects. Liquids, including precipitation falling on the site, flow through a treatment train that allows suspended solids to settle out in the facility's settling bays, drain through two sedimentation structures, and then flow into the permitted pre-treatment aeration pond prior to discharge into the City of Lacey sanitary sewer under Wastewater Discharge Permit No. LA-004 for final treatment at the LOTT Wastewater Treatment Plant. Discharge from the Vactor Waste Decant Facility shall not cause an exceedance of Permit No. LA-004 Solids testing occurs in accordance with the *Solid Waste Permit*, WAC 173-350, *Water Quality Standards for Ground Water of the State of Washington*, and as approved by Thurston County Environmental Health.

### **9.5 Operations Facilities**

#### **9.5.1 Operations Division**

Public Works, Fleet Services, and Emergency Operations provide services from a facility located at 9605 Tilley Road S., Olympia. The facility follows its own Stormwater Pollution Prevention Plan (SWPPP) as it includes heavy equipment and a storage yard. To ensure Permit compliance and improve usability, the SWPPP gets reviewed regularly and was updated in January 2019. The SWPPP is posted on the Stormwater Coordination Team's SharePoint site with the original located in Public Works Buildings A, ER&R Fleet Services.

#### **9.5.2 Solid Waste**

The Waste and Recovery Center (WARC) receives all refuse material collected throughout the County. The WARC is located at 2420 Hogum Bay Rd NE, Lacey. In addition to falling under the Permit's coverage, the WARC operates under its own Wastewater Discharge Permit for its discharges to sanitary sewer. To ensure permit compliance and improve usability, the SWPPP gets reviewed regularly and was updated in July 2020. The SWPPP is posted on the Stormwater Coordination Team's SharePoint site with the original located in the main office of the WARC.

#### **9.5.3 Fairgrounds**

The Thurston County Fairgrounds, located at 3054 Carpenter Road, Lacey, hosts the annual county fair. The facilities are also available to rent for functions and vehicle storage. The site's stormwater infrastructure falls under the Underground Injection Control Program regulatory scheme (i.e., not the County's Phase II municipal stormwater permit).

#### **9.5.4 Central Services**

Central Services, through the Facilities Department, has maintenance responsibilities for a number of facilities located in various parts of the County (See [Appendix I](#)).

The Facilities Department makes all known, available, and reasonable efforts to reduce stormwater impacts associated with runoff from buildings, sidewalks, parking lots, and driveways owned by the County and maintained by the Department. The Facilities Department use applicable stormwater BMPs in conducting maintenance tasks.

#### **9.5.5 Parks Division**

The Parks Division manages parkland, trails, historic sites, preserves, and undeveloped land. It conducts operations out of the facility located at 9605 Tilley Road S., Olympia. Developed County parks include:

- Kenneydell – 6745 Fairview Road SW
- Burfoot – 6927 Boston Harbor Road NE

- Frye Cove – 4000 NW 61<sup>st</sup> Avenue NW
- Deschutes Falls Park – 25005 Bald Hill Rd. SE

### 9.6 Training

Thurston County implements an ongoing training program for employees whose primary responsibilities involve operations or maintenance job functions that may adversely impact stormwater quality. Operation and maintenance staff receive training on the importance of protecting water quality during maintenance operations. Additional training courses for maintenance personnel may apply base on individual job duties. Follow-up training occurs as needed to address changes in procedures, techniques, requirements, or staffing. For additional information on related training, please see the *Stormwater Training Plan* in [Appendix B](#).

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## 10. SOURCE CONTROL PROGRAM FOR EXISTING DEVELOPMENT

### 10.1 Core Program Functions

The Permit requires Thurston County to deploy a program to prevent and reduce pollutants in runoff from existing development that discharge to the MS4 by applying operational and structural source control best management practices (BMPs).

The County will design its Source Control Program to perform the following core functions:

1. Maintain an inventory identifying sites that have the potential to generate pollutants to the County's MS4.
2. Inspect potential pollutant generating sources at identified sites.
3. Provide technical assistance on operational and structural practices to prevent and reduce polluted runoff from sites identified in the inventory.
4. Enforce local code requiring BMPs to control pollution discharging or having the potential to discharge to the MS4.

The County has begun efforts to identify candidate sites as well as reaching out to glean lessons learned from mature source control programs in other jurisdictions, focusing on Phase I County programs that most closely parallel Thurston County's program needs.

### 10.2 Source Control Ordinance

The County initiated efforts to develop code language to support this program to meet the Permit's August 1, 2022 deadline to *adopt and make effective an ordinance(s), or other enforceable documents, requiring the application of source control BMPs for pollutant generating sources associated with existing land uses and activities.*

These requirements will be met by using the source control BMPs in the County's *Drainage Design and Erosion Control Manual*. In cases where the manual lacks guidance for a specific source of pollutants, the County will work with the owner/operator to implement or adapt BMPs based on the best professional judgement.

### 10.3 Site Inspections

Prior to August 1, 2022, the County will develop an inventory of sites with a potential to generate pollutants to the MS4. The inventory will include businesses or sites identified based on the presence of activities that are pollutant generating or complaint-based from home-based businesses and multi-family sites.

Prior to January 1, 2023 the inspection program will:

- Provide outreach to sites identified with activities that may generate pollutants on the new requirements and resources available.
- Annually complete inspections equal to 20% of the number of sites.

### **10.4 Enforcement Mechanism**

Prior to January 1, 2023 the County will implement a progressive enforcement policy requiring sites to comply with stormwater requirements within a reasonable timeframe.

### **10.5 Training**

Staff responsible for implementing the source control program will receive training to conduct these activities as described in the County's *Stormwater Training Plan* ([Appendix B](#)).



## 11. COMPLIANCE WITH TOTAL MAXIMUM DAILY LOAD REQUIREMENTS

### 11.1 Background

Section 303(d) of the Clean Water Act (CWA) requires states, territories, and authorized tribes to develop lists of impaired waters (i.e., waters too polluted or otherwise degraded to meet the water quality standards set by states, territories, or authorized tribes). The law requires that these jurisdictions establish priority rankings for these listed waters and develop corresponding Total Maximum Daily Loads (TMDLs). A TMDL represents the numerical value of the highest amount of pollutant a surface water body can receive and still meet water quality standards. Any amount of pollution exceeding the TMDL level needs to be reduced or eliminated. Pollution sources fall into two broad categories: “point source pollution” and “nonpoint source pollution”, based on federal regulations. Point source pollution is discharged by a discernable, confined, and discrete conveyance (e.g., pipes, ditches) and subject to NPDES permitting under Section 402 of the CWA. Nonpoint source pollution, by contrast, comes from many diffuse sources not subject to NPDES permitting.

TMDLs assign *wasteload allocations* (WLAs) to point sources of pollution and *load allocations* (LAs) to nonpoint sources of pollution. The TMDL Water Quality Improvement Report and Implementation Plan (WQIR/IP) sets out the pollution reduction actions required for nonpoint and point sources in the TMDL area to ensure TMDL allocations are met, ultimately leading to compliance with water quality standards. WLAs established for discharges from permitted municipal stormwater systems are implemented via the municipal stormwater permit program. As a result, the County must demonstrate compliance with specific requirements identified in the TMDL water quality cleanup plan and listed in Appendix 2 of the Permit.

### 11.2 Engaging in TMDL Development

The County tracks and participates in the development of TMDLs for waterbodies in Thurston County. During the public comment period for the proposed Water Quality Assessment, the County reviews each proposed water quality impairment listing to determine if any inaccuracies or incomplete information exists, and/or if supporting data suggests a waterbody has been improperly categorized. The County then submits its comments to Ecology for their consideration.

Once the water quality assessment concludes that a TMDL must be established to address water quality impairments, Ecology solicits participation in an advisory group to help guide the development of the associated Water Quality Improvement Plan. As a participant in an advisory group, the County helps steer the development of the plan by:

- Committing to participate in the multi-year process.
- Cooperatively working with Ecology and other stakeholders to use the best available science and share local knowledge about implementation challenges and opportunities.

- Sharing applicable water quality data, where available.
- Advising and suggesting ideas on effective strategies and implementation actions to improve water quality.
- Reviewing, editing, and providing comments on draft documents.

The County's engagement in TMDL development processes helps improve the chances that WLAs and permit actions are appropriate and effective in reducing pollutant discharges and ultimately meet water quality standards.

TMDL water quality cleanup plans inform the County's efforts to prioritize and direct resources to the most meaningful projects and programs by identifying critical watershed areas and activities that could help address water quality impairments. The County takes a proactive approach to prevent and address known impairments and is building partnerships, both within and outside the County, to leverage existing resources and local knowledge to develop more informed and meaningful implementation strategies.

### ***11.2.1 Interagency Team***

While the County works hard to contribute meaningfully to the development of TMDLs, there has been much discussion over the last decade about the efficacy of the TMDL program in successfully addressing water quality impairments. In order to assist in the effort to improve our state's approach to assessing and cleaning up impaired water bodies, the County has been participating in an [Interagency Team](#) (IAT). The IAT consists of staff from the King, Kitsap, Pierce, Snohomish, and Thurston Counties, Cities of Bellevue and Everett, and the Washington State Department of Transportation. Key areas of interest include identifying:

- Criteria Ecology uses for determining which waters are added and removed from the state's list of polluted waters. This includes methods for ensuring the list reflects the waterbody's actual and current conditions based on scientifically credible and legally defensible decisions.
- Criteria and methods for prioritizing impaired waters for TMDL development.
- Methods for determining the level of effort and rigor necessary for TMDL studies ranging from complex multi-year sampling and analysis efforts to the "straight to implementation" approach.
- Criteria for selecting TMDL implementation actions based on the pollutant(s) of concern in municipal stormwater runoff.
- Approaches successfully used in other states.

To date, the IAT has developed the following nine key recommendations:

1. Establish a multi-stakeholder standing committee to improve coordination and engagement with the regulated community.
2. Implement existing regulatory authority related to unpermitted and nonpoint sources.

3. Refine water quality standards and water quality assessment methodologies.
4. Improve and employ consistent processes for collecting, assessing, and utilizing credible data in Water Quality Assessment and TMDL development.
5. Refine water quality assessment categories to improve clarity and aid in defining priority water bodies.
6. Update the current biological assessment and listing methodology.
7. Define TMDL prioritization methodology, timelines, and process for public involvement.
8. Define TMDL development methodology.
9. Develop consistent TMDL implementation expectations.

The IAT has developed strategies and working agendas in an effort to initiate implementation of the key recommendations. The ultimate goal of the IAT effort aims to increase the efficacy of Water Quality Assessment and TMDL program in Washington State in order to restore water quality and remove impaired waterbodies from the 303(d) list.

In 2020, in partnership with Pierce County, the County began engaging Ecology's Southwest Region Office on mapping the pathway for delisting. This builds off work began by King and Snohomish Counties with Ecology's Northwest Region Office.

### **11.3 Thurston County TMDL Compliance Requirements**

Thurston County implements assigned TMDL actions specified in Appendix 2 of the Permit. Applicable areas in Thurston County include the Nisqually River Basin Reach (WRIA 11), Deschutes River Watershed (WRIA 13), and Henderson Inlet Watershed (WRIA 13).

*Tables 8.3a and 8.3b and 8.3c*, provide greater detail on the County's permit-related obligations associated with each of the three existing TMDLs. The content was excerpted and adapted from Appendix 2 of the Permit. In addition to performing these specific actions, the Permit requires the County to keep records associated with these TMDL-related actions and report annually on the status of TMDL implementation as part of its annual permit report submittal to Ecology. On August 6, 2021, EPA transmitted revised final TMDLs for the Deschutes River and its tributaries to Ecology. These new TMDLs were developed for sediment, bacteria, dissolved oxygen, pH, and temperature. To date the TMDL's implementation plan (i.e., the water cleanup plan), including how TMDL wasteload allocations are incorporated into municipal stormwater permits, remains unchanged.

## Stormwater Management Program Plan

Table 8.3a: Nisqually River Basin TMDL Requirements

Document(s) for TMDL	<a href="#"><i>Nisqually Watershed Bacteria and Dissolved Oxygen Total Maximum Daily Load (Water Cleanup Plan): Submittal Report</i></a>  <a href="#"><i>Nisqually River Basin Fecal Coliform Bacteria and Dissolved Oxygen Total Maximum Daily Load: Water Quality Implementation Plan (WQIP)</i></a>
Areas Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittee's municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Fecal Coliform, Dissolved Oxygen
<b>Task Description</b>	
Annually implement the following best management practices for reducing fecal coliform bacteria in areas discharging to the Nisqually Reach via the MS4 in accordance with the Permit: a. Reach households in targeted watershed through mailings, door hangers, etc. to increase awareness of the sources of bacteria pollution. b. Adequately maintain vegetation around stormwater facilities, ditches, and ponds.	

Table 8.3b: Deschutes River Watershed TMDL Requirements

Document(s) for TMDL	<a href="#"><i>Deschutes River, Percival Creek, and Budd Inlet Tributaries Temperature, Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Fine Sediment Total Maximum Daily Load Technical Report: Water Quality Study Findings</i></a>  <a href="#"><i>Deschutes River, Percival Creek, and Budd Inlet Tributaries Temperature, Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Fine Sediment Total Maximum Daily Load: Water Quality Improvement and Implementation Plan</i></a>
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittee's municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Temperature
<b>Task Description</b>	
1. Annually report on temperature reduction measures in the watershed.	

## Stormwater Management Program Plan

Table 8.3c: Henderson Inlet Watershed TMDL Requirements

Document(s) for TMDL	<a href="#"><i>Henderson Inlet Watershed Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Temperature Total Maximum Daily Load Study</i></a> <a href="#"><i>Henderson Inlet Watershed Fecal Coliform Bacteria, Dissolved Oxygen, and pH Total Maximum Daily Load: Water Quality Improvement Report Implementation Strategy</i></a>  <a href="#"><i>Henderson Inlet Watershed Fecal Coliform Bacteria Total Maximum Daily Load: Water Quality Implementation Plan</i></a>
Area Where TMDL Requirements Apply	Requirements apply in all areas regulated under the Permittee's municipal stormwater permit and discharging to water bodies listed within the specific requirement in this TMDL section.
Parameter	Fecal Coliform, Dissolved Oxygen, pH, Temperature
<b>Task Description</b>	
1. Annually implement the following best management practices in areas discharging to the Henderson Inlet via the MS4 in accordance with the Permit: <ul style="list-style-type: none"> <li>a. Require phosphorus control for new and redevelopment projects that discharge via the MS4 to Woodard Creek and meet the project thresholds in <i>Appendix 1</i>, Minimum Requirement #6: Runoff Treatment of the Permit.</li> </ul>	
2. Annually implement the following best management practices for reducing fecal coliform in areas discharging to the Henderson Inlet via the MS4 in accordance with the Permit: <ul style="list-style-type: none"> <li>a. Enhance screening in Henderson Inlet in areas of concern. Investigation shall include stormwater ponds and on-site septic systems as potential fecal coliform sources, and sampling of wet-weather discharges (November-April)</li> </ul>	
3. Annually implement the following best management practices for reducing fecal coliform in areas discharging to the Henderson Inlet via the MS4 in accordance with the Permit: <ul style="list-style-type: none"> <li>a. Continue offering public education and outreach efforts for fecal coliform reduction such as brochures, signage, and pet waste stations to homeowner associations.</li> </ul>	

### 11.4 Thurston County Programs and Activities that Address TMDL Requirements

Many Thurston County departments and divisions are engaged in implementing the TMDL requirements including Community Planning & Economic Development, Environmental Health, and Public Works. This requires ongoing coordination, support, and education on permit compliance and TMDL implementation activities. This inter-county partnership allows the County to make continuous improvements to its implementation of TMDL-related activities and make more insightful and relevant contributions during TMDL development processes. Details regarding Thurston County programs and activities that address TMDL requirements are provided in greater detail in other sections of this document. In addition, the County actively evaluates additional programs and partnership opportunities that may help address TMDL-related water quality impairments.

## 12. MONITORING

### 12.1 Overview

Monitoring of streams, lakes, groundwater and weather has been ongoing in Thurston County for over 20 years. The information obtained from the monitoring programs helps inform land use studies, regulations, and provides information used in efforts to improve water quality and protect people and property. For example, the County uses this data to develop and calibrate hydrologic models and identify problem areas requiring further assessment and remediation. The monitoring program also incorporates water quality and quantity data from multiple County sources in a centrally accessible database.

This section describes how Thurston County meets the Permit requirements related to water quality monitoring and assessment. This section also describes the programs and activities that occur outside of the Permit's regulatory framework as well as future planned activities.

### 12.2 Stormwater Action Monitoring

Ecology established the Regional Stormwater Work Group (RSWG) to develop a Regional Stormwater Monitoring Program for Puget Sound, now renamed Stormwater Action Monitoring (SAM), that was integrated into the 2013 reissuance of the Western Washington Municipal Stormwater Phase I and II permits. Thurston County originally participated in the RSWG and will continue to participate to evaluate the results of the program and assist in the development of status and trends, source identification, and BMP effectiveness monitoring for inclusion in the next iteration of the stormwater permit as time permits.

In August of 2019, Thurston County notified Ecology that it chose the Permit option that allows paying into the collective fund to implement the SAM in lieu of conducting independent monitoring studies. Our contribution to the monitoring elements of the Permit for 2019 includes the following annual payments:

- *Status and Trends Monitoring* - \$8,371 to help implement SAM for small streams and marine near shore status and trends monitoring in Puget Sound
- *Effectiveness Studies and Source Identification Monitoring* - \$15,299 to help implement the SAM effectiveness and source identification studies.)

### 12.3 Thurston County Environmental Monitoring Program

Thurston County's Environmental Monitoring Program (TCEMP) includes ambient water quality, limited biological, and physical monitoring elements. The ambient water quality monitoring samples lakes and streams throughout the county for multiple parameters including pH, dissolved oxygen, suspended sediments, nitrogen, phosphorous, fecal coliform and e-coli, and other chemicals of concern. The physical monitoring element includes weather monitoring (precipitation, temperature, evaporation, wind speed/direction, solar radiation, and



evapotranspiration), stream flow, lake level, and groundwater level monitoring, and water temperature monitoring in surface and groundwater.

The physical environmental monitoring program supports the emerging needs of the County for landslide analysis, groundwater protection, water availability, and Low Impact Development implementation. The program includes live telemetry at twenty-one locations throughout the County, including thirteen weather stations, four streamflow stations, one lake level station, and one groundwater monitoring site.

The GData database platform, the engine behind the County's online [Monitoring Dashboard](https://thurstonwater.org/monitoring) (<https://thurstonwater.org/monitoring>), allows multiple users to access millions of datasets from 20+ years of water quality and water quantity data using a seamless interface.

### **12.3.1 Stream Flow Monitoring**

Stream flow monitoring includes 17 streams evaluated for flow and temperature. The program monitors stream stage continuously using data loggers and completes a stream cross section and flow calculation several times per year. Stage-discharge curves are developed from this data at regular intervals to provide flow history for each stream.

Rating curves for each stream are completed and certified as needed using scientifically defensible statistical methods for flow volume calculations. The County uses these curves to generate flow quantities from stage-discharge relationships at each stream monitoring site.



**Figure 2: Stream flow monitoring**

### **12.3.2 Weather Monitoring**

Thurston County monitors 20 weather stations located throughout the County. All weather stations record temperature and precipitation. Most stations also track relative humidity, barometric pressure, wind speed and direction, solar radiation, and evapotranspiration. The weather stations, distributed throughout the County, provide uniform coverage while avoiding significant overlap.



A National Oceanic and Atmospheric Agency (NOAA) weather station at the Olympia Airport also collects weather data. This constitutes an important part of the monitoring program as the County uses its data as a standard for statistical calculations and comparisons to the County's weather station data.

### **12.3.3 Groundwater Monitoring**

Groundwater level monitoring occurs at over 48 wells throughout the County. Many of these wells are in the Salmon Creek Basin, an area that has a history of high groundwater flooding. Well loggers installed in most wells provide a continuous record of groundwater level. A few wells are only monitored monthly for groundwater level. Data download occurs monthly.

The County completed an evaluation of the groundwater monitoring network in 2017 and as a result added eight new monitoring wells in the Scatter Creek aquifer in early 2017. The program evaluation's second phase assists with selection of sites to abandon, upgrade, modify, or add to provide a more uniform depiction of groundwater levels in the County. Installation of new wells with abandonments and retrofits of damaged wells was performed between 2020 and 2021, reorienting the groundwater monitoring program from project-driven to an ambient status and trends program, more in keeping with the stream and weather monitoring programs. This expanded the network of groundwater calibration points supports predictive analysis of flooding, determinations of stream baseflows, and contaminant migration into streams and lakes.

### **12.3.4 Lake Water Level**

Lake level monitoring currently includes three lakes: Long Lake, Lake St. Clair, and Black Lake. A volunteer reports lake levels for Hicks Lake. Additional lakes are being considered for level monitoring. Real-time automated monitoring of Lake St. Clair and of Black Lake Ditch reduces program costs and enhances our ability to identify emerging problem conditions.

### **12.3.5 Ambient Water Quality Monitoring**

Thurston County Environmental Health (EH) Division of the Public Health and Social Services Department conducts ambient water quality monitoring on the County's numerous lakes, streams, and rivers. Stream water quality monitoring, conducted monthly, includes parameters such as pH, temperature, conductivity, dissolved oxygen, total



**Figure 3: Precipitation station**



**Figure 4: Groundwater monitoring equipment**

phosphorous, nitrate+nitrite nitrogen, turbidity, and fecal coliform and e-coli. The program currently monitors five groundwater wells in the Scatter Creek aquifer – 12 sites on nine lakes and 36 sites on 29 streams or rivers.

The County deploys continuous temperature sensors at all our stream sampling locations. This improves our ability to characterize diurnal cycling and to accurately assess important statistics like the seven-day average daily maximum.

### ***12.3.6 Macroinvertebrate***

Thurston County's Macroinvertebrate (B-IBI) monitoring program is a staff-lead opportunity for volunteers to collect stream data. B-IBI monitoring rotates to different sites around the county each year; sites are visited every three to five years, after an initial establishment phase of 2-3 consecutive sampling years.

### ***12.3.7 Interlocal Monitoring Agreement***

Since the 1980s, Thurston County, in cooperation with the Cities of Lacey, Olympia, and Tumwater under an Interlocal Monitoring Agreement (ILMA), has pooled funding of ambient water quality, stream flow, and weather monitoring locations within the north county area.

Since its inception, the ILMA has been updated and renewed approximately every three to five years. The previous ILMA covered the period of 2015-2018. Since 2013, participation in the ILMA declined significantly as a cost reduction strategy for the participating cities who had to channel funding to comply with the Permit's regional monitoring program obligations.

The County and the Cities are currently examining how, or whether, to renew the ILMA for the 2019-2024 Permit cycle. To date, no agreement has been executed.

## **12.4 Other Monitoring Programs**

### ***12.4.1 Long Lake Management District***

Thurston County Public Works (PW) runs a lakes program which, among other duties, provides support to the two Lake Management districts, including Long Lake. In 2020, the Long Lake Management District decided to implement an outfall monitoring program in response to a months-long algae bloom. This program, implemented during the 2021 water year (fall 2020 through spring 2021), focused on evaluating to what extent, if any, nutrient pollution discharges from stormwater outfalls directly to the lake. The County collected at nine sites over three stormwater events on behalf of the District to inform the management and treatment of the lake. Currently, the Long Lake Management District is evaluating phosphate levels and considering additional sampling programs that may include the Pattison Lake inlet.

### **12.4.2 Pollution Identification and Control (PIC)**

Thurston County Environmental Health (EH) initiated a pilot PIC program in the Henderson Inlet watershed in 2019. That program consisted of targeted monitoring of specific streams for bacteria that could be contributing to shellfish bed infection and closures. Based on the success of that pilot, EH applied for and received a grant from the Washington Department of Health to expand the PIC program to the Totten and Eld inlet watersheds. As of 2020 that program has begun identifying bacteria sources in various streams in those watersheds, primarily McLane, Green Cove, and Swift creeks.

PIC monitoring starts by identifying a section of stream, and multiple monitoring points along that stream. Samples are collected more frequently than at ambient sites. All initial sampling sites are sampled bi-weekly for the first round of sampling, and then an interval of bi-weekly to quarterly is assigned according to priority. As the diagnostic process progresses, new monitoring sites are added near areas of high concentration while monitoring sites with persistent low concentrations are removed until specific sources are identified. In instances where diagnostic efforts involve a stormwater outfall candidate, source tracing sampling can continue up the storm sewer conveyance pathway.

The diagnostic process utilizes land use characterizations, stormwater facilities inventories, septic system maintenance records, field observations (e.g., windshield surveys), and outreach to help verify the source(s). Once the pollution source(s) are identified, the County works with the landowner to reduce or eliminate it.

### **12.5 Reporting**

The County prepares ambient water quality monitoring and physical monitoring reports typically on an annual or bi-annual basis to summarize the results and posts the data reports to its website:

- [Ambient water quality monitoring data](#)
- [Water Year Reports](#)

### **12.6 Planned Activities**

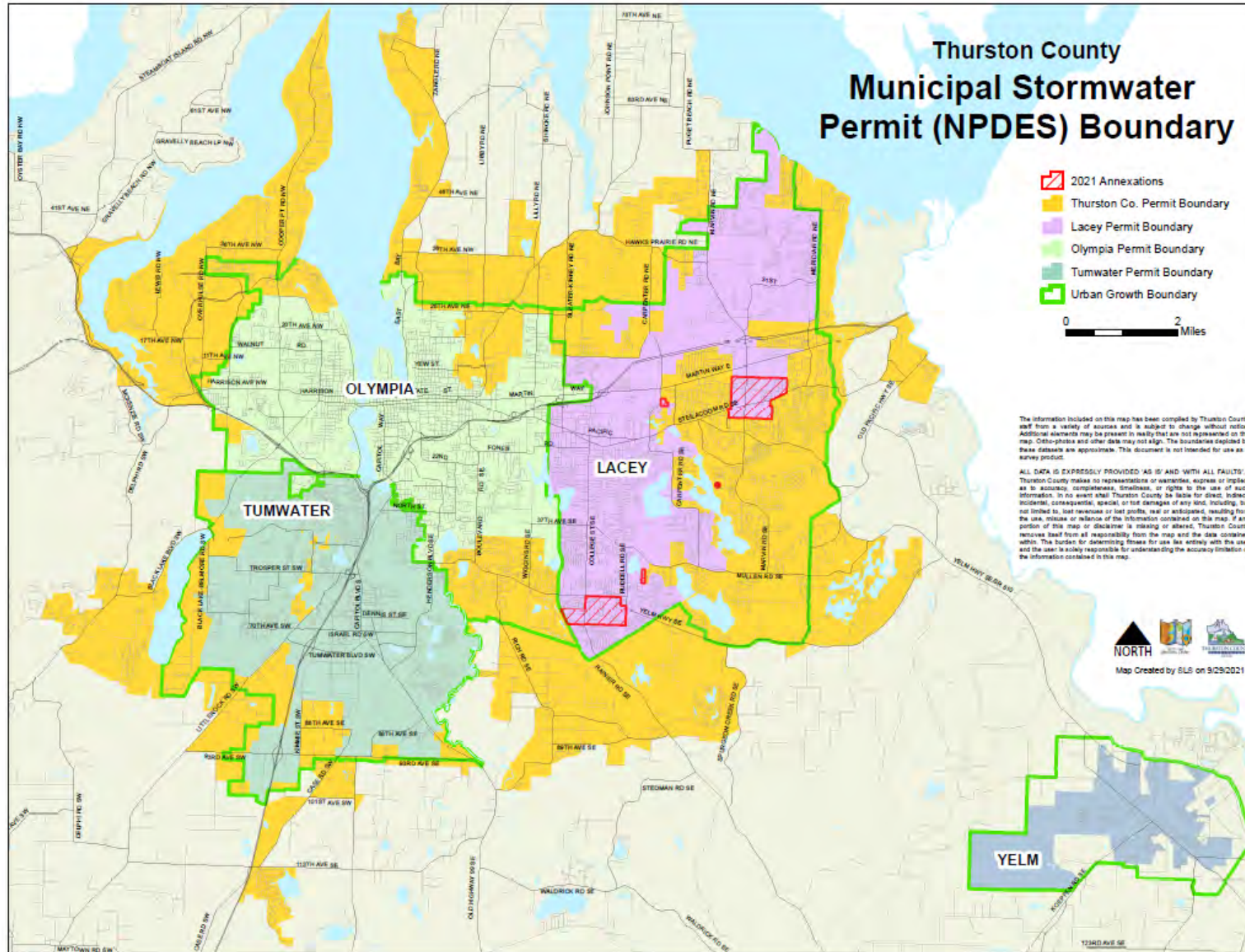
Going forward, Thurston County's monitoring program will continue to collect, analyze, and disseminate data on ambient water quality, stream flow, groundwater, and rainfall to inform stormwater system management, design, and retrofits. The County intends to:

- Continue funding SAM as required by the Permit.
- Continue to participate in the RSWG's Local Caucus sub-committee, time permitting.
- Continue to implement program changes identified in the Phase 1 & 2 monitoring program evaluations.

- Certify and publish all updated rating curves for County streams included in the TCEMP monitoring program plan.
- Continue to develop database capabilities for rapid evaluation and reporting of customized data presentations.
- Maintain and expand the online *Dashboard* to allow rapid data access.
- Expand and incorporate all new and proposed telemetered field stations as they become operational for real time access to field conditions via the online *Dashboard*.
- Implement recommended changes to the 2018 Groundwater Monitoring Plan.
- Invest in upgrading field equipment to incorporate telemetry as a standard operating practice.
- Invest in upgrades to web development of front-end capabilities for online data sharing.
- Assist in Countywide data projects for real-time advanced notification warning of vulnerable flood areas (in cooperation with Emergency Management and Environmental Health).



## Appendix A



# THURSTON COUNTY STORMWATER TRAINING PLAN

2021 v2

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## Introduction

Thurston County prepared this *Stormwater Training Plan* to facilitate deployment of the training requirements set forth in the Western Washington Phase II Municipal Stormwater Permit (Permit) and summarized in the *County's Stormwater Management Program Plan* (Stormwater Plan). The Training Plan's [Appendix 1](#) contains the specific permit conditions that require training for County staff who have a direct or indirect job duties that fall into the following stormwater program areas:

1. Illicit Discharge Detection and Elimination (IDDE)
2. Controlling Runoff from New Development, Redevelopment and Construction Sites
3. Operations and Maintenance (O&M)
4. Source Control
5. Enforcement

For each of these program areas, the *Stormwater Training Plan* describes the key target audience (i.e., the groups or positions that need the training), curriculum, training delivery mechanism, and training frequency. Refresher training occurs as needed to address changes in procedures, techniques, requirements, or staffing. The responsibility lies with the supervisors to document that their staff receives the applicable training.

### 1. Illicit Discharge Detection and Elimination

The IDDE training fulfills Permit Special Conditions S5.C.5.d.iii and S5.C.5.f. This training is tailored toward three audiences:

- Field staff
- Sheriff's Deputies
- Staff responsible for response, tracing, and cleanup

Refresher training occurs as needed to address changes in procedures, techniques, requirements, or staffing. The IDDE/Spills training fulfills Permit Special Conditions S5.C.5.d.iii and S5.C.5.f.

#### **1.1 Field Staff**

Field staff who, as part of their normal job responsibilities, might encounter or otherwise observe a spill, illicit discharge, and/or illicit connection to the County's municipal separate stormwater sewer system (MS4) receive training on: 1) identifying spills, illicit discharges, and illicit connections; and 2) proper procedures for reporting and responding to these incidents following the County's *Spill Reporting Matrix*.

## 1.2 Sheriff's Deputies

Deputies receive training on identifying spills and the proper procedures for reporting them via TCOMM 911.<sup>1</sup>

## 1.3 Staff Responsible for Response, Tracing, and Clean-up

Staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges (including spills and illicit connections) receive additional training to conduct these activities. This includes training on the use of the [Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual](#) (ID-IC Manual). Staff responsible for assessing stormwater outfalls receive training on how to map, trace, and characterize illicit discharges and connections. This training includes the use of the [VUEWorks](#) asset management software program to assist in identifying the areas contributing to the illicit discharge/connection, possible pollutant entry points upstream, and aquatic resources and health and safety risks downstream of the discharge.

Table 1. IDDE Program Area

Target Audience	Curriculum Description	Training Delivery	Training Frequency
Field staff	IDDE program overview, including information on how to identify and report suspected spills, illicit discharges, and illicit connections	<ul style="list-style-type: none"><li>➤ Online platform with quiz</li><li>➤ Read <i>Stormwater Management Program Plan</i> (SWMPP) Chapter 7</li></ul>	<ul style="list-style-type: none"><li>➤ Within six months of hire</li><li>➤ Refresher every two years<sup>2</sup></li></ul>
Deputies	Spill identification and reporting procedures via TCOMM 911	TBD based on conversation between the Sheriff's Office, TCOMM 991, Roads dispatch, & Water Resources Ops Manager	<ul style="list-style-type: none"><li>➤ Within six months of hire</li><li>➤ Refresher training as needed to address changes in procedures</li></ul>
Staff responsible for response, source tracing, and cleanup	Source tracing, investigation, termination, and cleanup of spills, illicit discharges, and illicit connections	<ul style="list-style-type: none"><li>➤ <i>Field Staff</i> training listed above</li><li>➤ Review <i>IC-ID Field Screening &amp; Source Tracing Guidance Manual</i> and training<sup>3</sup></li><li>➤ TC Chapter 15.07</li><li>➤ MS4 Permit Special Condition S4.F and General Condition G3</li><li>➤ HAZWOPER<sup>4</sup> 40-hour</li><li>➤ On-the-job training, including VUEWorks</li></ul>	<ul style="list-style-type: none"><li>➤ Within six months of hire</li><li>➤ 8-hour annual HAZWOPER</li><li>➤ Refresher training as needed to address changes in procedures, techniques, and requirements</li></ul>

<sup>1</sup> Thurston 911 Communications (TCOMM 911) is a countywide enhanced 911 answering point and dispatch center for all law enforcement, fire services, and Medic One departments.

<sup>2</sup> "Light version" of initial training.

<sup>3</sup> Training via workshops, webinars, or [Washington Stormwater Center's online videos](#).

<sup>4</sup> Hazardous Waste Operations and Emergency Response

## 2. Controlling Runoff from New Development/Redevelopment/Construction Sites

Training for controlling stormwater runoff from new development, redevelopment, and construction stormwater fulfills Permit Special Condition S5.C.6.e. Refer to 3.1 for training related to S5.C.6.c.iv. duties. This training is tailored to staff teams responsible for:

- Permitting
- Plan review and designing public works construction and maintenance projects
- Construction site oversight and inspections
- Building inspections & maintenance

### 2.1 Permit Counter Staff

Staff responsible for reviewing low impact development (LID) code applicability and stormwater-related documents to identify potential conflicts with other codes (e.g., steep slopes, wetlands, critical areas, and shorelines).

### 2.2 Plan Reviewers and Designers of Public Works Construction and Maintenance Projects

Plan reviewers and designers for public works construction and maintenance projects receive training to conduct these activities. Training includes site plan and report review per the guidelines in the County's *Drainage Design and Erosion Control Manual* (DDECM)<sup>5</sup> and supporting documents, project review flowcharts, public works construction and maintenance projects coordination procedures, CESCL (Certified Erosion and Sediment Control Lead) certification, and best management practice (BMP) selection/design. Supplemental on the job training addresses policies and procedures. Additional outside training may occur.

### 2.3 Construction Site Inspectors and Road Operations Crew Chiefs

Construction Inspectors and Road Operations Crew Chiefs receive training on temporary erosion and sediment control (TESC) and construction stormwater pollution prevention per the guidelines in the County's DDECM and related recordkeeping. Construction site inspectors and Road Operations Crew Chiefs maintain CESCL certification and receive ongoing on the job training.

### 2.4 Building Inspectors and Maintenance Staff

Building Inspectors and Public Works and Facilities maintenance staff receive training on what to look for and report to construction inspectors regarding TESC and construction stormwater pollution prevention.

*Table 2. New Development/Redevelopment/Construction Stormwater Program Area Training*

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<sup>5</sup> WSDOT's Highway Runoff Manual (HRM), as applicable for road projects.

Target Audience	Curriculum Description	Training Delivery	Training Frequency
Building Development Center counter staff	LID code applicability per Ordinance 15355	<ul style="list-style-type: none"> <li>➤ Read <i>SWMPP Sections 8.1-8.4 &amp; 11.3</i> and <i>Appendices D &amp; E</i>; LID codes per Ordinance 15355</li> <li>➤ On-the-job training</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within six months of hire</li> <li>➤ Weekly staff meetings</li> <li>➤ Refresher training as needed to address changes in codes and procedures</li> </ul>
Staff reviewing permit applications for stormwater-related code compliance; staff responsible for designing public works construction and maintenance projects	Reviewing site plans and reports for new development, redevelopment, and construction activity; applying DDECM (and HRM, as applicable for road projects); and LID principles and codes.	<ul style="list-style-type: none"> <li>➤ Site Plan Review Training videos<sup>6</sup></li> <li>➤ Read <i>SWMPP Chapter 8</i> and <i>Appendices D &amp; E</i>; DDECM<sup>7</sup>; and LID codes per Ordinance 15355</li> <li>➤ Hydrologic analysis &amp; modeling (e.g., WWHM, MGSFlood)</li> <li>➤ CESCL</li> <li>➤ Program review conducted jointly by County engineer, DDECM administrator, &amp; SW Program Coordinator</li> <li>➤ On-the-job training</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within six months of hire</li> <li>➤ Obtain CESCL certification within six months of hire; recertify every three years</li> <li>➤ Weekly staff meetings</li> <li>➤ Annual program review</li> <li>➤ Refresher training as needed to address changes in procedures, techniques, and requirements</li> </ul>
Construction Site Inspectors and Road Operations Crew Chiefs	Assessing compliance with TESC, construction stormwater pollution prevention plans (SWPPPs), and applicable drainage codes. Related recordkeeping.	<ul style="list-style-type: none"> <li>➤ Read <i>SWMPP Sections 8.4-8.6</i> and <i>Appendices F &amp; G</i>; and DDECM <i>Volume II</i></li> <li>➤ CESCL</li> <li>➤ On-the-job training</li> </ul>	<ul style="list-style-type: none"> <li>➤ Obtain CESCL certification within six months of hire; recertify every three years</li> <li>➤ Weekly staff meetings</li> <li>➤ Refresher training as needed to address changes in procedures, techniques, and requirements</li> </ul>
Building Inspectors and Public Works and Facilities maintenance staff	Identifying and reporting deficiencies in erosion and sediment control and construction stormwater pollution prevention.	<ul style="list-style-type: none"> <li>➤ Online TESC/Pollution Prevention training<sup>8</sup></li> <li>➤ Read <i>SWMPP Sections 8.4-8.6</i> and <i>Appendices F &amp; G</i>; and DDECM <i>Volume II</i></li> <li>➤ On-the-job training</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within six months of hire</li> <li>➤ Refresher training as needed to address changes in procedures, techniques, and requirements</li> </ul>

### 3. Operations and Maintenance (O&M)

Operations and Maintenance (O&M) training fulfills Permit Special Conditions S5.C.7.e. as well as duties related to S5.C.6.c.iv. This training is tailored to staff responsible for:

- Transitory-located O&M

<sup>6</sup> Posted on [Washington Stormwater Center's website](#).

<sup>7</sup> WSDOT Highway Runoff Manual (HRM) training, as applicable.

<sup>8</sup> A "CESCL-light version" (i.e., not required for those with CESCL certification).

- County facilities M&O
- Inspection of public and private stormwater facilities

### 3.1 Transitory-Located Field Staff

Field staff working in their normal job duties at transitory project locations (e.g., roads, parks, utilities, capital facility construction, etc.) or responding to emergency situations receive training on DDECM operation and maintenance standards, good housekeeping, and BMP selection.

### 3.2 Staff Responsible for County Facility Maintenance

Staff whose primary responsibility or main duty station is a County facility (e.g., Facilities, Fleet, and Solid Waste) receive training on DDECM operation and maintenance standards, good housekeeping, and BMP selection, and applicable SWPPPs.

*Table 3. Operations and Maintenance Program Area Training*

Target Audience	Curriculum Description	Training Delivery	Training Frequency
Transitory-located field staff	DDECM O&M standards  BMP and good housekeeping selection, installation, and maintenance per DDECM, HRM, and the Regional Road Maintenance Program (RRMP)	<ul style="list-style-type: none"> <li>➤ WSDOT 8-hour RRMP field training</li> <li>➤ Read <i>SWMPP Section 9 and DDECM Appendix V-C</i><sup>9</sup></li> <li>➤ On-the-job training</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within six months of hire</li> <li>➤ Weekly crew meetings</li> <li>➤ Refresher training to address changes in procedures, techniques, and requirements</li> </ul>
Staff responsible for County facility maintenance (i.e., Facilities, Fleet, and Solid Waste)	BMP and good housekeeping selection, installation, and maintenance per DDECM or applicable SWPPP  In-depth knowledge of facility SWPPPs	<ul style="list-style-type: none"> <li>➤ SWPPP walk throughs</li> <li>➤ Read <i>SWMPP Section 9; Tilley or Waste and Recovery Center (WARC) SWPPP (as applicable); DDECM Appendix V-C</i></li> </ul>	<ul style="list-style-type: none"> <li>➤ Within six months of hire</li> <li>➤ Refresher training to address changes in procedures, techniques, and requirements</li> </ul>
Stormwater facility inspectors	DDECM O&M standards  BMP and good housekeeping per DDECM  In-depth knowledge of facility SWPPPs	<ul style="list-style-type: none"> <li>➤ Read <i>SWMPP Section 9 and Appendices D, E, F, and H; Tilley and WARC SWPPP; and DDECM Appendix V-C</i></li> <li>➤ On-the-job training</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within six months of hire</li> <li>➤ Refresher training to address changes in procedures, techniques, and requirements</li> </ul>

## 4. Source Control<sup>10</sup>

Source Control training fulfills Permit Special Condition S5.C.8.b.v. Staff responsible for implementing the source control program receive training on source control BMPs and their proper application, inspection protocols, and escalating enforcement procedures.

<sup>9</sup> Vactor and Street Sweeper Operators also need to read Western WA MS4 Permit Appendix 6 – Street Waste Disposal.

<sup>10</sup> January 1, 2023 compliance date for program deployment.

*Table 4. Source Control Program Area Training [Provisional – under development]*

Target Audience	Curriculum Description	Training Delivery	Training Frequency
Source control site inspectors	DDECM source control standards  BMP and good housekeeping per DDECM	<ul style="list-style-type: none"> <li>➤ <i>Source Control Guidance Manual</i> &amp; related training workshop<sup>11</sup></li> <li>➤ Read <i>SWMPP Section 10</i> and <i>DDECM Volume IV Chapters 4 &amp; 5</i></li> <li>➤ On-the-job training</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within six months of hire</li> <li>➤ Refresher training to address changes in procedures, techniques, and requirements<sup>12</sup></li> </ul>

## 5. Code Enforcement

Code Enforcement training fulfills Permit Special Conditions S5.C.6.e and S5.C.8.b.v. County code enforcement staff obtain CESCL certification and ongoing on the job training on County DDECM, IDDE, and Source Control code enforcement, policies, and procedures. This includes compliance with erosion and sediment control standards, SWPPPs, and pollution prevention plans.

*Table 5. Code Enforcement*

Target Audience	Curriculum Description	Training Delivery	Training Frequency
Code enforcement staff	Enforcement compliance of DDECM, IDDE, and Source Control codes per the County's code enforcement policies and procedures.	<ul style="list-style-type: none"> <li>➤ Read <i>SWMPP Sections 8.6 &amp; 10</i>, and <i>Appendices F &amp; G</i>; TCC 15.05, TCC 15.07, and Title 26</li> <li>➤ CESCL</li> <li>➤ On-the-job training</li> </ul>	<ul style="list-style-type: none"> <li>➤ Within six months of hire</li> <li>➤ Obtain CESCL certification within six months of hire; recertify every three years</li> <li>➤ Refresher training to address changes in procedures, techniques, and requirements</li> </ul>

<sup>11</sup> Underdevelopment as part of a SW Action Monitoring Source ID project. Materials and training information will be based on best management practices and lessons learned from existing Phase I and Phase II jurisdiction business inspection programs.

<sup>12</sup> May take the form of ongoing on-the job training and discussions with other regional permittees (e.g., Business Inspection Group).



## Tracking and Recordkeeping

Tracking and recordkeeping responsibilities lie with the supervisors for their applicable staff identified in sections 1-5 above. The County uses an electronic Learning Management System (LMS) to track and maintain stormwater-related staff training records. Managers and supervisors can generate reports from the LMS with the support of their internal Training Point of Contact (TPOC). Reports to assess adherence with the training plan as well as help with annual employee development planning can be run throughout the year.

The following LMS coding convention (applicable target audience for each referenced in parenthesis's) enables the County to query the system by the Permit-mandated training categories, where:

- SW-1.1-IDDE (*Field Staff*)
- SW-1.2-IDDE (*Deputies*)
- SW-1.3-IDDE (*Investigators*)
  
- SW-2.1-Controlling Runoff (*Building Development Center Staff*)
- SW-2.2-Controlling Runoff (*Plan Review & Design*)
- SW-2.3-Controlling Runoff (*Construction Inspectors & Road Operations Crew Chiefs*)
- SW-2.4-Controlling Runoff (*Building Inspectors & Maintenance Staff*)
  
- SW-3.1-O&M (*Transitory-located Field Staff*)
- SW-3.2-O&M (*County Facility Maintenance*)
- SW-3.3-O&M (*Stormwater Facility Inspectors*)
  
- SW-4-Source Control
  
- SW-5-Enforcement

The supervisor is responsible to ensure group lists within the LMS contain all applicable team members for the relevant trainings based on their staff's roles and responsibilities.

## ***Appendix 1 - Permit Conditions Related to Training***

### **S5.C.5.d.iii.**

An ongoing training program for all municipal field staff, who, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge and/or illicit connection to the MS4, on the identification of an illicit discharge and/or connection, and on the proper procedures for reporting and responding to the illicit discharge and/or connection. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of the trainings provided and the staff trained.

### **S5.C.5.f.**

Permittees shall train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections, to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of the training provided and the staff trained.

### **S5.C.6.e.**

Each Permittee shall ensure that all staff whose primary job duties are implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. Follow-up training must be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.

### **S5.C.7.e**

Implement an ongoing training program for employees of the Permittee whose primary construction, operations, or maintenance job functions may impact stormwater quality. The training program shall address the importance of protecting water quality, operation and maintenance standards, inspection procedures, relevant SWPPPs, selecting appropriate BMPs, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of training provided. The staff training records to be kept include dates, activities or course descriptions, and names and positions of staff in attendance.

### **S5.C.8.b.v.**

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

# Thurston County Procedure: Responding to the Private Use of Herbicides in Storm Drainage Facilities

## Section 1. Purpose

This procedure provides direction to County personnel regarding the procedures for responding to the private use of herbicides in storm drainage facilities in unincorporated Thurston County. This procedure clarifies a portion of the Thurston County Illicit Discharge Detection and Elimination (IDDE) Ordinance; [Thurston County Code 15.07](#).

## Section 2. Definitions

"Department" means any division; subdivision; or organizational unit of the County established by ordinance, rule, or order.

"Director" means the Director of the Thurston County Community Planning and Economic Development Department or any duly authorized representatives of the director.

"Discharge" means to throw, drain, release, dump, spill, empty, emit, or pour forth any matter or to cause or allow matter to flow, drain, run, or spill into a storm drainage system, surface water, ground water, or onto the surface of the ground.

"IDDE Ordinance" means the Thurston County Illicit Discharge Detection and Elimination (IDDE) Ordinance; [Thurston County Code 15.07](#).

"Illicit discharge" means any direct or indirect non-storm water discharge to a storm drainage facility except those specifically allowed in [Section 15.07.060](#) of Thurston County Code.

"Integrated pest management (IPM)" means an approach to pest and vegetation control that utilizes regular monitoring to determine if and when treatments are needed. The approach emphasizes physical, mechanical, cultural, and biological tactics to keep pest numbers or vegetation problems low enough to prevent intolerable damage, annoyance, or public safety hazards. When chemical controls are necessary, they will be the least toxic available and will be used only when no other control methods would be effective or practical. Components for integrated pest management programs are established in the [Thurston County Pest and Vegetation Management Policy](#).

"Municipal storm drainage facility" means any storm drainage facility which Thurston County owns or has a right-of-way or easement to maintain.

"Noxious weed" means a plant listed on the [Thurston County noxious weed list](#) adopted pursuant to RCW 17.10.090.

"Nuisance/invasive vegetation" means any herbaceous or woody plant or tree species that interferes with the drainage, design, capacity, maintenance, and/or function of a storm drainage facility. Examples include, but are not limited to, Cattail, Himalayan Blackberry and Red Alder.

"Person" means any individual, association, municipality, government agency, organization, partnership, firm, corporation, or other entity recognized by law and acting as either the owner or as the owner's agent.

"Private" means not holding public office or employment with Thurston County (e.g., a private citizen, association, or business).

"Repair and maintenance" means those activities associated with the routine care and upkeep of a structure, development, land use, or activity.

"Responsible party" means the owner of a property, premises, or facility on which a violation has occurred, any person who engages in any activity in violation, or any person who, through an act of commission or omission, procures, aids or abets a violation.

"Right-of-way" means an area dedicated to public use for pedestrian and vehicular movement, which may also accommodate public utilities.

"Storm drainage facility" means any public or privately-owned facility by which stormwater is collected, conveyed, and/or treated, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, catch basins, piped storm drains, pumping facilities, retention and detention basins, ditches, human-made or altered drainage channels, swales, reservoirs, and other drainage structures.

## Section 3. Affected Departments

This procedure applies to all Thurston County departments involved directly or indirectly in the inspection, monitoring, planning, operation, repair and/or maintenance of storm drainage facilities, or any related education, outreach, or compliance activity.

## Section 4. Procedure

1. Background: The Board of County Commissioners adopted Ordinance 14404 on September 7, 2010, amending Chapter 15.05 of the Thurston County Code, and adopting Chapter 15.07 - Illicit Discharge Detection and Elimination (IDDE) Ordinance. The IDDE ordinance is intended to prevent the contamination of stormwater runoff and comply with the Western Washington Phase II Municipal Stormwater Permit.
2. The IDDE ordinance (15.07.060.A – Discharge Prohibitions) states "It is unlawful for any person to dump, spill, or allow to be discharged any pollutant into a storm drainage facility." The ordinance lists 34 examples of illicit discharges "...including, but not limited to: "15. Pesticides, herbicides, or fertilizers."
3. **Applicability to municipal storm drainage facilities:** The IDDE ordinance prohibits private citizens from applying (i.e., discharging) herbicides to municipal storm drainage facilities, including ditches and swales. As such, the private application of herbicides to municipal storm drainage facilities would constitute an illicit discharge.

4. **Applicability to non-municipal (private) storm drainage facilities:** The *Thurston County Drainage and Erosion Control Manual* (DDECM) contains best management practices (BMPs) for vegetation and landscape management, including pesticide use, based on IPM principles:
- **BMPs for Commercial and Industrial Facilities:** The DDECM contains required and suggested BMPs for the use of pesticides (including herbicides) at commercial and industrial facilities. See [DDECM Volume IV](#):
    - BMP A3.6 Landscaping and Lawn/Vegetation Management
    - BMP A4.10 Storage of Pesticides, Fertilizers, or Other Products That Can Leach Pollutants
    - BMP S.8 Implement Integrated Pest Management Measures
      - Appendix IV-B, Example of an Integrated Pest Management Program
  - **BMPs for Single Family Residences:** The DDECM contains required and recommended BMPs for residential yard maintenance and gardening, including pesticide use. It states, in part: “Never apply fertilizers over water or adjacent to ditches, streams, or other water bodies.” See [DDECM Volume IV](#):
    - BMP 6.5 Yard Maintenance and Gardening

The [DDECM Volume V](#) contains maintenance checklists for various storm drainage facilities (e.g., detention ponds, infiltration basins, treatment wetlands, bioretention, etc.) to ensure that facilities function according to their intended purpose and design. Vegetation management in storm drainage facilities typically involves mowing or other mechanical methods. In cases where herbicide use is necessary to control [noxious weeds](#) or manage nuisance/invasive vegetation that interferes with facility function/capacity, a licensed pesticide applicator must:

- 1) Apply the herbicide according to the [FIFRA label](#);
- 2) Obtain any necessary state, local, and federal permits; and
- 3) Prevent discharges that may cause or contribute to violations of water quality standards.

Following vegetation management, the operator must revegetate any bare or denuded soils to control erosion, restore facility function, and prevent the discharge of sediment and other pollutants. The application of herbicides to private stormwater facilities, in accordance with this procedure is consistent with Section 15.07.060.B.12<sup>19</sup> and therefore does not constitute an illicit discharge under [Section 15.07.060](#).

## Section 5. Procedures, Roles, and Responsibilities

1. Thurston County will respond to IDDE ordinance violations related to herbicide applications to municipal storm drainage facilities in accordance to its escalating enforcement procedures.
2. Thurston County will initially rely on education and technical assistance to gain compliance with the IDDE ordinance. A notice of violation may be issued.

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<sup>19</sup> Exceptions to Illicit Discharges. Section 15.07.060.B.12: A person employing properly designed, constructed, implemented, and maintained BMPs and carrying out AKART to prevent pollution of stormwater is considered to be in compliance with sub-section 15.07.060.A above.

3. When education and technical assistance fail to resolve the issue, or when the violation poses a hazard to public health, safety, or welfare, the Director of the Community Planning and Economic Development Department, his/her Compliance Officer, or a duly authorized representative of the Director, as the situation dictates, may pursue formal enforcement, up to and including civil penalties, cease and desist orders, and/or emergency orders, under the authority of Thurston County code (TCC 15.07.040).

### **Municipal Storm Drainage Facilities**

- Staff responding to reports or observations of herbicide applications to municipal storm drainage facilities will initiate education and technical assistance with the responsible party. Staff will:
  - Explain the prohibition on applying herbicides to municipal storm drainage facilities, based on the IDDE ordinance
  - Explain the option to maintain vegetation using mechanical means, if appropriate
  - Give the responsible party a hard copy of Thurston County's *Roadside Ditches* pamphlet and/or other appropriate guidance document(s)
  - If applicable, follow-up with any complainants and explain status of the County's response
  - Document the incident in the County's Asset Management Software

### **Non-Municipal Storm Drainage Facilities**

- Staff responding to reports or observations of the herbicide applications to non-municipal storm drainage in a manner inconsistent with Section 4.4 of this procedure will initiate education and technical assistance with the responsible party. Staff will:
  - Investigate and attempt to determine if herbicide applications are being performed in accordance with Section 4.4 of this procedure and provide education/technical assistance, as appropriate
  - If applicable, follow-up with any complainants and explain status of the County's response
  - Document the incident in the County's Asset Management Software

### **Noxious Weed Management**

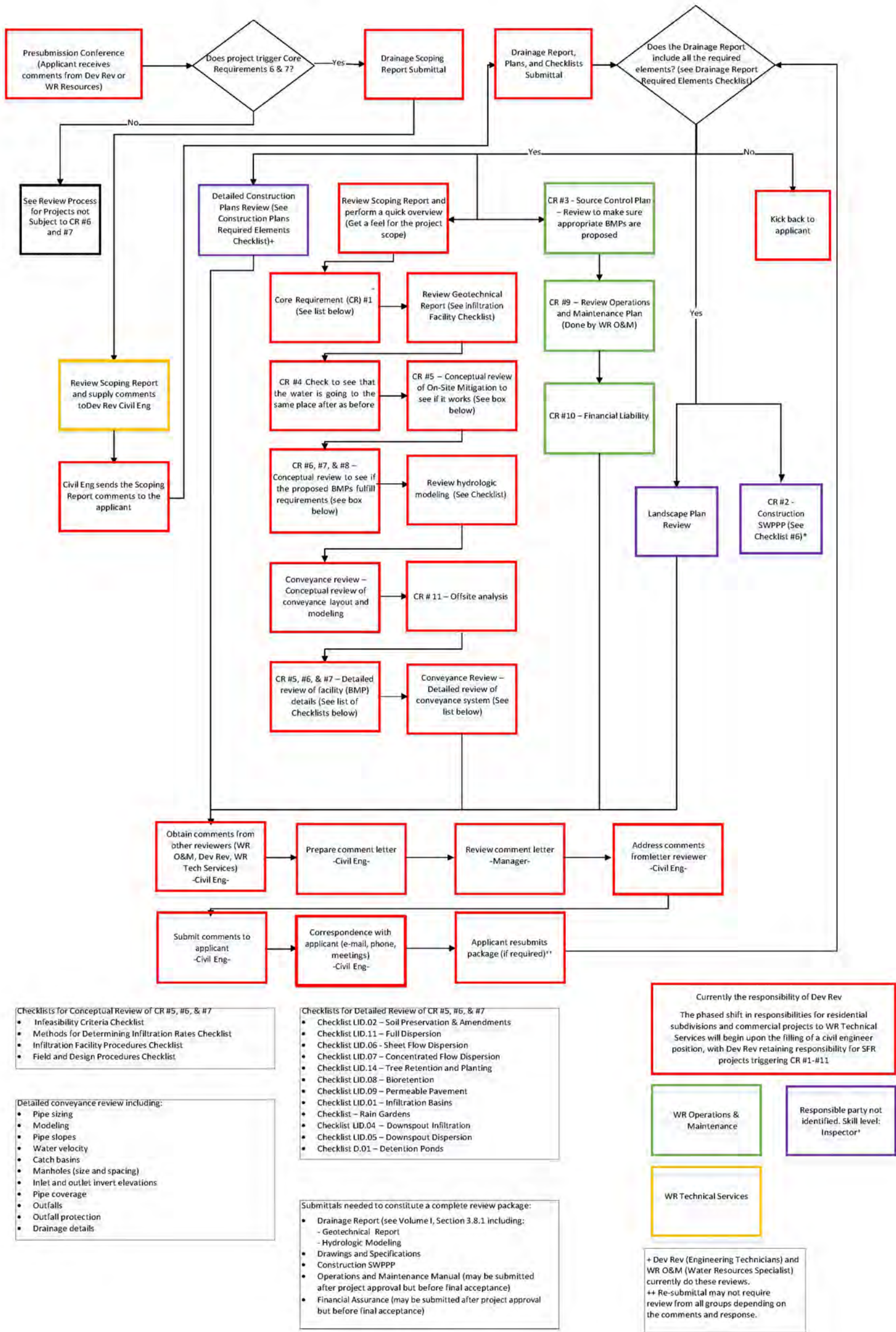
Thurston County Public Works (PW) uses mechanical methods (e.g., mowing) to manage vegetation in municipal storm drainage facilities. However, PW also uses herbicides to eradicate noxious weeds in accordance with the [Thurston County Pest and Vegetation Management Policy, Chapter 17.10 RCW](#) and Section 15.07.060(12) of the IDDE Ordinance.

When a citizen reports the presence of noxious weeds within municipal storm drainage facilities to any Department, staff will put the citizen in contact with the PW Noxious Weed Manager for follow-up, including noxious weed eradication, if necessary

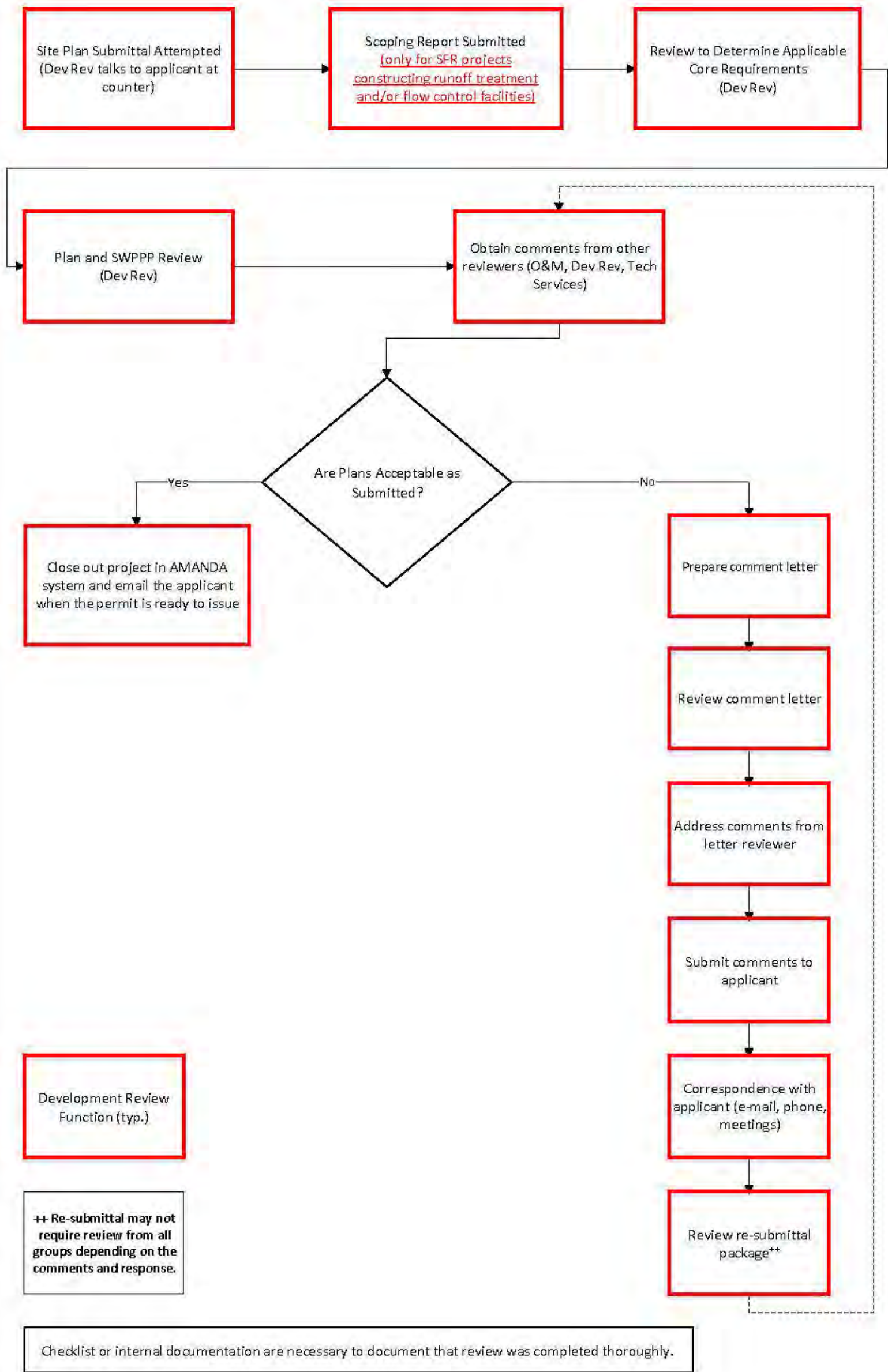


PROJECT REVIEW FLOW CHARTS

Projects Triggering DDECM Core Requirements #1-#11



Projects not Subject to CR #6 and #7 Plan Review  
and Single-Family Residential Projects

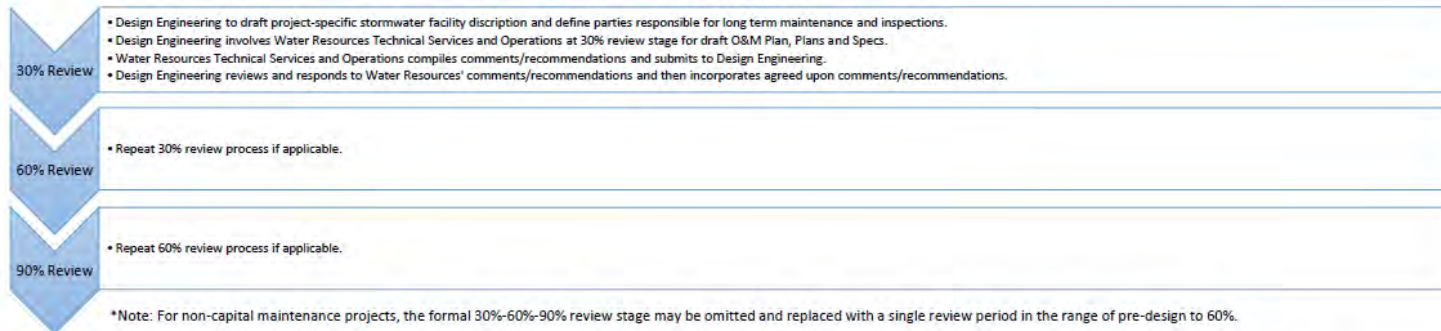




## Appendix E

### Thurston County Staff Stormwater-Related Coordination on Public Works Construction (Construction & Maintenance) Projects

#### *Design Phase*



#### *Construction and Post-Construction*

##### **Capital Construction Projects (06 Project #)**



##### **Non-Capital/Maintenance Construction Projects (04 Project #)**



# Thurston County Procedure: Inspection and Enforcement Procedures

## Section 1. Purpose

The procedures describe how Thurston County complies with the inspection and enforcement requirements in the Western Washington Phase II Municipal Stormwater Permit; specifically, Condition S5.C.4 - *Controlling Runoff from New Development, Redevelopment and Construction Sites*.

In addition, these procedures:

- 1) Ensure that standards and specifications set forth in the *Thurston County Drainage Design and Erosion and Sediment Manual (DDECM)* are consistently implemented, inspected, documented, and enforced.
- 2) Provide a “level playing field” for project proponents, developers, contractors, and builders in Thurston County.
- 3) Protect Thurston County residents, businesses, and stormwater utility ratepayers from incurring unnecessary damage and operations and maintenance (O&M) costs resulting from improper stormwater and drainage work occurring during the construction phase of a project.

## Section 2. Applicability

These procedures apply to County staff responsible for inspections and code compliance at development, redevelopment, and construction sites within unincorporated Thurston County including, but not limited to: 1) private development project permitted by Thurston County, 2) County public works projects, or 3) any other projects/activities requiring erosion and sediment control (ESC) best management practices (BMPs) for which a permit has been issued by the County.

## Section 3. Related Regulatory Documents

The most current version of the following:

- Department of Ecology-issued [Western Washington Phase II Municipal Stormwater Permit](#)
- Department of Ecology-issued [Construction Stormwater General Permit](#)
- [Thurston County Drainage Design and Erosion Control Manual](#)
- Thurston County Code – [Title 15 Public Works](#)
- Thurston County Code – [Title 26 Code Enforcement](#)
- Thurston County Public Works Policy POL-820: Escalating Enforcement Policy for Erosion and Sediment Control Compliance

## Section 4. Definitions

"Best Management Practices (BMPs)" means schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs may include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

"CESCL" means Certified Erosion and Sediment Control Lead.

"Department" or "department" means the Thurston County Community Planning and Economic Development Department or the Thurston County Public Works Department, as appropriate.

"Director" or "director" means the director of the Thurston County Community Planning and Economic Development Department or the director of the Thurston County Public Works Department, as appropriate, and the director's designees.

"Discharge" means to throw, drain, release, dump, spill, empty, emit, or pour forth any matter or to cause or allow matter to flow, drain, run, or spill into a storm drainage system, surface water, ground water, or onto the surface of the ground.

"Illicit discharge" means any discharge to the County's municipal storm drainage system except those specifically allowed in [Section 15.07.060](#) of Thurston County Code.

"Person" means any individual, association, municipality, government agency, organization, partnership, firm, corporation, or other entity recognized by law and acting as either the owner or as the owner's agent.

"Municipal storm drainage facility" means any storm drainage facility which Thurston County owns or has rights-of-way or easements to maintain.

"Pollutant" means any substance or physical alteration to the natural physical, chemical, or biological conditions of the water as will or is likely to create a nuisance or render such waters harmful, detrimental, or injurious to people, domestic animals, wildlife, aquatic organisms, or the environment.

"Responsible party" means the project proponent or their contractor for which a violation of County Code has occurred, any person who engages in any activity in violation of County

code, or any person who, through an act of commission or omission, procures, aids, or abets a violation of County code.

"Stormwater pollution prevention plan (SWPPP)" means a document which describes the best management practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or receiving waters to the maximum extent practicable.

## Section 5. Inspection and Documentation

Thurston County inspectors shall follow established procedures for inspecting and documenting work completed under a County-issued permit or public works contract. If a pre-construction conference is scheduled for the project, emphasis should be placed on the proper installation and maintenance of ESC BMPs and other requirements of the site's construction Stormwater Pollution Prevention Plan (SWPPP) or Erosion and Sediment Control Plan. Identify the Construction Erosion and Sediment Control Lead (CESCL) by name at the pre-construction conference. Identify the applicable permittee for sites issued a Construction Stormwater General Permit by the Washington State Department of Ecology.

Staff will complete a Thurston County Construction Stormwater Site Inspection Form for all erosion and sediment control inspections associated with new development, redevelopment, and construction sites and provide it to the responsible party within the shortest practicable timeframe. Thurston County inspectors have the discretion to use either the short or long inspection report form to document inspections. Both forms collect key information regarding the project, site conditions, BMPs evaluated, and specific corrective actions that must be addressed by the responsible party to comply with applicable permit requirements/codes. The long form contains additional detail about BMP standards and specifications under the 13 elements of pollution prevention set forth in the DDECM. The short form is typically used for routine/daily inspections but use of the long form may be appropriate when the responsible party would benefit from additional guidance on specific BMPs, or when a responsible party needs to correct significant permit/code compliance issues.

An electronic copy of all inspection-related information gathered on a given day (i.e., inspection report, photos, etc.) must be entered into the County's permitting database (AMANDA) on the same day, unless unusual circumstances prevent an inspector from doing so.

At a minimum, Thurston County will conduct and document compliance inspections at all projects covered by these procedures: 1) prior to construction, 2) a minimum of one-time during construction (typically weekly during active construction), and 3) upon completion of construction and prior to final approval or occupancy.



### 1. Prior to Construction

Inspect, prior to clearing and construction, all permitted development sites and public works projects for which an ESC Plan and/or SWPPP has been completed. No clearing, grading, grubbing, or removal of surface structures may occur until an inspection occurs to verify the proper installation of ESC BMPs.

### 2. During Construction

Inspect all permitted development sites and public works projects during construction to verify proper installation and maintenance of required erosion and sediment controls. Verify that the contractor is documenting changes to the site's SWPPP, if applicable. Enforce as necessary based on the inspection, per the procedures outlined below.

### 3. Upon Completion of Construction

Inspect all permitted development sites and public works projects upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities.

Verify completion of a maintenance plan and assignment of maintenance responsibilities for stormwater treatment and flow control BMPs/facilities. Enforce as necessary based on the inspection, per the procedures outlined below.

## Section 6. Enforcement<sup>20</sup>

If a project inspected by the County Engineer, Water Resources Manager, or their designee finds the project in a state of non-compliance with applicable permits and/or codes, the County will pursue the escalating enforcement actions contained in *POL-820: [Escalating Enforcement Policy for Erosion and Sediment Control Compliance](#)* if a reasonable level of technical assistance/verbal warning to the responsible party does not achieve voluntary compliance.

## Section 7. Conflict with County Code

In the event of any conflict or inconsistency between these procedures and a County Code, the applicable Code shall take precedence.

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<sup>20</sup> The County holds public works projects to the same DDECM erosion and sediment control standards as private projects. As such, the County and contractors working on behalf of the County are subject to the escalating enforcement strategy provided in this procedure. However, a contractual relationship between the County and a contractor may require the County to modify the enforcement strategy as necessary to prevent conflict or inconsistency with the terms and conditions of the applicable contract. Compliance and enforcement actions for public works projects require close coordination between the Director(s), inspection and compliance staff and, as appropriate, the prosecuting attorney's office.

## Appendix G

Effective Date: 10-30-13 Revised Date:	Page 1 of 2
<b>PUBLIC WORKS POLICY</b>	
Supersedes: New See Also:	Approved by:  Director

### **POL-820: Escalating Enforcement Policy for Erosion and Sediment Control Compliance**

This policy establishes a formal procedure to be followed when enforcement action is necessary on construction sites that do not comply with the erosion and sediment control Best Management Practices (BMP) installation and maintenance procedures contained in the Drainage Design and Erosion Control Manual (DDECM) adopted by reference under Title 15 Public Work of the Thurston County Code (TCC).

Once site conditions have been verified by the County Engineer or his/her authorized representative, and if the site is determined to be in a state of non-compliance, the following enforcement actions will be pursued.

#### **1. Correction Notice**

A correction notice may be used for minor issues. These may include lack of installation and maintenance of appropriate erosion and sediment control BMPs or failure to address minor deficiencies in existing BMPs, (Such as adding more straw mulch, repairing silt fence, recovering stockpiles, etc). Correction notices may be verbal or written. Verbal correction notices will be documented within the permitting software (currently 'Amanda') under the project or via a letter sent to the responsible party. The time period for implementing corrections required by the correction notice will be provided with the notice. A reasonable effort to obtain a voluntary correction should be pursued.

The County may bypass enforcement action step #1 and advance immediately to enforcement action step #2 based on the severity of the impact, a discharge to the County's MS4, threat to human health, welfare and/or the environment and/or past compliance issues with the responsible party.

#### **2. Stop Work Order**

If voluntary correction by the responsible party cannot be reached within the timelines set in the 'Correction Notice' described above, a formal violation will be assessed against the responsible party and a physical stop work order will be posted onsite. The violation will then be forwarded onto the Compliance Section for official processing.

In general, once a stop work order is issued a notice of violation letter will be sent to the responsible party describing the types of violations and timelines to come into compliance. If these timelines are not met, citations and civil penalties can be assessed against the responsible party.

Washington State Department of Ecology will also be contacted at this stage of non-compliance to help aid with enforcement under the responsible party's individual National Pollutant Discharge Elimination System (NPDES) Construction Permit.

### **3. Emergency Work and Immediate Hazards**

If an immediate hazard to public safety is present, the County may abate such hazard without following the procedures of this policy. Any work determined by the County Engineer to be an emergency shall be exempt from erosion and sediment control requirements for forty-eight hours; at which time the County Engineer will evaluate if the emergency will allow erosion control BMPs to be followed. If the County Engineer determines that it is practical to use erosion control BMPs, then the provisions of this policy will go into effect.

# Thurston County Procedure: Responding to the Unauthorized Modification of Storm Drainage Facilities

## Section 1. Purpose

This document provides direction to County personnel regarding the procedures for responding to the unauthorized modification of storm drainage facilities in unincorporated Thurston County.

## Section 2. Definitions

"Department" means any division, subdivision, or organizational unit of the County established by ordinance, rule, or order.

"Director" means the Director of the Thurston County Community Planning and Economic Development Department or any duly authorized representatives of the director.

"Municipal storm drainage facility" means any storm drainage facility which Thurston County owns or has a right-of-way or easement to maintain.

"Person" means any individual, association, municipality, government agency, organization, partnership, firm, corporation, or other entity recognized by law and acting as either the owner or as the owner's agent.

"Private" means not holding public office or employment with Thurston County, e.g., a private citizen, association, or business.

"Private storm drainage facility" means any storm drainage facility which Thurston County does not own or have a right-of-way or easement to maintain.

"Responsible party" means the owner of a property, premises, or facility on which a violation has occurred; any person who engages in any activity in violation; or any person who, through an act of commission or omission, procures, aids or abets a violation.

"Right-of-way" means an area dedicated to public use for pedestrian and vehicular movement, which may also accommodate public utilities.

"Storm drainage facility" means any public or privately-owned facility by which stormwater is collected, conveyed, and/or treated, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, catch basins, piped storm drains, pumping facilities, retention and detention basins, ditches, human-made or altered drainage channels, swales, reservoirs, and other drainage structures.

## Section 3. Affected Departments

This procedure applies to all Thurston County departments involved directly or indirectly in the inspection, monitoring, planning, operation, repair and/or maintenance of storm drainage facilities, or any related education, outreach, or compliance activity.

## Section 4. Regulatory Background Storm Drainage Facilities

1. [Title 13 – Roads and Bridges](#) establishes regulations regarding roads and bridges.
2. [Chapter 13.56 – Thurston County Rights-of-Way](#) establishes regulations to provide administrative, procedural and technical guidance for the installation, replacement, adjustment, maintenance, repair and relocation of all facilities, construction excavation encroachments, and work activities which are located within or upon the County rights-of-way.
3. [Chapter 15.05 – Thurston County Stormwater Standards](#) adopts by reference the [2016 Drainage Design and Erosion Control Manual](#) for Thurston County.
4. [Chapter 15.07](#) establishes the Illicit Discharge Detection and Elimination (IDDE) ordinance.
5. [Title 18 – Platting and Subdivisions](#) establishes regulations regarding the subdivision of land, including, but not limited to, the safety and general welfare in accordance with established standards; to promote safe and convenient travel by the public on streets and highways; to provide for adequate water, drainage, sewer and other public facilities; and to maintain and perpetuate environmental quality.
6. [Title 26 – Code Enforcement](#) governs code enforcement for a number of different titles and sections of the Thurston County Code as listed in [26.05.010](#).

## Section 5. Site Assessment and Prioritization

1. For purposes of this document, storm drainage facilities fall into three categories:
  - Category 1 (High Priority):
    - Facilities constructed under TC DDECM Minimum (Core) Requirement 5, 6, or 7<sup>1</sup>
      - MR 5: Onsite Stormwater Management
      - MR 6: Runoff Treatment
      - MR 7: Flow Control
    - Ponds
  - Category 2 (Medium Priority):
    - Swales (grass-lined), or any other non-Category 1 treatment facility
    - Culverts
    - Any conveyance directly discharging to a 303(d)-listed water body
  - Category 3 (Low Priority):

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<sup>1</sup> Based on the [Drainage Design and Erosion Control Manual \(DDECM\)](#) published November 2009 and updated/adopted in December 2016. For purposes of this section, Minimum Requirement (MR) means Core Requirement (CR).

- Other non-Category 1 and 2 conveyance ditches
2. Risk Factors
    - Staff apply best professional judgement to determine if one or more of the *risk factors* below pertain to an unauthorized stormwater facility modification:
      - Public Health and Safety
      - Flooding
      - Impact to Water Quality
      - Non-compliance with County's Municipal Stormwater Permit
      - Maintenance Issue, e.g., causes mowing problem, safety concern, etc.
      - Precedence, e.g., potential to start adverse trend in neighborhood or locality
  3. Modification of a Category 1 (High Priority) facility
    - If one or more risk factors listed in *Section 5.2* are present, staff will notify the responsible party and seek resolution of the issue according to *Section 6*.
    - For purposes of this section, Public Works Crew Chiefs will screen issues reported by staff before seeking resolution with the responsible party.
  4. Modification of a Category 2 (Medium Priority) facility
    - If one or more risk factors listed in *Section 5.2* are present, staff will notify the responsible party and seek resolution of the issue according to *Section 6*, if the modification/work is currently underway or recently done where there is a reasonable opportunity to correct/undo with modification. However, if the modification/work pertains to historical/legacy issues that would be overly burdensome and unreasonable to correct, staff may apply discretion and choose not to prioritize the issue for resolution.
  5. Modification of a Category 3 (Low Priority) facility
    - If one or more risk factors listed in *Section 5.2* above are present, *and the situation is the subject of a citizen complaint*, staff will conduct site visit, determine the severity of the situation, and make a determination regarding the appropriate response including compliance procedures in *Section 6*. Staff will follow up with the complainant to inform them of the status of the issue.
    - If one or more risk factors listed in *Section 5.2* above are present, *but the situation is not the subject of a citizen complaint*, staff may notify the responsible party and seek resolution of the issue according to *Section 6* depending on potential impact/risk and workload.
      - Staff will give consideration to whether the modification/work is currently underway or recently done where there is a reasonable opportunity to correct/undo with modification, as opposed to historical/legacy issues that would be burdensome and unreasonable to correct.

## Section 6. Procedures, Roles and Responsibilities

1. Thurston County will initially rely on education and technical assistance to gain compliance with ordinances related to municipal and private stormwater drainage facilities.



- A stop work order or notice of violation may be issued, on a case by case basis.
  - In cases where immediate action is required to solve an erosion or drainage problem, the County may perform the necessary construction or remedial work per [15.05.030](#).
2. Depending on the nature of the potential impact/risk associated with the modification/work, staff from the following departments will take the lead on initial contact and technical assistance efforts:
- Public Safety, including roadway flooding
    - If municipal storm drainage facility: Public Works – appropriate division, not including Water Resources, takes lead
    - If private storm drainage facility: Water Resources or Code Compliance takes lead
  - Impact to Water Quality
  - Non-compliance with County’s Municipal Stormwater Permit, including any modification of a Category 1 facility
    - Water Resources takes lead
  - Maintenance, e.g., causes mowing problem, safety problem, etc.
    - Road Operations takes lead
  - Precedence, e.g., potential to start adverse trend in neighborhood or locality.
    - Water Resources or Development Review takes lead
3. When appropriate, the initial response with the likely responsible party will be in-person (i.e., explain reason for visit, gather information/take notes and photos; and provide technical assistance as appropriate).
- Residential: If no one is home, staff may leave an informational door-hanger (or other printed materials); or post stop work order, if appropriate.
  - Commercial or Homeowner Association: If responsible party not available, leave door hanger (or other printed materials) with person affiliated with responsible party; or post stop work order, if appropriate.
4. Applicable staff from Water Resources or Roads Operations will document the modification/work in the applicable County database<sup>2</sup>, e.g., Water Resources uses VUEWorks.
5. If appropriate, staff<sup>3</sup> may send likely responsible party “Contact Letter” requesting response within set timeframe (e.g., 14 days).
6. If appropriate, staff from Public Works Water Resources will schedule meeting with Community Planning and Economic Development Compliance Unit to discuss situation and determines if it warrants escalating enforcement from the compliance officer.
- If so, Community Planning and Economic Development Compliance Unit sends Contact Letter to likely responsible party.

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<sup>2</sup> Water Resources uses *VUEWorks*; Road Operations uses *CAMS*; and Development Review uses *AMANDA*.

<sup>3</sup> May be Code Compliance Officer or staff from other appropriate division, case-by-case.

- Letter will request that party contact County staff within 14 days.
  - Staff will seek satisfactory resolution of the issue within reasonable timeframe.
  - Community Planning and Economic Development Compliance Unit may issue Notice of Violation if issue not resolved within reasonable timeframe.
7. When education and technical assistance fail to resolve the issue, or when the violation poses a hazard to public health, safety, or welfare, the Community Planning and Economic Development Department, his/her Compliance Officer, or a duly authorized representative of the Director may pursue formal enforcement up to and including civil infraction, penalties, cease and desist orders, and/or emergency orders, under the authority of Thurston County code ([Title 26 - Code Enforcement](#)).
- This step requires close coordination with the applicable Public Works lead on the site-specific issue, before and during the initiation of formal enforcement.

## Appendix I

<b>Thurston County Central Services Properties</b>		
<b>Property</b>	<b>Address</b>	<b>City</b>
Thurston County Courthouse Bldg. #1	2000 Lakeridge Dr. SW	Olympia
Thurston County Courthouse Bldg. #2	2000 Lakeridge Dr. SW	Olympia
Thurston County Courthouse Bldg. #3	2000 Lakeridge Dr. SW	Olympia
Thurston County Courthouse Bldg. #4	929 Lakeridge Dr. SW	Olympia
Thurston County Courthouse Bldg. #5	2400 Evergreen Park Dr. SW	Olympia
Thurston County Courthouse Bldg. #6	926 24 <sup>th</sup> Way	Olympia
Thurston County Emergency Services	2703 Pacific Ave. SE	Olympia
Thurston County Health	412 Lilly Rd.	Olympia
Tilley Shop A	9605 Tilley Rd SW	Olympia
Tilley Shop B	9605 Tilley Rd SW	Olympia
Tilley Bldg. C	9605 Tilley Rd SW	Olympia
Tilley Bldg. D	9605 Tilley Rd SW	Olympia
Tilley Bldg. E	9521 Tilley Rd SW	Olympia
Mottman Bldg. 1	2905 29 <sup>th</sup> Ave	Tumwater
Mottman Bldg. 2	2918 Ferguson St W	Tumwater
Mottman Bldg. 3	2915 29 <sup>th</sup> Ave	Tumwater
Thurston County Family Justice Center	2801 32 <sup>nd</sup> Ave.	Tumwater
Thurston County Coroners Bldg.	2925 37 <sup>th</sup> Ave. SW	Tumwater
Thurston County Correction Facility	3491 Ferguson St. SW	Tumwater
Ferguson Bldg.	3285 Ferguson St. SW	Tumwater
Thurston County Work Release	3013 Ferguson St. SW	Tumwater
G Parking Lot	2000 Lakeridge Dr. SW	Olympia
J Parking Lot	910 24 <sup>th</sup> Way SW	Olympia
Waste and Recovery Center	2414 Hogum Bay Rd NE	Lacey

## Acronyms & Abbreviations

BMP	Best Management Practice
BoCC	Thurston County Board of County Commissioners
B-IBI	Benthic Index of Biotic Integrity
CAD	Computer-Aided Design
CBSM	Community-Based Social Marketing
CESCL	Certified Erosion and Sediment Control Lead
CFP	Capital Facilities Plan
CR	Core Requirement
CS	Thurston County Central Services
CWA	Clean Water Act
DDECM	Drainage Design and Erosion Control Manual
DMR	Discharge Monitoring Report
DNR	Washington State Department of Natural Resources
DPSIR	Drive-Pressure-State Impact-Response
Ecology	Washington State Department of Ecology
EcoNET	EcoNetwork
EH	Thurston County Environmental Health
EM	Thurston County Emergency Management
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESC	Erosion and Sediment Control
GIS	Geographic Information System
HAZWOPER	Hazardous Waste Operations and Emergency Response
IAT	Interagency Team
IC	Illicit Connection
ID	Illicit Discharge
IDDE	Illicit Discharge Detection and Elimination
ILA	Interlocal Agreement
ILMA	Interlocal Monitoring Agreement
IPM	Integrated Pest Management
LA	Load Allocation
LID	Low Impact Development
LMS	Learning Management System
MR	Minimum Requirement
MS4	Municipal Separate Storm Sewer System
NOAA	National Oceanic and Atmospheric Agency
NOI	Notice of Intent
NOV	Notice of Violation

NPDES	National Pollutant Discharge Elimination System
NPSP	Native Plant Salvage Program
O&M	Operations and Maintenance
Permit	Western WA Phase II Municipal Stormwater Permit
PHSS	Thurston County Public Health and Social Services
PW	Thurston County Public Works
RRMG	Regional Road Maintenance Endangered Species Act Guidelines
RRMP	Regional Road Maintenance Endangered Species Act Program
RSWG	Regional Stormwater Work Group
SAM	Stormwater Action Monitoring
SCT	Stormwater Coordination Team
SFR	Single Family Residential
SMAP	Stormwater Management Action Plan
SWMMWW	Stormwater Management Manual for Western Washington
SQGs	Small Quantity Generators
SSWAB	Storm and Surface Water Advisory Board
Stormwater Plan	Stormwater Management Program Plan
SWPPP	Stormwater Pollution Prevention Plan
TCC	Thurston County Code
TCEMP	Thurston County's Environmental Monitoring Program
TMDL	Total Maximum Daily Load
USGS	United States Geological Survey
WAC	Washington Administrative Code
WARC	Waste and Recovery Center
WIN!	Work Involvement Now!
WLAs	Waste Load Allocations
WQIP	Water Quality Implementation Plan
WQIR/IP	Water Quality Improvement Report/Implementation Plan
WRIA	Water Resource Inventory Area
WSU	Washington State University Extension